

**PAPER / PANEL SESSION 10:15 - 11:30****REINVENTING UNIVERSITY CAPABILITIES TO SUPPORT TECHNOLOGY COMMERCIALIZATION: A PANEL DISCUSSION**

Panel	Track F	Borgia Room
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Norris Krueger Jr, *Boise State University/Entrepreneurial Strategies*  
 Richard Goodman, *University of California-Los Angeles*  
 Mariann Jelinek, *National Science Foundation/College of William & Mary*  
 Newell Gough, *Boise State University*  
 Alan Carsrud, *University of California-Los Angeles*  
 Lyman Frost, *Idaho National Energy & Environmental Labs*

This panel discusses the adaptation of a successful 'best practice' at using university resources in an innovative way to nurture technology-driven high-growth entrepreneurs, offering a highly productive 'virtual incubator' that rewards the university, its students and faculty, entrepreneurs and their firms, and the community. The adaptation will be critiqued by key experts from different perspectives, including the UCLA program founders, Boise State faculty, the Idaho National Energy & Environmental Laboratories, National Science Foundation and Idaho state government. This panel showcases a successful best practice at nurturing nascent technologies into viable new high-growth entrepreneurial ventures and explores how this model can best be adapted to a different setting. The multiple perspectives afford an opportunity to identify critical success factors for such programs.

**CROSS-BORDER MERGERS, ACQUISITIONS, AND STRATEGIC ALLIANCES: HOW PRE-DEAL MOTIVATIONS INFLUENCE POST-DEAL IMPLEMENTATION**

Panel	Track General	Elizabethan Room A
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Duncan Angwin, *University of Warwick*  
 L J Bourgeois, *University of Virginia*  
 David Collis, *Yale University*  
 John McGee, *University of Warwick*  
 Howard Thomas, *University of Warwick*  
 Philippe Very, *EDHEC*

This panel session sets out to examine perspectives on the M&A process. Howard Thomas opens by providing a context for the perspectives of succeeding speakers. These include a resource-based view of the motivations behind M&A (David Collis), the influence of National Culture on pre-and post-acquisition management (Duncan Angwin), a learning perspective on different levels of the M&A process (Phillippe Very), contingency approaches to post-acquisition management (Jay Bourgeois), and issues of integration efficiency (Pierre Dussage). Speakers will present for 10 – 15 minutes and in the remaining time, John McGee will facilitate debate by asking further questions of the panelists, drawing views and insights from the floor, and finally bringing out the main themes of the session.

**CREATING VALUE FROM GLOBAL OPPORTUNITIES**

Paper	Track L	Elizabethan Room B
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**Global Strategy in the Internet Era**

George Yip, *London Business School*  
 Anna Dempster, *Cambridge University*

This paper provides a theoretical framework and empirical evidence on the effects of the Internet on global strategy. The paper demonstrates that the Internet does not have equal effects across industries. It interacts with existing industry globalization drivers and with current company strategies, having more of a multiplicative than an additive effect. We will present some of the results from a new survey of 100+ multinational companies on: 1) the extent to which the Internet makes it easier for different companies to implement global strategy; 2) the effects of globally common Web sites; 3) the effects of Internet operations on company's global performance; and 4) the relationship between a company's existing strategy and its successful use of the Internet.

**Seizing the Global Opportunity: Using e-Business to Extend your Enterprise**

Timothy Mills, *IBM Corporation/University of Phoenix*  
 Vincent Pizzo, *IBM Corporation*

In today's Internet economy, globalization is a fact of life among the world's leading corporations. Worldwide enterprises are spending billions to expand into international markets, establishing new organizations and forging new channel alliances to carry their products and services into global markets. Over the past 5 years, leveraging the Internet and e-business models has accelerated firms' ability to globalize. Yet, few enterprises have developed a comprehensive, integrative and flexible strategy that optimizes the impacts on technology, internal processes, and organizational structure. Focusing on integrating corporate strategy with organization structure and culture, internal processes and technical compatibility, this paper outlines an integrative environmental analysis technique, developed by IBM Corporation, which provides an e-globalization business and technical readiness and risk assessment for firms migrating their e-businesses globally.

**Building Shareholder Value from Strategies for Sustainability**

Stuart Hart, *University of North Carolina-Chapel Hill*  
 Mark Milstein, *University of North Carolina-Chapel Hill*

An increasing number of firms are challenged by the related concepts of sustainable development and strategies for the bottom of the economic pyramid. While there is much interest in these concepts that rely on strategic advantage through the optimization of economic, social, and environmental concerns, many firms continue to find operationalization difficult to achieve. We have developed a shareholder value added model that simultaneously captures the global drivers of sustainable development, the corporate challenge that stems from those drivers, and the firm payoff associated with addressing these challenges. Managers have found the model to be invaluable for helping to reframe and articulate broad, ambiguous challenges facing their firms with regard to their company's specific skills, capabilities, and competitive operating environment.

**COMPETITIVE STRATEGIES IN NEW ECONOMY**

Paper	Track A	Elizabethan Room C
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**Competing in the New Economy: Concepts and Issues**

David Asch, *De Montfort University*

The paper starts by considering some basic ideas of how customers view purchases of goods and services. The way in which buying decisions are made is then considered and a comprehensive and simple framework for understanding customer choice developed. The growth and impact of technologies on the market for goods and services is then outlined and mapped on to the framework. The article concludes by considering the implications of the continued development in this rapidly changing arena. The implications for the development of effective competitive strategies are analysed as are the issues that confront customers who purchase goods and services using the new media.

**Corporate Branding at Silicon Valley Firms: Do External Perceptions of Organizational Culture Help Construct Reputations**

Stanley Kowalczyk, *San Francisco State University*

The locus of competitive advantage is shifting from products to organizations and a shift from product branding to corporate branding is underway. Branding allows firms to use organizational culture as part of their selling proposition. The names Apple Computer, Cisco Systems, Hewlett Packard, National Semiconductor, Oracle, Sun Microsystems, and 3Com generate images not only of products but also of cultures. For each of these seven firms: 1) eight dimensions of external perception of culture were measured by administering a survey instrument to 273 industry professionals; and 2) the eight dimension results of Fortune's Most Admired Corporations Survey were used as indicators of corporate branding. Pair by pair regression analysis demonstrated that there were a substantial number of statistically significant relationships between dimensions of externally perceived culture and brand indicators.

### e-Commerce 2.0: Nature of Competition and Suggestions for Effective Strategies

Arun Pillutla, *St Ambrose University*

Jerry Allison, *St Ambrose University*

e-Commerce is evolving into a way of conducting business. The technological changes in the field have been revolutionary, yet companies do not seem to have found enduring strategies to be successful. We explored the apparent intensity of business activity on the Internet with equally apparent inability of businesses to secure a durable advantage. Since managing competition is central to business success, we drew from the rich literature on competition to develop general propositions for successful strategies within the e-commerce field. Our research suggests that firms should have a market-derived strategy (as opposed to a technology-driven strategy) as they compete in the future. Further, committing deep resources into market-derived defensible niches could provide firms with durable advantages. These theoretical ideas have important implications for practice as well. It is the markets, not the technology that hold the key to strategic success in the future.

### Testing the Applicability of Porter's Generic Strategies in the Digital Age: A Study of Korean Cyber Malls

Eonsoo Kim, *Korea University*

Dae-il Nam, *LG Economic Research Institute*

John McIntosh, *Bentley College*

Bo-Kyung Bae, *Ehwa Women's University*

The spread of the Internet and widespread adoption of computer and telecommunication technologies by firms worldwide has caused a seismic shift in the way business is conducted and calls into question keystone frameworks such as Porter's generic strategies. This study tests the applicability of that framework in a sample of 1,009 online Korean B2C firms. Our results indicate that Porter's framework is not only relevant but also shows performance differences. For the entire sample, cost leadership exhibited the lowest performance while the integrated cost leadership/differentiation (ICLD) strategy exhibited the highest performance. Separate analyses for pure plays and clicks and bricks models indicate that firms pursuing the ICLD strategy outperformed all other strategies. For all firms pursuing the ICLD strategy, pure plays exhibited superior performance.

### CORPORATE VENTURE CAPITAL

Paper	Track E	Elizabethan Room D
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### Elements of a Mature Corporate Entrepreneurship Competency

Richard Leifer, *Rensselaer Polytechnic Institute*

Mark Rice, *Babson College*

Gina Colarelli O'Connor, *Rensselaer Polytechnic Institute*

Based on data from twelve radical innovation projects in ten established companies gathered over a six year time period, elements of a mature corporate entrepreneurship competency (CE) were developed. Most companies today approach CE in ad hoc manner although most struggle with a way to systematize the process. Elements of a mature CE competency include: 1) an innovation hub as an organizational unit supporting CE activities; 2) a receiving capacity for capturing CE proposals; 3) an internal venture capital program for funding CE activities; 4) recruiting, developing, and retaining appropriate people to drive CE activities; 5) strategically managing partners; and 6) a clear transition process for getting projects to operating units. Developing this competency requires the persistence and commitment of top management over time.

### "Innovation Attack": Combining Venture Capital and Incubation Tools to Drive Innovation in Established Companies

Holger von Daniels, *Roland Berger & Partner*

Jens Leker, *University of Münster*

Stefan Bötzel, *Roland Berger & Partner*

Pascal Meiners, *University of Münster*

Carsten Seeliger, *Roland Berger & Partner*

The paper argues that large corporations can make good use of venture capital units and incubators as instruments designed to stimulate ideas both internally and externally, to bind newly created startups and spinoffs to the company or integrate them into their own business organization. Based on in-depth practical experience gained in consulting projects and extensive theoretical research, the authors have developed an institutionalized innovation management tool, "Roland Berger Innovation Attack". This integrative approach - combining an ideas catalyst, an incubator, and a corporate venture-capital unit - drives corporate innovation and can serve as a highly successful business-development tool. The study describes the concept, the tools and the organizational aspects involved, and also covers practical experience with putting "Innovation Attack" into practice.

### How Corporate Venture Capitalists Add Value to Entrepreneurial Young Firms

Markku Maula, *Helsinki University of Technology*

Erkko Autio, *Helsinki University of Technology*

Gordon Murray, *London Business School*

Earlier research has indicated that corporate venture capital investors may provide important value added benefits to their portfolio companies. However, earlier research is very limited on identifying the specific factors influencing the actual value added benefits. Building on received theories, we develop a model describing the linkages between these factors and the ensuing benefits. The model is tested and validated by employing data collected from the CEOs of U.S. technology based new firms with corporate venture capital investors. The results suggest an important positive relationship between investor-investee complementarities and social interaction, and subsequently between social interaction and both learning and resource sharing benefits. Complementarities and the prominence of the corporate venture capital investor are significantly related to the certification benefits.

### Corporate Venture Capital: Leveraging "Strategic" Investments

James Henderson, *Babson College*

Benoît Leleux, *IMD*

In this paper, we build on detailed case studies using a resource based view perspective to develop propositions regarding the processes by which "strategic" corporate venture capital portfolios may outperform private venture capitalists funds. We argue that superior value creation in corporate venture capital programs can come either through the combination and/or transfer of resources with the corporation's business units or through the accumulation of investment experience. Yet, both of these processes suffer from significant obstacles including: lack of recognition, lack of commitment, lack of incentive, tenuous relationships, and lack of time. Propositions are, thus, developed regarding how these obstacles may be overcome based on clinical research in the network related industries based in Europe and the U.S.

### INTRA-FIRM KNOWLEDGE LEARNING AND TRANSFER

Paper	Track C	Essex Room
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### Knowledge Sharing in Organizations: A Field Study

Bala Chakravarthy, *IMD*

Akbar Zaheer, *University of Minnesota*

Srilata Zaheer, *University of Minnesota*

While inter-organizational cooperation through strategic alliances has attracted well-deserved interest, knowledge sharing and cooperation within the large multi-business firm is a neglected area of study. We suggest that such knowledge sharing is important to leveraging a firm's competencies, which are often "imprisoned" and dispersed across its

multiple businesses. We develop a grounded model of the factors that influence knowledge sharing within the firm, which we argue, is critical for both knowledge creation and utilization, through a yearlong field study of eight projects in six major multi-business companies. We suggest that top management intervention to promote sharing is unlikely to be effective by itself. The more fruitful role for top management is to create a sharing context, the ingredients of which are defined by our model.

### **Organizational Learning in R&D Intensive Environments: Contributing Processes and Mechanisms**

Bo Eriksen, *University of Southern Denmark*

Thorbjørn Knudsen, *University of Southern Denmark*

In this paper we analyze the influence that alternative strategies for sourcing R&D knowledge have on research intensity and organizational learning in R&D-based industries. A model of organizational learning is developed, where the firm's learning rate depends on its strategy for acquiring scientific knowledge. We distinguish between internal and external strategies for sourcing knowledge. The main proposition is that firm level learning is influenced by its ability to balance internal and external knowledge sourcing. Maintaining a sufficient level of diversity in knowledge sourcing strategies is a critical requirement for stimulating firm level learning, but the cost of internalizing the external scientific knowledge rises as the proportion of external to internal scientific knowledge becomes large.

### **The Internal Transfer of Team-embodied Competencies: The Mediating Role of Organizational Context**

Linda Edelman, *Bentley University*

Recent work in knowledge management discusses the time, cost, and performance benefits of transferring firm knowledge internally. Yet, empirical evidence indicates that firm competencies are sticky, making internal transfers difficult. This paper uses a structural equation modeling on data collected from six firms and 117 internal transfers in the United Kingdom, to explore the effects of knowledge and motivationally based transfer barriers and organizational context on transfer success and team performance, in team-based firms. Findings indicate that contextual variables have a partially mediating effect between transfer barriers and team performance. Implications are discussed.

### **Tacit Knowledge Transfer and Employee Turnover: The Case of Marketing**

Yvonne Wicki, *University of St Gallen*

Carmen Sagarra, *University of St Gallen*

This research examines how firms transfer and retain strategically relevant knowledge under condition of high employee turnover. By focusing on marketing knowledge, this study departs from past research, which has traditionally focused on technical knowledge transfer. Building brands faster, more efficiently, and more effectively is considered as a potential source of competitive advantage, which, however, has not yet received adequate attention. A model of marketing knowledge transfer under employee turnover is proposed. Potential mediators of the process, such as knowledge allocation mechanisms (bureaucracy, markets, community), task complexity, and knowledge type are tested. An empirical investigation in a global consumer goods firm, using both quantitative and qualitative data, validates the model. Results show that community structure in marketing functions with high turnover rates support knowledge transfer.

### **The Trustworthiness Trap: When Trustworthy Sources Share Complex Knowledge**

Gabriel Szulanski, *University of Pennsylvania*

Rossella Capetta, *Bocconi University*

Robert Jensen, *University of Pennsylvania*

The velocity of knowledge transfer is key in the new economy. Conventional wisdom holds that the best place to get knowledge is from a trustworthy source. It is generally believed that knowledge is transferred more effectively and efficiently when it stems from a

trustworthy source. Yet, trustworthiness may have a less desirable side. We show that the extent to which trustworthiness of the source contributes to the effectiveness of knowledge transfer, as captured by the degree of accuracy in the transfer, depends on the nature of the knowledge that is transferred. In the case of causally ambiguous knowledge a trustworthy source does not contribute to the accuracy of the transfer. Under extreme causal ambiguity a trustworthy source may not help. It might even cause damage.

### **JOCKEYING FOR POSITION: INCUMBENTS, NEWCOMERS, AND TECHNOLOGICAL CHANGE**

Paper	Track D	Georgian Room
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### **Inter-firm Cooperation and Technological Discontinuities: When Incumbents and New Entrants Coexist**

Simona Spedale Latimer, *Erasmus University-Rotterdam*

The paper investigates the types of cooperative strategies used by incumbents and new-entrants facing discontinuous technological change. Empirical evidence from the U.K. optical communications-systems industry suggests that firms adopt one of two ideal-types. The closed-tie strategy is characterised by the development of highly engineered, structured inter-organisational partnerships; the open-tie strategy relies on the development of informal relationships between individuals. The type of strategy adopted by individual firms appears related to two factors - the strategic driver of the firm (market-driven versus technology-based) and its degree of flexibility (both technological and organisational). The paper also explores how the emergence of cooperative strategies might be related to the long-term coexistence of incumbents and new-entrants and the division of the industry competitive space into complementary but distinct arenas.

### **What Drives R&D Alliances? Evidence from the Biotechnology Industry**

Yongliang Han, *California State University-Sacramento*

In this study, I examine the motives for R&D alliances between large pharmaceutical companies (LPCs) and new biotechnology firms (NBFs). Using a sample of 529 R&D alliances formed by 13 global pharmaceutical firms between 1985 and 1998, I test three competing but related explanations for R&D alliances in biotechnology. These include the transaction cost view; learning with flexibility; and technology preemption. I seek to distinguish among these explanations primarily using demographic analyses that examine the types of alliances formed; the dynamics of alliance formation; and some factors that may determine alliance formation. My results support the argument that LPCs' alliances with NBFs are motivated primarily by their need to learn while retaining organizational flexibility.

### **Incumbent's Adaptation and Capability Building on the Internet: Empirical Tests of Innovativeness in the United States Banking Industry**

Carmen Weigelt, *Duke University*

This paper applies an evolutionary economics and dynamic capability perspective to investigate the patterns of adaptation, learning, and innovation incumbents exhibit when adopting the Internet. Distinguishing different levels of adoption and initial (path-dependent) from emerging capabilities, this study focuses on the influence of post-adoption decision capability building on comprehensiveness of Internet adoption. The degree of a firm's emerging capability development reflected in its strength of internal capability building versus skill acquisition over time is expected to affect its innovativeness on the Internet, in addition to early choices often hypothesized to affect later adoption opportunities. Moreover, early versus later adoption is expected to affect online service comprehensiveness. The hypotheses are tested using longitudinal data on Internet adoption from more than 100 large U.S. banks.



### Revising “Old Truths” to Sustain Strategic Leadership in the New Economy: Lessons from the Foreign Exchange Spot Market (1951-1999)

Charlene Hyle, *KCP Associates*

A S Paulson, *Rensselaer Polytechnic Institute*

Conventional wisdom is that new economy firms, founded on utilizing new information technologies, will win a dominant position if they focus on acquiring and maintaining first mover advantages. To succeed at that strategy, these firms have been willing to spend abundant low-cost capital to be the first to accumulate the largest membership of active customers. Yet most have fallen short of leadership goals. Research on the global foreign exchange market's use of new information technologies as technological change occurred, provides insight to the relationship of technological change and strategy in network-based businesses. The reasons for competitive leadership change relate to how firms monitor and renew internal assets to match technological change. We show how this applies to both old and new economy firms.

#### ORGANIZATIONAL FORMS: CHOICES AND CONTINUUM

Paper	Track J	Hampton Room
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### Designing Complex Organisations: Towards Principles of Good Design and a Language for Describing Building Blocks and Relationships

Andrew Campbell, *Ashridge Strategic Management Center*

Michael Goold, *Ashridge Strategic Management Center*

Managers do not have structured ways of designing organisations. Moreover the language managers use to describe different parts of organisations and different relationships between organisation parts is not rich, for example: 1) organisation parts: business units, divisions, functions; 2) relationships: line, dotted line, staff; and 3) degree of centralisation: centralised, decentralised. These simple descriptors are adequate for simple M-from organisational structures. But they do not provide much help to managers attempting to design complex organisations in which function, product, customer segment and geography are all important dimensions of focus and influence. This poster session will report on research we have been doing to: 1) define the principles of good organisation design; 2) develop a language for describing the building blocks of complex organisations and the different relationships that exist between building blocks; and 3) produce frameworks and guidance to help managers with the design challenge.

### Choice Interaction and Organizational Structure

Jan Rivkin, *Harvard University*

Nicolaj Siggelkow, *University of Pennsylvania*

We examine how a firm's organizational structure affects its ability to cope with interdependent decisions. An agent-based simulation allows us to examine four coordinating mechanisms: the grouping of related decisions, a vertical hierarchy, firm-level incentives, and high-ability managers. We identify each mechanism as a force that either encourages firms to explore a broad set of alternatives or that stabilizes firms around existing choices. Successful firms strike a balance between exploration and stability. The need to balance exploration and stability generates interdependencies among the coordinating mechanisms. Consequently, firms sometimes benefit from seemingly harmful features: avoidable decision interdependence between departments, a passive CEO, or subordinates of limited ability. We further find that when interactions among decisions are pervasive, successful organizations employ coordinating mechanisms that promote broad exploration.

### Of Markets, Hybrids, and Hierarchies: Evidence of a Forked Continuum?

Grant Miles, *University of North Texas*

Derrick D'Souza, *University of North Texas*

John Orr, *Cameron University*

John Masters, *Western Illinois University*

Progress can be made, however, by moving beyond confrontation between theories and into a model that allows for multiple influences to be recognized. Through a study that examines risk propensity and trust alongside traditional variables from transactions cost economics (TCE),

we suggest the need to alter traditional views of hybrid arrangements and the factors that impact the choice of hybrid form. We offer a model built on a forked continuum where movement into hybrid arrangements requires sufficient levels of risk propensity and trust in addition to TCE factors. This model offers one means of accounting for challenges to the TCE approach in explaining hybrid arrangements while still incorporating the insights provided by TCE.

### Managing Interdependence: An Agent-based Model of Adaptation in Centralized and Decentralized Systems

Charles Williams, *University of Michigan*

This paper compares the adaptation of centralized and decentralized coordination of production. I present an agent-based model in which agents produce a single product and search for opportunities to specialize. In the model, decentralized coordination leads to trading networks that connect many specialized agents, while centralized coordination leads to small isolated trading groups. When agent turnover is introduced in the model, the decentralized system achieves lower average production because it exhibits greater disruption when agents exit the trading network. The model illustrates an adaptive advantage of central coordination in dynamic settings. Centralized systems minimize the interdependence of agents, which reduces the information processing and mutual adjustment that must be made to adapt cooperative production in a dynamic environment.

#### INTEGRATION, DISINTEGRATION, AND DIVESTITURES

Paper	Track G	Olympic Room
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### Sequential Divestiture through Initial Public Offerings

Jeffrey Reuer, *Ohio State University*

Jung-Chin Shen, *INSEAD*

This paper investigates private firms' decision to undertake an initial public offering (IPO) prior to divestiture rather than undergo an outright sale. We develop the argument that IPOs can serve to mitigate ex ante transaction costs in the market for corporate control when search costs are nontrivial because potential acquirers' understanding of the identity and availability of exchange partners is incomplete and when information asymmetries pose valuation challenges and the possibility of adverse selection. The empirical evidence suggests that sequential divestiture is more likely in industries with spatially-dispersed firms and for firms with significant intangible resources. Investments in strategic alliances attenuate the impact of intangibles on the propensity of firms to divest sequentially through IPOs.

### The Vertical Disintegration of a Firm and its Effects: The Value of “Leftover” Assets and Capabilities

Quintus Jett, *Rice University*

Adria Anuzis Brown, *Stanford University*

Strategic management scholars are revisiting existing theories of make-or-buy decision making, considering factors other than transaction costs to explain the degree of a firm's vertical integration and addressing how managers can identify the most efficient boundaries for the firms they lead. We use the history of a custom woodwork manufacturer to examine the circumstances surrounding a vertical integration decision and that decision's subsequent effects on the firm's core business. The results of this study indicate that changes in customers and competitors may guide the timing and properties of an integration decision. Further, the results indicate that when managers make a vertical disintegration decision, difficult-to-replicate assets and capabilities from the abandoned business may remain in the firm for them to leverage as a continuing source of advantage.

### Corporate Breakups as Strategic Options: Last Resort or Attractive Move?

Stefan Odenthal, *Arthur D Little International Inc*

AT&T recently announced the split into four separate businesses. This move could be perceived as a surprise. The last breakup, the “trivestiture”, occurred only five years ago. Even this move was not the starting point for the upcoming AT&T breakup story. The creation of the “baby bells” at the early eighties was the cornerstone of a phenomenon that is generally

considered as a “last resort”, not to mention an attractive strategic option of corporate development. Taking into consideration the breakup wave at the end of the nineties one must admit an obvious perception shift leveraging demergers, spin-offs, split-offs and split-ups on the top management agenda of many companies. Main motives for this have been the necessity to refocus business activities and enhance shareholder value.

### Can Relational Norms Substitute for Ownership? An Empirical Examination of Alternative Governance Devices

Laura Poppo, *Virginia Polytechnic Institute & State University*

Todd Zenger, *Washington University-St Louis*

Zheng Zhou, *Virginia Polytechnic Institute & State University*

This study empirically examines the performance of vertically integrated exchanges as compared to market exchanges governed through social relations. Alternatively, the research question is: under what conditions can relational norms substitute for vertical integration? Central to this study is the fact that this question has not been empirically examined at this time. Preliminary data analysis indicates that relational norms can substitute for ownership, and in some cases, produce even higher performance than ownership. The paper will also address the difficulty of testing, empirically, such a proposition. The data is based on a survey of IS managers about characteristics of their information services, their governance, and their performances.

### THE OPTIONS COMPLEX: WHAT'S “NEW” ABOUT REAL OPTIONS REASONING

Panel	Track F	Oxford Room
	Max Boisot, <i>ESADE/University of Cambridge</i>	
	Charles Baden-Fuller, <i>City University Business School</i>	
	Ian MacMillan, <i>University of Pennsylvania</i>	
	Rita Gunther McGrath, <i>Columbia University</i>	
	Vince Kaminski, <i>Enron</i>	

Much of the strategy literature on real options has been influenced by the theory of financial options. There, the focus has been primarily on issues of valuation and on the conditions necessary for achieving it. These can be unnecessarily restrictive when applied to real options, leading to a serious underestimation of what the options perspective has to offer the strategist. The panel explores three interrelated themes. The first presents new thinking about options complexes and their properties. The second explores the public support and private funding of entrepreneurship. The third looks at how an options-complex perspective affects the way that financial risk and uncertainty are handled. We will include comments from a consultant/practitioner on the relevance and applicability of some of these ideas.

### DIFFERENTIATION AND IMITATION: THE DYNAMICS OF INTRA-INDUSTRY RIVALRY

Paper	Track I	Victorian Room
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#### Why Do Firms Imitate Each Other?

Marvin Lieberman, *University of California-Los Angeles*

Shigeru Asaba, *Gakushuin University*

Imitation of rivals is one of the most fundamental features of business competition, yet in some ways it remains poorly understood. Imitation of superior products and processes is accepted as a natural part of the competitive process. Other types of imitation are often dysfunctional; herd behavior can lead to speculative bubbles and wasteful investments, as observed recently in the dot com sector. This paper develops a conceptual survey to distinguish among types of mimetic behavior. Drawing from work in strategic management, economics, and organization theory, we show that explanations fall into two broad categories: 1) information-based theories, where firms follow rivals that are perceived as having superior information; and 2) rivalry-based theories, where firms imitate others to maintain competitive parity or limit rivalry.

### Following the Herd or Being Different? Trajectories of Strategic Renewal of European Financial Services Firms

Bert Flier, *Erasmus University-Rotterdam*

Frans A J van den Bosch, *Erasmus University-Rotterdam*

Henk Volberda, *Erasmus University-Rotterdam*

How do large firms renew themselves in a turbulent environment? Are there industry, country, or firm specific patterns of strategic renewal? To answer these questions, we examine the relative incidence of external versus internal and explorative versus exploitative renewal actions and their speed using longitudinal data spanning the 1990-1997 period of leading Dutch, German, Norwegian, Swedish and British financials. We distinguish attributes that cover the context, content, and process of strategic renewal. Research questions are investigated using a methodology that incorporates new metrics. We found that exploration/exploitation ratios are fairly similar across the industry, whereas differences are evident in the external/internal ratios across countries. We suggest that industry, country and firm specific factors influence journeys of strategic renewal in distinctive and complementary ways.

### “What Were You Thinking...?”: How Executive Cognition and Perceptions Drive Competitive Strategy and Action

Walter Ferrier, *University of Kentucky*

Rhonda Reger, *University of Maryland*

Don Knight, *University of Maryland*

J Christopher Moran, *Applied Materials Inc*

Our two-study paper provides new insight for strategic management research and competitive intelligence practice by integrating the competitive dynamics and executive cognition views of competitive rivalry. In particular, using a sample of market-leading firms across 23 different industries, our first study examines how executives' cognitive orientation toward competitive aggressiveness, change, and innovation influences the firm's pattern of competitive actions actually carried out and, ultimately, performance. Our second study uses a mental mapping technique to explore how the perceptions of individual rivals held by divisional managers within a market-leading Silicon Valley semiconductor equipment manufacturer influence the firm's pattern of competitive actions.

### Competitive Advantage through Strategic Group Membership? A Longitudinal Empirical Analysis on the Role of Group-level Effects

Boris Durisin, *Bocconi University*

Georg Von Krogh, *University of St Gallen*

An analysis of the global investment banking industry during the period 1990-1999 finds that knowledge assets grounded in the collective firm knowledge act as an isolating mechanism. In the case of knowledge assets rivalry effects are group-level effects that change behavior of member from what they would in the absence of the group. We find empirical support for the existence of group-level effects. Strategic group membership is a significant explanatory variable for the share of within group rivalry to total rivalry for each single firm. As a consequence, a discussion of knowledge assets is not satisfactory as long as it does not include group-level effects in its investigation of performance differences. The implications for empirical studies in strategic management will be discussed.

### E=MC2: EXTREME ENVIRONMENTS REQUIRE MANAGING CHANGE AND COMPLEXITY

Paper	Track K	Yorkshire Room
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#### Creativity and Complexity Science in e-Commerce Business Model Innovation

dt ogilvie, *Rutgers University*

This paper examines e-commerce business models in terms of their strengths and weaknesses from a complexity science and creativity perspective. I am particularly interested in what ‘old truths’ may make a difference, and what new insights can be gained by using the lenses

of creativity and complexity theory to examine these business models to see if there are patterns in the models of companies that have taken an innovative approach toward the customer, providing customers value that could only be obtained through Internet technology. Preliminary findings will be presented.

### The Relationship between Scanning Behaviour and Changing Beliefs about Competitive Advantage

Paul Raspin, *Modem Media*

Cliff Bowman, *Cranfield University*

This paper reports on our research into a critical aspect of the strategy process, scanning the business environment. Our objective is to provide insights into how managers are adapting their scanning behaviour in the light of developments in information technology and in response to increasing environmental turbulence. The paper will comment on environmental categorisation schema's that managers use to scan, information gathering tactics employed, emerging scanning modes adopted, and the role of the Internet within scanning behaviour. Propositions about the relationship between scanning modes and the propensity for individual managers to change their beliefs about competitive advantage will also be explored.

### The Influence of Cognitive Models on Incumbent Responses to Disruptive Technology in the Media Industry: The Case of BBC Online

Lucy Küng, *University of St Gallen*

Media industry incumbents have been criticised for responding inadequately to disruptive innovations in general and the Internet in particular. This paper presents the findings of research into this phenomenon in the form of empirical application of theories of disruptive technology and incumbent failure to the British Broadcasting Corporation's (BBC) response to the Internet, with a particular focus on the role played by cognitive models. The research, which took the form of a fine-textured, processual and multi-lens investigation into the organisation's Internet-related activities, found broad support for existing concepts. The paper advances a framework by which the complex role played by collective cognition in the form of shared unconscious assumptions can be integrated into current theories.

## PAPER/PANEL SESSION 15:45 - 17:00

### STRATEGY PROCESSES IN EMERGENT ECONOMIES

Paper	Track K	Borgia Room
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### Simple Rules and Simple Solutions: Dominant Logic of High and Low Performers in Turbulent Environments

Krzysztof Oblój, *University of Warsaw*

This paper tries to explain the dominant logic of winners and losers in a study of pairs of firms that attained leading and peripheral positions in their marketplaces during 10 years of existence. Ten companies that had the same point of departure in 1989-1990 in five industries were studied. Two different dominant logic's of simple rules and simple solutions were identified. Winners follow simple rules. They focus on environmental events perceived as opportunities; they combine market focus with optional marketing strategies, experiments, quick entries and exits; they have flexible but centralized organization. Surprisingly, the dominant logic of poor performers is coherent and strategic but limits growth potential. It consists of limited focus on environmental events perceived mostly as threats; early strategic choices of segments and products, and rigid, formalized and centralized execution of strategy.

### Cultural Issues and the Link with Strategic Thinking: Case Histories of "Successful" Asian Entrepreneurs in the United Kingdom

Shiv Chaudhry, *University of Central England*

Dave Crick, *University of Central England*

Much has been written about the teaching of entrepreneurship. Some believe it can be taught via structured material such as texts while others prefer a more radical approach, arguing that constructing business plans, hearing successful and less successful business people discuss practical

issues, views from banks, venture capitalists etc. may be more useful. This paper discusses a project that addresses the need to profile the case histories of 'successful' (richest in U.K.) ethnic minority entrepreneurs in order to foster entrepreneurship in their communities. Asian entrepreneurs were chosen for this study due to their propensity to engage in entrepreneurial activities in the U.K., that is, vis-à-vis other communities. Ten case histories were undertaken, but one is presented in this paper due to conference restrictions.

### From Intuition to Continual Learning: An Exploratory Study of Decision Making in Emerging Markets

Li-Choy Chong, *University of St Gallen*

Klaus Kukovetz, *University of St Gallen*

Decision processes, appropriate for stable and highly predictable environments, have been clearly mapped out in the literature. However, little is said about decision processes for unstable and unfamiliar environments, such as that of emerging economies like China and the Internet. This paper reports the findings of research into the decision processes of western multinational companies in the unstable and unfamiliar environment of emerging China and explores the possible application of these findings to the similarly unstable and unfamiliar environment of the emerging Internet economy through a case study of an Internet B2B startup. The paper proposes a decision process based on intuition, which becomes increasingly accurate through experience and continual learning.

### Scaling the Peaks of Business Strategy

Michael Milgate, *Macquarie University*

Getting strategy right is akin to climbing a mountain - the metaphor to which I allude in the title of this paper. Climbing a mountain is largely a function of training, technique, and execution, yet while many succeed at this task, many also fail. Getting strategy right is not a matter of training, technique, and execution; it is a matter of coming to grips with the essential humanness of the task. Strategy is not so much about setting the direction that a business will travel; it is about people searching for clarity and unity of purpose and behaviour in a mountain range where visibility is often dreadful, earthquakes are frequent, and everyone has different ideas about the best way to climb.

## STRATEGIC MANAGEMENT RESEARCH: CURRENT EVOLUTION AND FUTURE DIRECTIONS

Panel	Track General	Elizabethan Room A
	Howard Thomas, <i>University of Warwick</i>	
	Bala Chakravarthy, <i>IMD</i>	
	Andrew Pettigrew, <i>University of Warwick</i>	
	Richard Whittington, <i>Oxford University</i>	

Contemporary assessments of strategic management research regularly characterise the field as at a crossroads. The 'crossroads' metaphor is meant to reflect guarded praise about the establishment of the field and its progress in academic and policy terms. However, with this sense of progress, there is also an impatience throughout the world for greater innovation and creativity in strategy research. This impatience is partly a reflection of some of the scholarly routines which have been built into the field, but it is also suggested by a changing competitive landscape for study by strategy scholars. This panel session brings together leading scholars from different fields of strategy, from both sides of the Atlantic, in order to discuss the past, present, and future direction of strategy research.

## GOVERNANCE, CHOICE, AND PERFORMANCE OF INTERNATIONAL COLLABORATIONS

Paper	Track L	Elizabethan Room B
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### Managing International Technology Alliances: Evidence from the Frontlines

S Raghunath, *Indian Institute of Management-Bangalore*

Ram Subramanian, *Grand Valley State University*

Using a case study approach, the study examined strategic alliances of U.S. and Indian technology companies. Three major sets of alliance issues were studied: antecedents to alliance formation, the alliance



governance process, and alliance outcomes. Major findings of the study included the fact that a steep learning existed in succeeding in India's technology market, alliance partners need to have clear expectations of the resources and skills that each partner contributes, and if the alliance agreement puts severe constraints on one partner, there is diminished likelihood of the alliance succeeding.

### **National Perspectives on European Cross-border Mergers and Acquisitions: The Case of Due Diligence**

Duncan Angwin, *University of Warwick*

In this time of record European cross-border mergers and acquisitions (M&A), most theoretical emphasis of enquiry has been placed upon non-cultural factors surrounding how such deals arise and are completed. However it is increasingly recognised in other spheres of management theory that management styles and business performance cannot be separated out from national or regional cultural influence. As a consequence, this exploratory study focuses upon the influence of national differences in business culture upon the pre-acquisition process. This paper reports the findings of a large-scale exploratory survey into whether such cultural differences are reflected in different perceptions of the value of due diligence and the use of professional advisors in the pre-acquisition phase. The findings suggest that national cultural differences do play an important role in affecting acquirer's perceptions of target companies and we suggest that this may have important consequences deal negotiation and subsequent post-acquisition management.

### **Strategic Alliances as Internationalization Strategy of Family-owned Businesses**

Africa Ariño, *IESE Business School-Navarra University*

Miguel Gallo, *IESE Business School-Navarra University*

Isabel Máñez, *University of Valencia*

This paper explores the influence that characteristics specific to family-owned businesses (FOBs) have on the speed of their internationalization strategy and, more in particular, on strategic alliance (SA) formation by this kind of firm. This study was conducted by means of semi-structured interviews with managers from 14 FOBs involved in collaboration activities at different stages. Our findings suggest the pace at which FOBs internationalize is influenced by the extent to which 1) the FOB's founder is committed to the internationalization process; 2) the rest of the organization has confidence that this process is beneficial for the FOB; and 3) efforts are exerted to develop organizational competencies that favor the internationalization process. Similar factors influence the formation of SAs among FOBs.

### **Knowledge Search and Governance Choice in International Joint Venture**

Jiatao Li, *Hong Kong University of Science & Technology*

Oded Shenkar, *Ohio State University*

This paper longitudinally examines knowledge search and governance choice in China-based international joint ventures from transaction costs and knowledge-based perspectives. Both the intentions to form equity ventures and their eventual formation are predicted by the Chinese firms' search for tacit knowledge, high knowledge base, and limited knowledge overlap with foreign partners. However, intentions to form equity ventures are also predicted by a low knowledge base, producing a U-shaped effect of knowledge base that is not replicated at the formation stage. Implications for theory development are delineated.

### **INTEGRATING SPECIALIZED HUMAN CAPITAL FOR COMPETITIVE ADVANTAGE**

Paper	Track I	Elizabethan Room C
<b>Network Governance Evolution in the Spanish Film Industry: Scrutinizing Pathways Towards Independence and Distinction</b>		

José Luis Alvarez, *IESE Business School-Navarra University*

Silviya Svejnova, *IESE Business School-Navarra University*

The paper explores how initially peripheral actors with different identities (maverick, integrated professional, and broker) govern collaborative

structures and enact roles in the quest for independence and distinction. "Mavericks" and "integrated professionals" discriminate between agents who deviate from and comply with the canons of acceptable practice. "Broker" refers to a social entrepreneur who bridges the non-redundant contacts in his network. The insights come from a comparative study of the trajectories of Oscar-winning Spanish filmmakers who represent the three identity profiles. The study provides a nascent theoretical framework for systematic analysis of network governance evolution across structural and role-based dimensions (i.e., structure, strategy, pace, and role versatility). It advances theoretical propositions that link the three different profiles with distinguishable pathways in creating and governing collaborative networks.

### **Network Resources in Project-based Enterprises: New Insights from the United States Movie Industry**

Raffaele Corrado, *University of Bologna*

Carlo Boschetti, *University of Bologna*

Simone Ferriani, *University of Bologna*

The increasing need for flexibility and of shrinking time frames of the firms have stimulated the development of project-based enterprises (PBE). The PBE seems in contradiction with a resource-based view and knowledge-based view on a key issue: accumulation of competencies through internal interaction and their consequent routinization as a source of advantage. Each PBE ends when its single target is achieved, and so end interactions between its members. We argue that complementary interactions survive the dissolution of the PBE and are replicated in following projects. We test our theoretical arguments with social network analysis techniques on interactions that had taken place in 782 movies distributed in the U.S. between 1995 and 1999. While complementary interactions tend to be repeated, non complementary interactions do not.

### **"Show Me the Money": A Structural Equation Model of Strategic Assets and Film Project Development in Hollywood (1988-1997)**

Allègre Hadida, *University of Cambridge*

This paper identifies the strategic assets that American film production companies need to combine to gain a competitive advantage and artistic recognition on their domestic market. It applies the resource-based view to hybrid organizational forms, and uses structural equation modeling with latent variables to test hypotheses derived from this perspective on a sample of 2100 American films first released in the United States between 1988 and 1997. Results broadly support the resource-based hypotheses. They suggest a number of insights about the concept of core rigidities. They also support the balanced approach to the effects of the implementation of organizational routines advocated by the evolutionary theory while rejecting the optimistic stance with which the resource-based approach generally treats routinized processes.

### **Achieving Competitive Advantage by Leveraging Star Knowledge Workers: Performance Drivers of Ranked Analysts**

Boris Groysberg, *Harvard University*

The portability of star knowledge worker performance: myth or reality? This paper examines whether and how dispositional and situational factors influence the short-term and long-term performance of star knowledge workers, in the context of ranked analysts. I also investigate if the degree of the portability of star knowledge workers' performance across firms has changed over time. The findings suggest that both dispositional and situational factors effect star knowledge workers' performance. Thus, if skill specificity exists for "one of the most likely professions to qualify for the free agent status" (star analysts), then it is present for many others. Overall, the findings suggest that star knowledge workers can be a source of sustainable competitive advantage for the firms because they are valuable, rare, and imperfectly mobile.

## Building and Defending Intangible Resources through Managerial Action: The Case of the “Grande Cuisine Francaise”

Rodolphe Durand, *EM Lyon*

Philippe Monin, *EM Lyon*

Hayagreeva Rao, *Emory University*

This study deals with the creation and protection of intangible resources in a context of high imitability, transferability, and substitution. Using available and non-rare resources, how do managers create differential returns, which manifest in terms of legitimacy. We apply our analysis to the French Grande Cuisine industry, in which the ‘chefs’ are the managers. In our theoretical model, performance is expressed in terms of upgrade (gaining stars) and downgrade (losing stars). The chefs activate four types of resources: technical, entrepreneurial, physical, and institutional resources. Our empirical results strongly support the hypotheses. This research is among the first to examine, over time, the consequences of managerial actions on the creation and decay of intangible resources.

### VENTURE TOP MANAGEMENT TEAMS

Paper	Track E	Elizabethan Room D
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## New Venture Evolution and Managerial Capabilities

Warren Boeker, *University of Washington*

Robert Wiltbank, *University of Washington*

Researchers in new venture management often note that entrepreneurial startups require managers with different sets of capabilities as they grow. This study contributes an empirical examination of the impact of strategic change, firm performance and market growth on the need for new top managers with new capabilities. We also examine the existing top management and governance of the firm to explore the effects of ownership, board composition, and the experience of the current top management as factors influencing the addition of top management talent. Exploring the resource-based view of the firm and agency theory perspectives in these new ventures relates traditionally “large firm” issues specifically to new ventures; where each resource is a larger part of the total, and the ownership often remains centered around founding managers.

## Competing in the New Economy: Effect of Intellectual Capital on Entrepreneurship and Future Performance in High Technology New Ventures

James Hayton, *Georgia State University*

Shaker Zahra, *Georgia State University*

Gerard George, *University of Wisconsin-Madison*

This study examines the influence of intellectual capital upon entrepreneurship and subsequent performance of high technology new ventures. Invoking the resource-based view of the firm, it is hypothesized that three dimensions of intellectual capital, namely, human capital, intellectual property, and reputational capital, each positively influence entrepreneurship in high tech new ventures. Further, the study posits that entrepreneurship mediates the relationship between intellectual capital and subsequent firm performance. The model is tested empirically using a sample of 450 high technology new ventures that issued initial public offerings between 1994 and 1998. Implications for strategic management theory and practice are discussed.

## Performance Outcomes of Resource Deployment Strategies, Top Management Experience, and Corporate Governance

Yasemin Kor, *University of Delaware*

Joseph Mahoney, *University of Illinois-Urbana Champaign*

This paper examines whether strategic persistence in resource deployments has a synergistic effect on firm performance and gives attention to both the intensity and consistency of resource deployments. This paper also connects resource-based theory with agency theory in investigating the influence of governance effectiveness on returns from resource deployments. It is argued that a rich theory of consequences of resource deployment strategies requires connecting the knowledge of the top management team, corporate governance, and rent generation. Put

differently, this paper is concerned with performance outcomes of both the quantity, or level, of the resource deployments and the quality of decisions related to these resource deployments. To investigate these concerns empirically, this paper uses a longitudinal sample of entrepreneurial firms that completed an initial public offering.

## The Effect of TMT and Technological Innovation on the Performance of IT Venture Firms at Different Organization Life Cycle Stages

Dong Sung Cho, *Seoul National University*

Jaeyoung Kang, *Seoul National University*

Why some firms that succeeded in their startup stage fail to succeed continuously? The aim of this paper is to answer this question. We classify venture firms into startup firms and adolescent firms from the perspective of organization life cycle and select TMT characteristics and technical innovation as the strategic factors influencing an organization's performance. The result of empirical test for the 76 Korean IT venture firms indicates significant effects for some characteristics of TMT and the degree of technical innovation on newly founded firm's sales growth. On the contrary for adolescent firms, these variables are not significant. Our findings suggest because the importance of strategic factors at each organization stage is different, venture firms should select their strategies with the consideration of organization stage.

### PATENTS AS A VALUABLE RESOURCE

Paper	Track C	Essex Room
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## Patents and Knowledge Management

Lee Davis, *Copenhagen Business School*

This paper seeks to develop an analytical framework to investigate how the patent system shapes the firm's ability to gather, process, evaluate, learn from, and exploit new knowledge. It builds on the concepts of “exclusion” and “diffusion,” which are central to the economic analysis of appropriability and patents, but have not been applied systematically to knowledge management. Innovating firms, we argue, do not necessarily exercise their exclusive rights to prevent others from exploiting their knowledge. And the patent law's information disclosure requirement, intended to enable other firms to learn from patented knowledge, can serve other purposes, such as signaling. Key to the analysis are factors like stage of innovation, industry, firm size, and the degree to which patents have been integrated into firm strategy.

## Insider Trading on Strategic Knowledge of Technological Breakthroughs: Profiting from Unannounced Patent Applications

Gautam Ahuja, *University of Michigan*

Russell Coff, *Emory University*

Peggy Lee, *Emory University*

Do managers exploit asymmetric information about imminent technological breakthroughs to appropriate rent? SEC regulation focuses on knowledge of very short-term events (quarterly earnings, etc.). Managers are free to trade on information about longer-term technological advances. This study relates patterns of insider trading to the firm's patent application process. Patent application dates become public knowledge once patents are granted and a patent's importance may take years to emerge. We test whether patent applications and patent importance drive insider trading at the time of the initial application. This is important because insider trading may allow managers to appropriate rent from a knowledge-based competitive advantage. Additional work should explore how markets adapt to information asymmetries associated with knowledge and how rent is appropriated from resource-based advantages.

## A Resource-based Approach to Unlocking the Hidden Value of Intellectual Property

Maritza Espina, *Rensselaer Polytechnic Institute*

Gideon Markman, *University of Georgia*

Phillip Phan, *Rensselaer Polytechnic Institute*

How does intellectual property (IP) help firms compete? A resource-based view of strategy suggests that inimitable, rare, and non-substitutable



technologies can provide a sustainable competitive advantage (Barney, 1991). Applying this rationale, we postulate that if a firm's ability to create and protect its technological discoveries may be framed as a core competency, then IP is the building block of sustainable competitive advantage and differentiation strategy. We show empirically that pharmaceutical companies (SIC Code 2834) that are able to produce patentable new technologies are also more likely to pursue radical product innovations rather than simple product imitations. Our empirical findings lead to several recommendations for future research, practice, and theory on the intersection of strategy and IP.

### MODULAR STRATEGY IN AN ARCHITECTURAL WORLD

Paper	Track D	Georgian Room
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#### Modular Stepping Stones Along the Technology Path

Nile Hatch, *Brigham Young University*

In an environment of fast-paced innovation, competitive advantage hinges on the ability to maintain a steady stream of new products or services. I show how a modular approach to innovation enables rapid innovation and forms the basis of a firm's technology path over time. A firm's library of manufacturing modules represents its current store of technical knowledge. It is simultaneously the foundation for future innovation and the set of constraints that limits the reach of innovative efforts. When the firm moves far from its existing knowledge base, it incurs increasing development costs that anchor the firm to its history and guide its long-run path of technology development. The path can be mapped by treating new modules as real options on developing related modules at lower cost.

#### Creating Durable Knowledge in the Biotechnology Industry: The Role of Modularity and Decay

Anupama Phene, *University of Utah*

Karin Fladmoe-Lindquist, *University of Utah*

Our study examines how firms can create dynamic capabilities to succeed in high technology environments. We focus on the role of durable knowledge in creating dynamic capabilities and determine how firms can create durable knowledge. Theoretically, we make a contribution by examining the characteristics of durable knowledge - modularity and decay. Knowledge that is durable, exhibits high modularity and low levels of decay thereby maximizing the firm's investment in creating the knowledge. We hypothesize that step function learning and the breadth of the firm's technological base positively affect the extent of modularity. Modularity, in turn, is posited to have a negative impact on decay. Empirically, we use patent data from the U.S. biotechnology industry to operationalize characteristics of knowledge. LISREL is used to test the model.

#### Product Modularity and the Contextual Factors that Determine its Use as a Strategic Tool

Peter Galvin, *Curtin University of Technology*

Jennifer Davies, *Queensland University of Technology*

John Rice, *University of South Australia*

Product modularity has been associated with organizational advantages such as enhanced learning at the component level, rapid determination of consumer preferences and low barriers to entry across an industry, along with disadvantages such as lower levels of radical innovation, higher development costs and an inability to derive a competitive advantage on the basis of product superiority. This paper considers these advantages and disadvantages in terms of two contextual factors: the level of control that is exerted over the information structures and the degree of change across the information structures. The aim is to provide a starting point for discussing some of the contextual factors that affect the ability for product modularity to be used as a strategic tool.

### STRATEGIES FOR DYNAMIC ENVIRONMENTS: CASES AND CONTROVERSIES

Paper	Track J	Hampton Room
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#### Innovation and "Competing on the Edge": An Empirical Test of Brown and Eisenhardt (1998)

Kurt Heppard, *United States Air Force Academy*

Christine Koberg, *University of Colorado-Boulder*

Dawn Detienne, *University of Colorado-Boulder*

Our study is an empirical test of Brown and Eisenhardt's statements regarding firms that are innovators. Their contention that these firms exhibit underlying processes of improvisation, experimentation, and transitioning or sequencing across projects in generally supported by our study. Our study is a large, cross-sectional study in multiple industries thus demonstrating the generalizability of many of Brown and Eisenhardt's central theses. An important outcome of our study is that our results validate many of Brown and Eisenhardt's proposed measures of factors related to "competing on the edge" or strategies based on innovation and complexity.

#### Leadership on the Edge: Old Wine in New Bottles?

Len Nanjad, *University of Western Ontario*

Mary Crossan, *University of Western Ontario*

Dusya Vera, *University of Western Ontario*

Is there a new form of leadership required to support new combinations of strategy and structure in order to be successful in hyper-competitive, high velocity, chaotic environments? This paper provides a brief overview of the literature addressing the links between organization, strategy, environment, and leadership. This is followed by a review of the current thinking on the characteristics that make the new competitive environment a fundamentally different one and discussion of the apparent need to find new forms of strategy, structure, and leadership that lead firms to success. We conclude that a new leadership model is needed. An "adaptive" form of leadership is defined and components are proposed. Implications for research and management are then presented."

#### Dealing with Dynamic Environments: Professional Service Firms and the Nature of Flexible Organizational Structures

Bente Løwendahl, *Norwegian School of Management BI*

Oivind Revang, *Norwegian School of Management BI*

One of the most important and difficult challenges in dynamic competitive environments is the question of how the organization is structured in order to achieve efficiency, agility, and adaptability simultaneously. This paper presents an effort at theory development, based on in-depth studies of highly knowledge intensive firms, and we propose three key dimensions driving the complexity of organizing: the extent to which tasks (activities) are predefinable ex ante (formerly described as task characteristics), the degree of interdependence between tasks, subtasks, and the people performing the tasks, and the type of coordination required. We extend the work of a classic in organization theory, Thompson (1967), by adding tasks that are not predefinable ex ante. We also discuss managerial implications of this added dimension.

### VALUATION: COMPANIES AND PORTFOLIOS

Paper	Track F	Kent Room
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#### Sub-additivity and Super-additivity in Strategic Investments: A Real Options Model

Roberto Santiago Vassolo, *Purdue University*

Jaideep Anand, *University of Michigan*

Real options formulations have become an important tool to understand how firms cope with technological and market uncertainties. However, such models treat each option as independent and ignore the observation that firms often simultaneously invest in multiple options. In this paper we model the interaction between options based on two conceptual lenses. First, we investigate the effects of correlations between the outcomes in different options. Second, we analyze the effects of investments that are fungible across project options. We show that under different conditions multiple options can be sub-additive (due to redundancies in outcomes)

or super-additive (due to fungible inputs). We test the implications of our model with data from the biotech industry and find some supporting evidence. Our model and results have some interesting implications for the real options lens in general, and for investments in multiple technological and market-entry projects in particular.

### Market Valuation of Firms' Technological Knowledge: A Real Options Perspective

Raffaele Oriani, *University of Bologna/Luiss Guido Carli University*

Maurizio Sobrero, *University of Bologna*

In spite of the growing attention to the role of intangible assets for the firm's competitive advantage, we are still lacking adequate schemes for knowledge valuation. This shortcoming affects several important decisions such as the funding of firms' R&D investments. We contribute to this research stream in three ways: 1) we use real options to develop a theoretical framework to understand the complex relationships between knowledge, uncertainty, and the value of the firm; 2) we focus on the stock market valuation of the firm's R&D capital to formulate a set of testable hypotheses; and 3) we present and discuss the empirical results based on a unique panel data set, including about 500 companies publicly traded in four European countries between 1989 and 1998.

### The Real Options Component of Firm Market Value: The Case of the Technological Corporation

Pablo de Andrés Alonso, *University of Valladolid*

Valentín Azofra Palenzuela, *University of Valladolid*

Gabriel de la Fuente Herrero, *University of Valladolid*

The aim of this paper is to examine the notion that the market value of companies reflects the investors' expectations with regard to the value of real options. We test the empirical relation between alternative estimates of the proportion of total firm market value accounted for by the value of real options and a series of variables that are supposed to disclose the actual or potential holding of real options by the company. The analysis is implemented based on a sample of 569 technological companies listed on the main OECD stock markets in the period from December 1994 to December 1999. Our analysis provides evidence in favor of the relevance of the real options portfolio value of the firm in its total market value.

### Assessing the Predictive Ability of the Real Options Approach Using Perfect Information

Todd Alessandri, *University of North Carolina-Chapel Hill*

Diane Lander, *University of Southern Maine*

Rich Bettis, *University of North Carolina-Chapel Hill*

The real options approach has received increasing attention in the strategy literature. Strategists focus on the strategic thinking benefits of this approach, while finance researchers emphasize the benefits of the approach over traditional valuation tools. Yet, application of the real options approach by practitioners has been limited due to the poor generalizability and complexity of the models (Lander and Pinches, 1998). This research employs "perfect information", i.e. actual firm performance, as inputs to a real options model to directly value the firm. We use Kester's (1984) model that decomposes the value of the firm into two components: the value of assets-in-place and the value of growth opportunities. This research provides a cross-sectional test of the theoretical arguments of real options proponents using a generalizable model.

### POST ACQUISITION INTEGRATION AND OUTCOMES

Paper	Track G	Olympic Room
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### Organizational Integration of Biotechnology Companies in the Structure of Big Pharmaceutical Companies after the M&A Deal

Lars Schweizer, *Otto-Friedrich University-Bamberg*

Based on in-depth case-studies, this paper analyses the organizational integration of biotech companies by big pharmaceutical companies after the M&A deal in order to gain access to the biotech knowledge and preserve their entrepreneurial competencies. This study reveals that pharmaceutical companies try to grant acquired biotech companies

as much autonomy as possible concerning the early steps of the pharmaceutical value chain like research, whereas the later steps like sales and marketing are completely carried out by pharmaceutical companies. The integration strategy depends on the positioning of the biotech company with respect to the pharmaceutical value chain. Moreover, it turns out that the entrepreneurial spirit gets lost after the acquisition which is, however, expected by pharmaceutical companies considering the acquired company henceforth rather as a discovery unit.

### The Evolution of Corporate Development Capabilities: Understanding Experience Spillovers Across Acquisitions and Alliances

Maurizio Zollo, *INSEAD*

Jeffrey Reuer, *Ohio State University*

This study develops a theoretical explanation for the existence of positive and negative experience effects across corporate development activities. We suggest that the similarity in two activities' execution decisions influences both the sign and magnitude of experience spillovers. The argument is used to understand how alliance experience and acquisition experience influence the performance of acquisitions in the U.S. commercial banking industry. The empirical evidence indicates that the spillover effect of alliance experience on acquisition performance is a function of the decisions made in the post-acquisition phase regarding the level of integration and the replacement of top management. We also find a U-shaped relationship between acquisition experience and acquisition performance as well as between alliance experience and acquisition performance, indicative of negative transfer effects.

### Does Procedural Justice Matter in Integrating Large Acquisitions of Similar-sized Firms?

Kimberly Ellis, *Michigan State University*

Bruce Lamont, *Florida State University*

Mergers of equals are not only popular, they are phenomenologically unique, making their performance determinants potentially different from other types of M&As. Perhaps, the most distinguishing characteristic is that the joining of similar-sized firms necessitates the creation of a new combined firm requiring the dismantling of one, and in most cases both firms. Procedural justice is likely to be a critical component of the integration process associated with M&As involving organizational recreation and transformation, where the participation of members in both organizations is essential for the "new" combined organization to function anywhere near its potential. After controlling for factors identified in previous research, we find evidence that components of procedural justice have a significant effect on performance outcomes associated with this special type of M&A.

### "Ideal" Acquisition Integration Approaches in Related Acquisitions of Equals: A Test of Long-held Beliefs

Kimberly Ellis, *Michigan State University*

Bruce Lamont, *Florida State University*

A long held notion in the acquisitions literature contends that the ability to manage multiple elements of the integration process is a critical determinant of post-acquisition outcomes. While case evidence and prescriptive work has generated useful guidelines about the effective integration of acquisitions, their veracity and generalizability remain unknown. This study tests implied configurations of effective process elements. We find good support for an "ideal" configuration when implementing absorption and transformation approaches, although not always as hypothesized. The contributions of our research rest on the increasing level of acquisition activity, despite the inability of previous ones to enhance value, as well as the limited evidence that can be applied to our understanding of the extent to which configurations of multiple process elements influence post-acquisition performance.

**COMPETING IN THE FACE OF NETWORK EXTERNALITIES - I**

Paper	Track B	Oxford Room
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**Overturning a De-facto Standard: Co-evolution, Network Effects, and Technology**

Scott Gallagher, *James Madison University*  
Seung Ho Park, *Rutgers University*

Competition in industries where significant network effects are present, so called standard based industries, has captured a significant amount of attention from strategy scholars. However, this work is often focused on how the standard is initially captured or set. Far less consideration appears to have been given to how extant standards are overturned. For example, the compact disk had to overcome the cassette tape. This paper describes the overturning of standards as a co-evolutionary process between three constructs - network effects, the degree of technological improvement, and the relative capabilities of the standard holder(s) and rival firms. Over time a wave pattern is expected in industries as products that conform to the extant standard battle with contemporary rivals as well as more technologically sophisticated standards.

**Competing through Innovation in Network Markets: Strategies for Challengers**

Willow Sheremata, *Tulane University*

Challengers can successfully compete against dominant firms in network markets. However, the type of innovation a challenger should compete with depends on characteristics of demand and technology. I develop a comparative model of expected returns from four types of product innovation, after first developing a framework to delineate innovation types. This model indicates radical innovation can be a more profitable strategy than incremental innovation, and incompatible innovation more profitable than compatible innovation. Sometimes it is more prudent for a challenger to take on more risk, but this depends on the characteristics of the market in play.

**Managing Lock-in: A Framework for Competing in the Networked Environment**

Mike Hess, *IESE Business School-Navarra University*  
Joan Ricart, *IESE Business School-Navarra University*

Customer lock-in entails creating high switching costs for customers that deter them from switching to a competitor's product or service. If managed successfully, lock-in can provide the firm with an important competitive advantage. In addition to traditional lock-in strategies, important new lock-in strategies are possible in today's increasingly interconnected environment. Despite lock-in's recognized role in contributing to competitive advantage and its increasingly strategic characteristics in the expanding networked environment, we find a lack of coherence and completeness in the conceptual tools and models developed to understand its role and help effectively manage the force. In this paper we attempt to address these needs by expanding and refining the conceptualization of the force and developing a more comprehensive lock-in framework for managers.

**The Fall of a Silicon Valley Icon: Was Apple Really Betamax Redux**

Joel West, *University of California-Irvine*

Apple Computer was once the face of the PC revolution and Silicon Valley's first global icon. However, in the 1990s Apple was eclipsed by rivals, entering a long period of relative decline that many incorrectly assumed would be terminal. The accepted truth of the Apple exemplar is that its Macintosh was "another Betamax" -- that the failure to license technology consigned Apple to a small market share and, through positive network effects, sealed its inevitable decline. After reviewing Betamax-derived theories of network effects, we examine the specifics of Apple's troubled decade in light of the network theories and simpler explanations of strategic and operational error. We conclude by showing how a skeptical reading of the accepted "Betamax" wisdom might affect the strategies of other firms.

**THE STRATEGIC SCOPE OF ONLINE BUSINESS MODELS**

Paper	Track I	Victorian Room
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**Competitive Drivers of Performance in Online Banking for Traditional Banks: Experience Goods, Search Costs, and Scope of the Firm**

Thomas Brush, *Purdue University*  
Jonathan O'Brien, *Purdue University*

In this paper we examine the performance of 1250 banks that have added online banking to their traditional delivery of banking services and compare them to banks that have not added these services. This comparison not only identifies how e-business is different from traditional forms of business, but also traces the evolution of the value creation process in online banking. We evaluate whether online banking improves performance or whether it has just become a necessary cost of business. Further, where it does improve performance, we determine whether it does so through cost reduction and greater leveraging of existing fixed premises, or through the revenue expansion that arises from selling more services to clients.

**The Determinants of the Range of Exchange Services in Online Vertical Marketplaces**

Sugato Bagchi, *IBM Corporation*  
Thomas Brush, *Purdue University*  
William Tulske, *IBM Corporation*  
Jianfeng Wu, *Purdue University*

In this paper we examine the range of exchange services in 130 online vertical marketplaces. In each of these vertical markets, online exchanges have developed or are developing in different ways. We categorize a variety of online exchange forms, in terms of the pattern of services offered by the exchange. We organize these patterns in terms of an ordinal sequence on a continuum between market exchange and vertical integration. We then estimate the determinants of these forms due to theoretical explanations such as transaction cost economics, market power, or efficiency of production, logistics or product development.

**Strategic Business Models for Complex Businesses: Methodology and Practice Examples**

Christoph Vogel, *Siemens AG*  
Andreas Ziegenhain, *Siemens AG*

Defining a strategic business model, especially in complex and heterogeneous organizations, is one important task for ensuring business excellence and growth. A methodology for realizing competitive advantage by defining the right strategy will be explained and illustrated with examples of a solutions and service business. The methodology of systematically developing a strategic business model includes the identification of a strategic business model, the assignment of businesses to strategic business models, the comprehensive assessment of businesses, and the determination of the strategic business models with a business plan. General guideline and recommendations on how to use the strategic business model methodology in general will be given.

**Explaining Entry Decisions and Crowdedness in Business-to-Business Electronic Commerce Markets**

David Croson, *University of Pennsylvania*  
Michael Jacobides, *London Business School*  
Amy Nguyen, *A T Kearney*

Billions were committed in 1998-2000 to fund entrants in B-to-B electronic marketplaces. B-to-B exhibit scale economies, network externalities and winner-take-all effects. We show empirically, however, using a detailed survey data set collected in 2000 from over 100 business-to-business exchanges, that markets with larger potential revenues attract significantly (and irrationally) more than proportional entrants. We examine competing theoretical explanations: Impacts of market structure under competition, oligopoly & increasing return to scale; option value of early presence in markets requiring uncertain capabilities; and finally agency, where entrepreneurs seek markets that yield funding, even at the



expense of future profitability. The latter hypothesis draws most support. We also examine what managers consider important for the success of new entrants, looking at whether firm-specific attributes or market structure dominate.

#### INTERNATIONAL PERSPECTIVES ON THE NEW ECONOMY

Paper	Track A	Yorshire	Room
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#### How does International Location Matter in the New Economy?

Srilata Zaheer, *University of Minnesota*

Shalini Manrakhan, *University of Minnesota*

We explore how the digital economy alters the motivations of firms to locate value-adding activities internationally. We suggest that higher digitization of value added, greater outcome-based control and more codified knowledge will increase the likelihood of an activity being remotely performed. Thus, locational factors such as agglomeration economies may become more critical in influencing the dispersion of activities worldwide, as firms look for efficiency and knowledge. As an illustration, we do an exploratory analysis of the worldwide spatial distribution of firms in financial services pre and post the introduction of a B2B electronic network. The results suggest that while the introduction of electronic networks increases the participation of firms from the periphery, it does not significantly reduce the role of locational clusters in the industry.

#### Digital Pathways to Multinational Strategic Mentalities

Maheshkumar Joshi, *St Joseph's University*

Hugh Sherman, *Ohio University*

Roger Kashlak, *Loyola College*

Global integration and local responsiveness pressures affect competition in industries crossing national boundaries. Organizational design has been linked to these strategies, a global orientation and a multidomestic orientation. In this paper we discuss the basic changes that have occurred due to growth of the digital economy. We present the new rules under which firms will have to create strategies to succeed in the future. We revisit the multinational strategic orientations of firms and the typical pathways used by indigenous firms to become a transnational. Using case studies, we map the changed pathways to each of the strategic mentalities because of the growth of the digital economy. Finally, we develop hypotheses and the research framework to move beyond the case study approach.

#### Italian e-Tailing: A Deep Insight and a Comparison with the United States Situation

Andrea Rangone, *Polytechnic of Milan*

Davide Corradi, *The Boston Consulting Group*

Isabella Gandini, *Polytechnic of Milan*

Umberto Bertelè, *Polytechnic of Milan*

The paper shows the result of a study on B2C electronic commerce. The main objective of the analysis is to compare the Italian situation with the international environment, in particular with that of the U.S., using the results of a study carried out in 2000 by Shoplab.it, permanent observatory of B2C electronic commerce in Italy, promoted by Associazione Impresa Politecnico di Milano (AIP), The Boston Consulting Group and Idc Italy. The analysis describes in details the B2C e-commerce sector in Italy (dynamics, structural variables, performance and economics drivers of the most relevant initiatives) on the basis of a large sample of case studies, highlighting the main differences between the Italian situation and that in the U.S. and trying to understand the structural reasons of those differences.

#### The Emergence of e-Chaebols: Transformation of Korean Business Groups to the Internet Economy

Sea-Jin Chang, *Korea University*

This paper pursues how the chaebols, which were shattered by the 1997 Asian crisis, have been installing the new economy model. Chaebols were initially stunned by the sudden shift to the new economy. They were heavily indebted and were undergoing serious restructuring, and

their best and brightest employees were leaving them en masse to join startups. Investors were shunning their stocks. They managed, however, to slowly move into Internet businesses. Their general trading companies spearheaded such efforts. Their Internet retailing business attracted many customers who trusted their brand names. They also translated their off-line businesses to B2B e-commerce. These forays by chaebols into Internet businesses represent the creation of e-chaebols. This paper will examine some recent efforts by chaebols to transform themselves to the Internet economy.

**PAPER / PANEL SESSION 08:00 - 09:15****CAPTURING VALUE FROM INNOVATION**

Paper	Track I	Borgia Room
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**Patent Infringement Suits: An Entry Barrier in the Semiconductor Industry?**

Karsten Hoppe, *Otto-Friedrich University-Bamberg*  
 Dodo zu Knyphausen-Aufsess, *Otto-Friedrich University-Bamberg*

This paper examines patent litigation suits in the semiconductor industry during the 90s. The research developed from an increasing importance of patents in the semiconductor industry, which shows the growing number of patent applications and patent litigation suits in the semiconductor field. The fact that the semiconductor industry is considered a complex industry with stacked patents raises the question whether incumbents can use their patent portfolios to create entry barriers against newcomers. Based on an analysis of patent litigation suit parameters and the subsequent development of the involved firms, two relations are examined: First, what effect do these key parameters have on the suit's outcome and second, how does the outcome affect post-suit development?

**Business Model Development and Commercialization Challenges Associated with Breakthrough Innovations**

Gina Colarelli O'Connor, *Rensselaer Polytechnic Institute*  
 Richard Leifer, *Rensselaer Polytechnic Institute*  
 Mark Rice, *Babson College*

Commercializing breakthrough technologies can be difficult due to business model and commercialization challenges even after a market application or breakthrough innovation (BI) has been identified. Based on a six year study of twelve BI in ten established companies, seven challenges to commercialization were identified: 1) not all BI are the same, we identify three types of BI; 2) initial application choices influence business model development, perhaps prematurely; 3) building a business model is experimental in nature; 4) attractive business models may take the firm far from what is familiar; 5) typical entry applications for BI are smaller than operating units expect; 6) overtime, killer applications are built through application migration; and 7) BI market development tools mirror tools for market exploration.

**Extending Innovation Beyond the Corporate Boundary**

Amy Muller, *Strategos Institute*  
 Liisa Välikangas, *Strategos Institute*

Extended innovation is beginning to change the very definition of a firm and of an industry. Firms are no longer defined by the assets they own or by the products they sell. Industries develop pertinent characteristics other than the number of sellers and buyers, product differentiation, or entry barriers. Extending innovation beyond the corporate boundary into a strategic network of collaborators provides levers for innovation beyond the corporate boundary. By studying the emergence of innovation in two industries, we will draw conclusions as to the drivers of extended innovation, mechanisms for engaging in such innovation activity, and the nature of the new extended corporation. Consideration of industry alliances emerges as a strategic variable for developing portfolios of competencies critical for innovating in an extended fashion.

**Strategic Innovation in Financial Services**

Laura Costanzo, *University of Leeds*

Primary qualitative data captured from the U.K. financial services industry provide a greater understanding of how financial organisations strategically innovate and what the implications are for the theory of business strategy. The study reveals the "evolutionary" nature of innovation among four groups of different financial organisations, whose strategic approach to innovation is on 'how to get better' rather than on 'how to get different'. Across the four groups, however, there is the emergence of a qualified category of 'breakthrough innovators': the organisations who radically changed the rules of their industry by adopting a "customer-centric perspective of the entire business". This perspective leads "breakthrough innovators" to occupy unique positions

in the market, whilst enabling them to achieve differentiation from their competitors.

**KNOWLEDGE INTEGRATION AND THE DYNAMICS OF COMPETITION IN THE GLOBAL ECONOMY**

Panel	Track L	Elizabethan Room A
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Yves Doz, *INSEAD*  
 Peter Williamson, *INSEAD*  
 José Santos, *INSEAD*  
 Andrea Cuomo, *ST Microelectronics NV*

Effectively accessing, sharing, melding and leveraging complex knowledge from multiple locations has become a powerful competitive advantage in today's global knowledge economy. Combining practitioners' and academics' insights on companies that lead the way in learning from the world, the panel participants will provide complementary perspectives on how to develop global knowledge management capabilities: how the strategy of knowledge integrators differs from that of more conventional global competitors, why melding complex knowledge from multiple locations is difficult and how companies can successfully do it, and how more traditional multinationals can develop new capabilities for knowledge integration and global learning. The experience of ST Microelectronics, the second most successful semiconductor company in the world (after INTEL), will be presented in detail to illustrate these points.

**INTERNATIONAL INVESTMENT DECISIONS: PRODUCT, PLACE, AND PRACTICE**

Paper	Track L	Elizabethan Room B
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**Foreign Investment and International Plant Configuration: Whither the Product Cycle?**

René Belderbos, *University of Maastricht*  
 Leo Sleuwaegen, *Catholic University-Leuven/Erasmus University-Rotterdam*

We analyze the determinants of the decision to invest abroad in particular configurations of overseas plants for 120 Japanese firms active in 36 well-defined electronic product markets. We find support for a structured internationalization decision model in which the decision to produce abroad and the choice for a specific international plant configuration are treated as nested strategic options. The product cycle still appears as an important force pushing firms to set up Asia-focused or global plant configurations. In contrast, plant configurations focused on the U.S. and the EU are a result of restrictive trade policies or offensive market access considerations vital to technology intensive firms facing competitive threats in foreign markets.

**Investment Across Latin America: A Logit Analysis of Chilean Strategies**

Patricio Del Sol, *Catholic University-Chile*

One of the most significant responses of Chilean companies to the economic liberalization that has taken place in Chile and the rest of Latin America has been their unprecedented investment commitments across the Latin American region. This paper analyzes these decisions to invest by applying a logit model to data collected through a survey of 102 chief executive officers. The empirical results show that a firm tends to invest abroad more: 1) if it is a member of a Chilean group; and 2) the more strategy changes it has made in dimensions other than investing abroad.

**The Effect of Multinational R&D Activities in Taiwan Knowledge Flow System**

Julia Lijuan Lin, *I-Shou University of Taiwan*  
 Shih-Chieh Fang, *I-Shou University of Taiwan*  
 Luke Hsiao, *I-Shou University of Taiwan*  
 Shih-Rong Fang, *Yunlin University of Science & Technology*  
 Chung-Ming Huang, *Chang Jung Christian University*

Questions about the R&D activities of multinational enterprises were addressed to a sample of 60 firms with investments in Taiwan, stratified by national origin and randomly selected from the Economic Ministry's list of foreign manufacturers. The findings support these suggestions:

1) the types of R&D units established by foreign firms vary as a function of the firms' strategic emphasis on market, technology, efficiency, and ownership factors, and the importance of Taiwan to their enterprise; 2) different types of R&D units have differential effects on the type and frequency of Taiwanese knowledge flow, characterized by human resource participation, equipment production and property rights; and 3) the nationality and years of investment in Taiwan influence the types of R&D organizations developed by multinational enterprises.

### Configuring and Coordinating Multinational Operations in the Asia-Pacific

Michael Enright, *University of Hong Kong*

Rapid changes in the global economy are having important impacts on the configuration and coordination of the international operations of multinational firms. A two-year study of the activities of North American, European, and Japanese companies in the Asia-Pacific has shown that the configuration of activities in the region depends on variables associated with host economies as well as variables associated with specific firms. The determinants of configuration choices differ from activity to activity and between manufacturing and service firms. Many companies have adopted regional structures to coordinate their activities that reflect segmentation of the region into distinct markets and sources of supply. Although overall structures remain fluid, as firms respond to new challenges in the region, strategic roles are being assigned to particular regional centers.

### RHYTHMS OF COMPETITIVE INTERACTION

Paper	Track I	Elizabethan Room C
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#### Time Pacing Behaviors and Performance: A Three-study Exploration

Peter Davis, *University of Memphis*

C Clay Dibrell, *Oregon State University*

Despite recent efforts to promote the importance of time pacing for organizational performance, researchers have failed to empirically substantiate the proposed linkages. Consistent with the conceptualization of time pacing articulated by Brown and Eisenhardt (1998), the authors assessed firms' emphasis on time pacing behaviors and their links to organizational performance using a combination of mail and web-based survey questionnaires. Two components of time pacing behaviors—internal and external—were observed and found to exhibit significant relationships with performance.

#### Divisionalization: Strategic Effects of Organizational Structure

Metin Sengul, *INSEAD*

The effect of organizational structure has been a major concern for management scholars for a very long time. Although there is considerable work that has examined the influence of organizational structure on firm performance from the efficiency perspective, no study in the management field has focused on how organizational structure affects firm performance through dynamic interactions within the industry. Despite its well-developed theoretical background in Industrial Organization Economics, effects of divisionalization lacks empirical support and a critical evaluation through the lenses of management theory. Based on an extensive literature review, this paper fills this conceptual gap by introducing a comprehensive theoretical framework of divisionalization concentrating on the industry-level and the firm-level effects. The paper concludes with remarks, limitations and directions for further research.

#### Strategies for Managing Demand Shocks, Supply Disruptions, and Other Extraordinary Circumstances

Lois Marie Shelton, *University of Illinois-Chicago*

Abigail McWilliams, *University of Illinois-Chicago*

Periodically, managers face predicaments caused by disruptive industry conditions, resulting in crises like the current natural gas supply imbalance, or price instability from excess capacity or supply shortages. These short-term structural problems, which can slash profits, can be managed by implementing strategies to modify industry characteristics and create stability and facilitate economic exchange. Here, a strategic or

game theoretic approach to solving these problems is presented. Empty core industries, which consistently suffer disruptive conditions, are used to illustrate a variety of broadly applicable solutions to structural market instability. One important implication is that managers in industries possessing even a few of the structural characteristics leading to industry volatility should consider implementing strategies in advance to protect earnings should disruptive conditions arise.

### Optimal Pricing Strategies for Incumbents Entering a Competitive Environment

Andreas Florissen, *McKinsey & Company*

Boris Maurer, *McKinsey & Company*

Bernhard Schmidt, *McKinsey & Company*

Thomas Vahlenkamp, *McKinsey & Company*

Pricing is an important value lever. However, many managers in newly liberated markets have trouble discovering the right prices for their products and services. Often, they misinterpret the factors that influence pricing: competitor price, switching rates, customer value, and cost to serve. This is symptomatic for incumbents with little competitive experience such as former monopolists. The authors explain why these factors are often misinterpreted and show the relations between the factors and the optimal price, which can then be calculated based on a quantitative model. In sum, the optimal price is usually higher and the switching rates lower than expected; customers have different values; and, though this is a tough lesson for many incumbents, it is necessary to lose customers in order to optimize value.

### RETHINKING AND REINVENTING STRATEGY: SCIENCE, SIMULATION, AND STORYTELLING

Paper	Track General	Elizabethan Room D
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#### Using History in Strategic Management

Scott Gallagher, *James Madison University*

History is one of the most frequently used foundations for strategy formulation by firms. Whither in the form of prior executive experience, organizational memory, or detailed statistical analysis, the past is used to inform the present. However, despite the use of case based teaching methods and numerous practitioner oriented articles, explicit discussions of how to apply history to strategic management appear infrequently. Therefore, this paper describes the role of history in strategic management today as informing an understanding of differences, context, and processes. History's role is examined at the three most common levels of analysis for strategy, the firm, the industry, and the macro-environment.

#### A History for the Future of Strategy

Stephen Cummings, *University of Warwick*

Both proponents and critics of strategic management's 'classical' approaches generally assume that the field was born in the 1950s and 1960s, with some antecedents in earlier military approaches. This paper argues that strategic management is limited by taking such origins to be key reference points, and that this limited understanding is related to the limited view of history that management, in general, has. Deconstructing and then regenerating the histories of management and strategy, 'liberating' the field to think otherwise by opening up its history to a wider range of influences as to what strategy could be, is, therefore, a crucial step toward re-inventing strategic management and thinking differently in the 21st century.

#### Socrates, Strategy, and Structural Modeling

Brian Boyd, *Arizona State University*

Steve Gove, *Arizona State University*

Strategy research has been characterized as placing less emphasis on construct measurement than other management subfields. This study documents the state of measurement in strategy and discusses the implications for interpreting research. We begin with a content analysis of empirical work in strategy published between 1995 and 2000. We find that many studies do not discuss reliability and validity issues, and typically rely on single-indicator measures. Additionally, studies rarely address the problems of attenuation due to measurement error. To



illustrate the consequences of measurement error, we revisit the debate on the causes of diversification (Amihud & Lev, 1982). We find that the divergent findings between studies are largely the result of measurement error, and that prior work has underestimated the true effect size between variables.

### The Case Study Method of Strategy and Management Research: Enhancing Internal and External Validity

Winfried Ruigrok, *University of St Gallen*

Michael Gibbert, *University of St Gallen/Siemens AG*

Barbara Kaes, *University of St Gallen*

The objective of this paper is to identify strategies for quality assurance in case study research. This shall be achieved by first, giving an overview of the status quo in case study research. In a second step, quality measures pertaining to case study research are delineated and strategies to enhance the different forms of validity and reliability in applied case study research are identified. This is ensued by a critical analysis of systematically chosen case study-based articles published in leading strategy and management journals. In the final section, the present paper derives propositions for the advancement of case study methodology theory and for the application of case study research in practice.

### RENTS, VALUE, AND CAPITAL

Paper	Track A	Essex Room
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### Rents, Hazards, and the Boundaries of the Firm: Incorporating Competitive Conditions into Transaction Cost Economics

Julia Porter Liebeskind, *University of Southern California*

TCE as it is currently formulated does not explicitly consider differences in competitive conditions in making predictions about governance arrangements. We examine this question. First, we show that argue that when transactions generate monopoly rents, the net benefits of internalization may be greater for a given level of transaction hazard, than when transactions are conducted in competitive markets. Second, we show that the net benefits of internalization for a firm earning Ricardian rents may be lower than for a firm earning no such rents. Third, we consider the case of governance choice by a firm that is facing a monopolist. Here again, internalization is more likely in some circumstances.

### Value Management: Creating, Co-producing, and Appropriating Value

Charles Hill, *University of Washington*

Violina Rindova, *University of Maryland*

Recent debates in strategy research have suggested that value creation and value appropriation are two alternative approaches to superior profitability. Value creation rests on dynamic deployment of core competencies; value appropriation on competitive tactics for retaining a larger portion of value. In this paper, we examine the different components of value, and relate them to three complementary processes of value management: value creation, value appropriation, and value co-production. We argue that innovation, competitive tactics, and customer and supplier interactions are the key strategic activities through which firms manage value. Our framework offers an integration of the currently disparate views of value creation and appropriation, and shows how specific strategic activities contribute to the value pie.

### Measuring Intangible Capital: Which Assets Support High Firm Values?

Catherine Maritan, *State University of New York-Buffalo*

Karen Schnatterly, *University of Minnesota*

Intangible capital such as knowledge, people, reputation, systems and relationships has become the main basis of competitive differentiation in many industries. Strategy scholars have long recognized the importance of these intangible assets in the form of resources, capabilities, and routines, to value creation and competitive advantage. However, because these assets are difficult to measure they are also difficult to value. In this study we empirically evaluate the contribution of a wide range of resources, capabilities and routines to firm value. Using a matched-pair

design we compare high market-to-book value firms with similar firms having average market-to-book values to determine which intangible assets effectively discriminate the high value firms from the others.

### Economic Rent Generation in Online Auctions

Ilgaz Arian, *Ohio State University*

Auctions, as a pricing mechanism, are most commonly used for goods where each potential buyer assigns asymmetric (private) value to the product since winner's curse is associated with the auctions of goods with common (symmetric) value. However, firms in multiple industries are adopting auctions for acquiring inputs with both common and private values. Theoretical explanation is offered to solve this contradiction by examining economic value creation and B2B online auctions. Can firms generate economic rents through auction mechanisms? In accordance with the resource-based view, firms can generate sustainable rents through auctions. Bidding behavior of firms depends on the auction type, market conditions, product characteristics and bundling. Creation of a centralized market generates rents for buyers by deeming important how you buy inputs.

### RADICAL INNOVATION IN OLD AND NEW INDUSTRIES

Paper	Track D	Georgian Room
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### Strategic Path and Competitive Advantage: The Search for Key Success Factors in the World Steel Industry

Stephen In-ho Kim, *Hanyang University*

Sung-Soo Han, *ETRI-IT Technology Management Research Institute*

This paper explains about the shift in industrial hegemony in the world steel industry through the strategic path that is a hybrid concept as the combination of growth vector (firm level) to cope with market change (industry level) and innovation vector (firm level) with technological change (industry level). Recognizing that competitive advantage comes from the strategic path during a given period of time based on the initial conditions at a given point in time, an empirical study has been done with the experience of the 30 biggest companies registered at IISI. The very finding is that competitive advantage is dependent on the strategic path representing the effect of interaction between industry drivers and strategic behavior variables as well as on the industry-specific and firm-specific effect.

### Breaking the Frame: Radical Change through External Corporate Venturing

Thomas Keil, *Helsinki University of Technology*

Ari Backholm, *Smarter Information Systems Ltd/Helsinki University of Technology*

A rich literature exists that argues that in the light of radical environmental change, persistence in behavior and strategies is linked with lower performance of the firm. One problem that the corporation faces may exist in recognizing and understanding the changing environment. Faced with dramatic change, the firm needs to develop new cognitive frameworks that can guide behavior in the changed environment that is it needs to expand its search space. Based on seven in-depth case studies in the information and communication technology sector, this paper investigates mechanisms that enable the firm to expand its search space and to form new cognitive frameworks. In particular, this study investigates the role of external corporate venturing in expanding the search space and developing new cognitive frameworks.

### Newspapers and the Internet: An Empirical Investigation of Strategic Decision Making by the Three Largest Newspaper Publishers in Switzerland

Mark Macus, *University of St Gallen*

Stefanos Vassiliadis, *University of St Gallen*

This paper studies the strategic reactions of the three largest Swiss newspaper publishers in 1997/1998 facing the Internet. A framework for firms to react strategically to a highly uncertain environment is proposed. The framework is empirically employed by assessing the uncertainty created by the Internet for newspaper publishers in general, showing that the Internet exhibits properties of a 'disruptive innovation'. The

actual uncertainty assessment of the three publishers is then portrayed. The results of this empirical study show that while the three largest Swiss daily newspapers made similar assessments of the extent of the uncertainty created by the Internet, they took rather different strategic postures and adopted different strategic instruments to support their postures.

### Technological Leapfrogging: Lessons from the United States Video Game Industry

Melissa Schilling, *New York University*

In industries characterized by network externalities, technology standards can become locked in through self-reinforcing effects. Often, new entrants may only break in through radical technological innovation. However, even major technological advancements often fail to break a standard, prompting the following questions: When will radical innovations succeed in displacing incumbent standards? What characteristics must new entrants possess and what strategies must they deploy to maximize their chance for success? And what can incumbents do to defend their positions? Detailed case studies of two generations of competition in the U.S. video game industry demonstrate both successful and unsuccessful technological leapfrogging. Data from these cases are integrated with existing work on network externalities to yield insight into the strategies and resources influencing the likelihood of successful technological leapfrogging.

### STRATEGIC AND ORGANIZATIONAL CHANGE: THEORY AND APPLICATIONS

Paper	Track J	Hampton Room
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### A Theory and Model of Complex Organisational Change

Jyoti Bachani Rahi, *London Business School*

In this article, I draw on ideas from complexity science to propose complex change theory, which I illustrate with a simulation model. I argue that radical change in organisations can occur as a non-linear dynamic outcome of distributed deterministic micro-changes in parts constituting an organisation. Organisations are conceptualised as complex adaptive systems, made up of inter-dependent activity domains i.e. values, strategy, power, control and structure. These activity domains exhibit micro-changes, i.e. changes to adapt to their environment while maintaining coherence. Under certain conditions these micro-changes can create radical organisational change. Complex change theory extends the generalisability of punctuated equilibrium theory to situations where re-orientations and recreations are not merely a product of senior executives responding to performance pressures, but are also possible in de-centralised, distributed firms, as a result of complex interactions that create radical changes from micro-changes.

### Dynamics of Organizational Routine Change: An Analysis of Danish Firms

Bo Eriksen, *University of Southern Denmark*

Dorthe Døjbak, *University of Southern Denmark*

In this paper, we relate macro-level adaptation processes and micro-level adaptation processes. The individual values and preferences of organizational decision makers act as a perceptual filter for information about organizational performance and its transformation into organizational action. An empirical model is proposed and tested on two samples of medium-sized manufacturing and service firms. We obtain estimates for both samples, and compare the two types of firms. Our empirical results provide support for all of our hypotheses in the case of service firms, and suggest that organizational adaptation is incremental and path dependent. The results are different in the case of manufacturing firms, suggesting that the process of organizational adaptation is highly context dependent.

### Managerial Action in Change Processes: Model Development and Testing

Heike Bruch, *University of St Gallen*

Bernd Vogel, *University of Hannover*

Many authors recently proclaimed the decisive role of action in management in general and in change processes in particular. Even more pointed to the lack of action in management practice, and yet little seems to be understood about the phenomenon. Aiming to contribute to overcoming this gap we address two questions: "What is managers' action?" and "Why do some managers act, while others don't?" We develop the following argument: 1) managers' action represents a focused energetic behavior; and 2) action is caused by particular contextual, cognitive and emotional factors that contribute to creating energy, and by volitional factors that induce its focusing towards certain intentions. Based on two qualitative studies we developed a model of managers' action and tested it in a quantitative study.

### A Window on the World: How Firm Structure Shapes the Business Evolution of the United States Telecommunications Companies, 1984-1998

Charles Williams, *University of Michigan*

Will Mitchell, *Duke University*

This paper studies how organization structure shapes firm evolution. We argue that a firm's structure shapes how the company gathers information from the environment and transmits the information within the firm. We predict that firms are more likely to enter markets that match the information characteristics of their units. We examine the effect of links between units on entry and predict different effects depending on the types of units they connect. We test our hypotheses using a sample of telecommunications companies. The dataset includes structure and service information from the eight largest local U.S. telephone service providers from 1984 to 1998 (7,241 potential entries and 327 actual entries). The results show that unit structure influences firm evolution, creating both paths and constraints on change.

### COLLABORATION IN DIVERSE TECHNOLOGICAL CONTEXTS

Paper	Track D	Kent Room
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### Joint Patenting Amongst Companies: Exploring the Effects of Inter-firm R&D Partnering and Experience

John Hagedoorn, *University of Maastricht*

Hans van Kranenburg, *University of Maastricht*

Richard Osborn, *Wayne State University*

R&D alliances and previous experience with the sharing of intellectual property rights are expected to have significant effects on joint patenting by alliance partners. Although as far as we know there is no previous research on this topic, this is both an intuitively and theoretically appealing subject because joint patenting could relate to the possible outcome of an important group of alliances. Somewhat to our surprise, we could not establish a statistical relationship between R&D alliances and joint patenting. It turned out that the main explanation for differences in joint patenting of R&D partners is found in their experience with the joint patenting process itself.

### What Determines the Internationalization of Small Technology Firms?

Gongming Qian, *Chinese University of Hong Kong*

Mike Peng, *Ohio State University*

Denis Wang, *Chinese University of Hong Kong*

Small technology firms confront a dilemma in internationalization. On one hand, because these firms usually possess strong technology in certain areas, they tend to have the incentive to expand sales abroad in order to leverage their superior technology. On the other hand, to succeed abroad, these firms often have to gain access to complementary capabilities which they are not so strong. Given these conflicting demands, what drives the internationalization decision for these firms is not unclear. We suggest that the internationalization of small technology firms is driven by their possession of, and access to, critical resources in technology, marketing, and international experience. Using a sample of biotechnology firms, our

empirical efforts center on the extent to which these resources are crucial to facilitate internationalization.

### The Nature of Technological Change and the Organizational Form of Strategic Alliances: Evidence from the Telecommunication Industry

Massimo Colombo, *Polytechnic of Milan*

This paper combines the contractual perspective on the organizational form of strategic alliances with considerations inspired by competence-based and real option theories. The empirical section of the paper focuses on the world telecommunication industry. It considers a sample composed of about 2,000 alliances (i.e. equity joint ventures, acquisitions of a minority interest, bilateral and unilateral non-equity agreements) established in the period 1994-1996. The data on alliances are provided by the MOSAICO database developed at Politecnico di Milano. New empirical evidence is provided on the factors that influence firms' decisions as to the organizational form of alliances based on the estimates of a logit model. Specific attention is devoted to the role of the nature of technological change in the fields related to the alliance.

### MERGERS AND ACQUISITIONS: OLD TRUTHS AND NEW QUESTIONS

Paper	Track G	Olympic Room
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#### Corporate Strategy in the New Economy: Market Value Effects of Acquisitions by and of Internet Firms

Nikolaus Uhlenbruck, *Texas A&M University*

Michael Hitt, *Arizona State University*

Matthew Semadeni, *Texas A&M University*

The recent merger between AOL and Time Warner marked the convergence of two major business trends: the rise of the Internet and the resurgence of mergers and acquisitions. For Internet companies, acquisitions may be the fastest way to expand and solidify their business in the competitive landscape of the 21st century. For non-Internet firms, the acquisition of Internet firms may provide access to technical knowledge and significant growth opportunities. Past research has found that the change in market value of acquiring firms on average vary closely around zero. We argue, however, that acquisitions of and by Internet firms have positive market valuation effects. Preliminary results of an event study of 926 acquisitions involving Internet firms largely support this prediction.

### Complementary Resources and Performance Implications of Mergers and Acquisitions: An Analysis of Technology-intensive Industries

Won Seok Woo, *State University of New York-Buffalo*

Today's technology-intensive firms employ mergers/acquisitions as a strategic tool to achieve technological diversification by benefiting from synergies created. For an acquisition strategy to generate economic value, a distinctive competence based on the resources of the combined firms must be created. I suggest here that mergers/acquisitions in technology-intensive industries are most effective when merger participants exhibit complementary capabilities — technological capabilities for acquired firms and financial, marketing, or operational capabilities for acquiring firms. For instance, M/A combinations in technology-intensive industries between acquirers with high financial, marketing, or operational capabilities and targets with high technological capabilities will be the best in terms of both ex ante, stock-price based and ex post, operating performance measures of the combined firm.

### Mergers and Acquisitions: Insights from a Resource-based Perspective

Erik Eschen, *Free University-Berlin*

Rudi K F Bresser, *Free University-Berlin*

This paper develops a resource-based model for explaining the success and failure of mergers and acquisitions. To overcome limitations of the resource-based theory, concepts germane to Austrian Economics are considered. The model is based on five theoretical dimensions: heterogeneity, dynamic business environments, entrepreneurial discovery,

factor market imperfections and time constraints. We maintain that the model provides a superior explanation of advantageous M&A-strategies than traditional approaches.

### Managerial and Theoretical Insights on the M&A Process: Evidence from Case Studies

Xavier Castañer, *University of Minnesota*

Mehmet Genc, *University of Minnesota*

While Jemison and Sitkin (1986) provided a theoretical discussion of four process impediments to M&A success, little empirical research showing the prevalence of these obstacles and their causes has been done until now. Conceptual and empirical research should also identify how managers are able to surmount these impediments. This paper tries to address those issues by drawing on eight case studies that describe the entire acquisition process. First, we provide empirical evidence of the often-mentioned process impediments, and identify new ones. In doing so, we consider both the decision choices that managers made at several stages in the process, as well as process dimensions such as different timing issues. We also offer some explanations about how some firms were able to overcome the impediments.

### Paradox in Mergers and Acquisitions: A Review of the Literature and a Research Agenda

Margaret Cording, *University of Virginia*

L J Bourgeois, *University of Virginia*

Petra Christmann, *University of Virginia*

Broadly speaking, the dismal financial performance of mergers/acquisitions can be attributed to one of two (or both) management failures: the acquiring firm may have overpaid for the acquisition, and/or the firm may have adversely disrupted value creating mechanisms during the integration process. A literature review provides no consistent set of issues to explain these management failures. This paper addresses three broad questions in a way that has not been previously asked: Can focusing on the nature of acquired resources improve the valuation of target firms? Can focusing on the routines that lead to value creation improve the acquiring firm's ability to integrate the two firms? What role does firm history play in successful integrations? Addressing these questions employs the resource-based view of the firm.

### DIVEST A RISING STAR? UNLOCKING THE VALUE OF CORPORATE INNOVATION THROUGH HIGH-TECH SPINOUTS

Panel	Track G	Oxford Room
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J Donald deBethizy, *Targacept Inc*

Michael Lord, *Wake Forest University*

Stanley Mandel, *Wake Forest University*

Jeffrey Wager, *CPP Advisors LLC*

This panel explores the strategic, organizational, and financial logics and processes of high-tech spinouts. Traditional models of corporate strategy and of technology and innovation management stress that new corporate ventures with high potential should be invested in and nurtured to create new business units and future value for the innovating firm. But what if maximizing the commercial success, and the ultimate value, of many corporate innovations instead requires a more counterintuitive strategy: rather than developing them internally, externalizing the innovations through high-tech spinouts? Using a series of rich, first-hand cases and examples, this panel addresses the key decision details of high-tech spinouts in terms of strategy formulation (whether and why to spinout), strategy implementation (how to spinout), and valuation.

### ACHIEVING SUCCESS IN STRATEGIC ALLIANCES

Paper	Track I	Victorian Room
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#### Alliance Capability, Stock Market Response, and Long-term Alliance Success

Jeffrey Dyer, *Brigham Young University*

Harbir Singh, *University of Pennsylvania*

We address 2 questions: 1) do firms that make greater investments in building an alliance capability enjoy greater alliance success as measured by both (a) greater "abnormal" stock gains, and (b) subjective managerial assessments of alliance performance; and 2) does the stock market



effectively predict long term alliance success rates? We find that firms that invest in a dedicated alliance function achieve greater abnormal stock market gains (average of 1.35 percent) and report that 63 percent of alliances are successful, whereas firms without an alliance function achieve much lower stock market gains (average of 0.18 percent) and only a 49 percent long-term success rate. We also find evidence of positive correlation between stock market based measures of alliance success and alliance success measured through managerial assessments.

### Alliance Management - Challenges for Old and New Economy Companies: Learning's from a Global Study for Sustainable Value Creation

Thorsten Gerhard, *Arthur D Little International Inc*

Stefan Odenthal, *Arthur D Little International Inc*

Today's growth and value creation opportunities in global markets and new technologies demand a wide range of skills. Nowadays an alarming number of failed acquisitions and mergers suggest a different approach to these challenges. Alliances can be a powerful enabler and option for value creation for many enterprise-wide strategic reasons. Airlines for example, use strategic alliances frequently to meet changing worldwide market needs. The Star Alliance™ of Lufthansa, SAS, Thai Airways, Varig, United Airlines and others seems to be the most successful case in this field. Based on the Star Alliance™ case and a global study with more than 1000 old and new economy companies we are discussing successful partnering processes, value creation logics, alliance organisations, progress measurement approaches, and knowledge networks in an alliance.

### Knowledge-based Competition in an Entrepreneurial Economy: The Importance of Strategic Alliances

Anita Van Gils, *University of Maastricht*

Peter Zwart, *University of Groningen*

Knowledge-based activities are at the basis of sustainable competitive advantages in today's economy. Resource-based theorists claim that firms should focus on the creation and accumulation of competencies in order to yield long-term survival. However, a major problem within small and medium-sized enterprises is that their characteristics often hamper the identification and leverage of those resources or competencies. Moreover, SME-research indicates SMEs limited capacity for knowledge absorption. This paper examines the role strategic alliances can fulfill within the learning processes of SMEs. A research project was initiated to study: 1) if SMEs were involved in cooperative agreements; and 2) if these relationships were used to acquire additional resources, competencies and/or knowledge. Conclusions are drawn concerning the importance of strategic alliances in the SMEs knowledge acquisition process.

### THE ROLE OF INTANGIBLE ASSETS IN THE NEW ECONOMY

Paper	Track A	Yorkshire Room
<b>Building Institutional Infrastructure in Business-to-Business e-Marketplaces</b>		
William Wan, <i>Thunderbird-American Graduate School of International Management</i>		
Howard Liu, <i>ThinkAlong Software Inc</i>		

### Building Institutional Infrastructure in Business-to-Business e-Marketplaces

William Wan, *Thunderbird-American Graduate School of International Management*

Howard Liu, *ThinkAlong Software Inc*

Business-to-business (B2B) electronic commerce has attracted a great deal of attention in recent years. To date, most B2B electronic marketplace (e-Marketplace) operators have focused their efforts on adding more members (aggregation). Although a critical mass is important to realize the potential of B2B e-Marketplaces, a large membership does not necessarily translate into success. Viewing B2B e-Marketplaces as network structures, we adopt an institutional perspective to understand these marketplaces. Premised on this perspective, we contend that unbounded aggregation, without appropriate institutional infrastructure, eventually leads to diminishing returns in these e-marketplaces. Ancillary transaction services or technological solutions, albeit of crucial significance, are insufficient to develop fully B2B e-marketplaces. Toward this end, we suggest ways for building institutional infrastructure in B2B e-marketplaces to improve their strategic value.

### Thriving on Temporal Advantage: Analysis of New Marketplaces for Knowledge in e-Commerce

Patrick Reinmoeller, *Erasmus University-Rotterdam*

The continued creation of temporal competitive advantage helps to better understand rapid growth and revolutionary business models. This paper conceptualizes temporal advantage and develops strategies for long-term market leadership through short-term adaptation and synchronous knowledge creation. A longitudinal analysis of e-business companies with headquarters in the U.S., Europe, and Japan, reflects the dynamic developments in high velocity environments. Case analysis shows intertwined synchronous and asynchronous processes to attain temporal competitive advantage. Temporal advantage is conceptualized through emphasis on anticipative and adaptive knowing and continuous and revolutionary acting. The paper develops four kinds of temporal competitive advantages: momentum, speed, rhythm and incubation. Propositions suggest different ways to align strategic thinking, acting and commitment to continuously re-create these temporal competitive advantages.

### Explicit and Tacit Knowledge Flows via the Internet in Inter-organizational Networks

Mark Kriger, *Norwegian School of Management BI*

Manuel Becerra, *Institute of Empresa*

This paper investigates the ways in which tacit and explicit knowledge are transferred within inter-organizational networks. Specifically we examine the following: 1) under what conditions does Information and Communication Technology (ICT) facilitate the transfer of knowledge between network members? and 2) what types of emotion-enabling processes increase the overall effectiveness of inter-organizational networks in transferring both tacit and explicit knowledge? This paper addresses these questions through an empirical study of 87 organizations that belong to a total of 15 inter-organizational networks connected through the Internet. Action recommendations for firms to compete effectively using inter-organizational ICT-facilitated networks and alternative bond-building mechanisms will also be presented.

### Leveraging Tacit Knowledge with Expert Systems, Robotics, and the Internet: The Case of Silicon Wafer Manufacturing

David Coff, *AT&T*

Russell Coff, *Emory University*

Roger Eastvold, *KLA-Tencor Corporation*

Tacit knowledge has strategic significance because it is hard for rivals to imitate. However, these same attributes make it hard to transfer and leverage. Technological solutions have met with limited success since tacit knowledge cannot be codified without losing its strategic properties. How, then, can firms leverage this scarce resource to create an advantage? We explore KLA-Tencor Corporation's approach to yield management in manufacturing silicon wafers. Robotic tools are used to inspect semiconductor wafers during various phases of chip production. These devices are monitored by expert systems and operated remotely through Internet interfaces to leverage scarce expertise across locations. Thus, individuals develop tacit knowledge about specific tools and apply it across many plants. The resource is shown to be valuable, rare, and unavailable to rivals.

### POSTER SESSION

10:45 - 12:30

Poster

Georgian Room

### "Intercompany-relations Table" as Performance Evaluation Method for Group Management (Track I)

Toshio Ariu, *Central Research Institute of Electric Power Industry*

Under the competitive environment, we need to evaluate a group company from not only consolidated but also the parent company or subsidiaries accounts. In this paper, we propose an "intercompany relations table" as an evaluation method for a group of companies based on the inter-industry-relations table. According to this table, it is possible to see the expense structure and to judge whether a company is

independent, contributive or supportive. Therefore, we could establish management measures corresponding to the functions of each company. If we use input coefficients, it is also possible to establish a better intercompany relationship over the long term. We could anticipate that these results would be valuable data for developing subsidiaries or affiliated companies, and for deciding outsourcing or overseas production, etc.

### **Organizational Learning in Industrial Research: Inventive Productivity versus Emergence of Technological Programs (Track D)**

Jukka-Pekka Salmenkaita, *Nokia/Helsinki University of Technology*

Competence in performing research can be a source of competitive advantage if the competitors can not readily acquire research capabilities by market transactions or imitation. Insofar as the research capability is based on idiosyncratic search routines or tacit knowledge not only the capability is hard to transfer across firm boundaries, but identification and nurturing of capabilities within firms is problematic. In terms of organizational learning literature, research organizations need processes both for exploitation of existing as well as exploration of emerging research capabilities. This theoretical dichotomy is elaborated on by examination of technology-based corporate venturing practices in industrial research environment.

### **Strategic Competence as Knowledge (Track K)**

James Fiet, *University of Louisville*

This research is important to those who aspire to be successful strategists because it addresses the questions of strategists can and cannot competently know about business ideas, as well as how to search for them. Mastering how to use this research to increase the effectiveness of strategic search could reduce the failure rate of internal ventures by providing them with a more profitable basis for investing. The difference in the financial performance of two firms may be due in part to the ideas that each of them chooses to exploit. The answer to what they can competently know partially depends on how much of a role they are willing to play in investing in the acquisition of strategist- or firm-specific information.

### **Industrial e-Business: A Strategic View (Track A)**

Niko Karjalainen, *Strategos Europe Ltd*

Open information networks represent simultaneously a huge opportunity and daunting threat to businesses. This paper explores the question: "How deeply do electronic business and the Internet affect firms' strategies and structure in the long term?" Information technology enables both incremental changes to business models to gain operational efficiencies and revolutionary new business models aimed at changing the rules of competition. Radical new strategies will emerge to take advantage of technology's possibilities. Radical change in the ways business is conducted within and across industries sets new requirements also for the process of formulating and implementing strategy. A new kind of active, flexible strategy process is needed. The new process is based on constant cycles of simultaneous strategy formulation, process development and technology building and implementation.

### **Learning, Knowledge Management, and Strategic Alliances (Track K)**

Andrew Inkpen, *Thunderbird-American Graduate School of International Management*

This paper provides an overview of the literature on strategic alliances and learning. Although a significant body of conceptual and empirical work in the alliance learning area has been produced, many important and substantive managerial issues remain under-explored. As the first step in generating further understanding in the alliance area, I summarize different types of knowledge involved in alliance learning processes. Next, I review the alliance learning research and organize this research by key research issues. I then offer an analysis of key areas requiring further research. Underpinning this discussion is the argument that in order for future studies to result in a better understanding of alliances

and learning, studies need to be designed with an appreciation of the complexity of learning and knowledge management.

### **Competitive Rivalry in the Political Marketplace: Implications for Firm Strategy (Track I)**

Jean-Philippe Bonardi, *University of Western Ontario*  
Amy Hillman, *Arizona State University*  
Gerald Keim, *Arizona State University*

Competitive advantage can often be won, lost or facilitated through a firm's participation in the public policy process. Government policies have the potential to take away or create market advantages. Microsoft's recent antitrust problems are good evidence that government policies can have tremendous impact on firms. Microsoft's competitors played a role in bringing about the inquiry against the firm, indicating that rivalry often takes place outside the economic marketplace. In this paper, we apply the concepts of competitive rivalry to corporate political strategies, defined as strategies used by firms to gain access or influence in the public policy process. Our discussion of rivalry is based on the conceptualization of the public policy arena as a competitive marketplace.

### **First-mover Advantages in Internet Markets (Track A)**

Marvin Lieberman, *University of California-Los Angeles*

During the late 1990s, Internet commerce was described as a "land grab" where firms rushed to acquire market positions before competitors had an opportunity to do so. Some Internet first-movers, such as Amazon, Yahoo and eBay, gained enormous stock market capitalization, as investors anticipated that early entry would translate into large financial returns. This study examines potential first-mover advantages within new "market spaces" in the emerging Internet economy. Data on revenue, market capitalization, and company survival are used to identify the extent and nature of these advantages. The study emphasizes the role of network effects in promoting first-mover advantage in web-based markets.

### **Strategic Analysis Adapted for IC Networks and e-Business Networks (Track B)**

P K M'Pherson, *Systems & Value Consultancy Ltd*  
Göran Roos, *Intellectual Capital Services Ltd*  
Stephen Pike, *Intellectual Capital Services Ltd*

For many years, companies have been operating in networks to try to maximise the value generated for themselves and the networks in which they operate. The main problems are the inability of companies to discuss value coherently and the inability to measure value in a network situation. Cooperative behaviour between companies can be described as a system of quasi-independent units collaborating within a system. This reduces to a coordinated multi-objective hierarchical system problem. A deterministic model has been developed in which businesses adjust to maximise intellectual capital for themselves and the system under applied scenarios. This model's results show how each business can arrange itself to play a full part in achieving the optimal state for itself, its partners and the system.

### **New Perspectives on the Management of Diversification and Corporate Strategy (Track G)**

J L Stimpert, *Colorado College*  
Irene Duhaime, *Georgia State University*

Our paper examines how executives influence the management of diversification and corporate strategy. The paper develops a framework linking managers' experiences and beliefs about the management of diversification with their firms' strategic decisions and organizational structures. Analysis of data collected from 174 executives reveals three distinct patterns of beliefs about the management of diversification. Data analysis shows that these beliefs are unrelated to managers' backgrounds and career experiences. The results also indicate that executives' beliefs about the management of diversification are a significant influence on their firms' strategic decisions and structural attributes, suggesting that the quality of senior managers' knowledge structures may be a significant source of advantage for diversified firms. The paper assesses the

implications of these findings for theory development and management practice.

### Developing Knowledge through Value Creation Processes: Lessons Learned from Two Knowledge Intensive Service Firms (Track C)

Siw Fosstenlökken, *Norwegian School of Management BI*  
Bente Løwendahl, *Norwegian School of Management BI*  
Oivind Revang, *Norwegian School of Management BI*

Knowledge development involves not only planned investments, but also knowledge improvements as a by-product of the firm's value creation processes. This paper applies a framework for the analysis and development of invisible assets in knowledge intensive firms to two such firms, one engineering design firm and one communication consulting firm. Findings suggest a clear and positive connection between strategy, in terms of clear priorities of domain choice (especially the types of clients and projects targeted), and the amount and quality of knowledge development. Findings also suggest a dilemma: when demand is high, funds are easily available for knowledge development projects, but time is scarce. When demand is low, time is available, but funds - even in terms of non-billable hours spent on internal projects - are scarce.

### Beyond Leadership: Shared Organizing and Strategizing Processes in Innovative Organizational Settings (Track J)

Leona Achtenhagen, *Jönköping University*  
Tomas Müllern, *Jönköping University*  
Thomas Ericson, *Jönköping University*  
Leif Melin, *Jönköping University*

Taking a leadership perspective on processes of organizing/strategizing as a starting point, we analyze changes in sense-making and sense-giving processes when moving towards innovative organizational settings. Within these settings, we witness a move from unidirectional framing and sense-giving processes towards reciprocal sense-making, which actively involves the different organizational factors into the organizing and strategizing processes. We understand strategizing as the continuous formation and transformation of strategic patterns, and organizing as the ongoing activities that contribute to the continuous reproduction of the organization, by building on the process of reciprocal sense-making. The ability to communicate and cooperate across the organization is growing in importance, and it consequently presents leaders with new challenges. More participative and communicative forms of leadership are reflected in these reciprocal sense-making processes.

### Vision Impossible: The Intangible Resource Curse of Firms Pursuing Incessant Growth (Track K)

Milorad Novicevic, *University of Wisconsin-La Crosse*  
Thomas Hench, *University of Wisconsin-La Crosse*  
Niranjan Pati, *University of Wisconsin-La Crosse*  
Thomas Kuffel, *University of Wisconsin-La Crosse*

This paper examines the limits of pragmatism in strategy formulation in the new, knowledge rich economy. By tracing the history of pragmatism in social and management thought, and assessing the commonalities and complementarities between a firm's vision and mission, we explore the possibility and consequences of an intangible resource curse for firms pursuing strategies of incessant pragmatic growth in the expanding Web-based domain. Ultimately, we posit a combined influence of market-based governance and strategy simplification as an effective antidote to the executive intangible resource bingeing, which is sustainable as long as confidence and trust continue to be shared among the firm stakeholders.

### Globalization and Business Strategy (Track L)

Alan Rugman, *Indiana University*

My recent research suggests that globalization is a myth. Far from taking place in a single global market, most business activity by large firms takes place in regional blocks. Government regulations and cultural differences divide the world into the triad blocks of North America, the European Union and Japan. Rival multinational enterprises from the triad compete for regional market share and so enhance economic efficiency. As a

result, top managers now need to design triad-based regional strategies, not global ones. Global markets are not becoming homogenized. Only in a few sectors, such as consumer electronics, is a global strategy of economic integration viable. For most other manufacturing, such as automobiles, and for all services, strategies of national responsiveness are required.

### How Do Diversified Knowledge Networks Emerge? A Rational Adaptation Perspective (Track C)

Anupama Phene, *University of Utah*  
Chadwick Nehrt, *Quinnipiac College*

Our paper seeks to examine how firms create knowledge networks that span the globe, creating innovations in multiple locations. The diversification of knowledge networks is examined on two dimensions, geographic dispersion, both intra-national and international, and technological dispersion. We use the rational adaptation perspective to determine the factors that drive the creation of these networks. We hypothesize that firm level characteristics: 1) the knowledge that gives them an opportunity to envision the network; 2) the resources that give them the ability to establish the network; and 3) the capabilities that allow them to create value from the network - lead to the emergence of diversified knowledge networks. Our study uses a partial least squares analysis to test the hypothesis using data on the patenting activity of U.S. semiconductor firms.

### Managing in the New Economy: Lessons on Innovation and Value Appropriation from the Old Economy (Track H)

Aya Chacar, *London Business School*  
William Hesterly, *University of Utah*

A central focus for strategy scholars has been on answering the following question: How can a firm increase the rent it generates for its shareholders? Answers to this question tend to emphasize either value appropriation or rent creation. The relationship between value creation and appropriation has received much less attention. Based on an inductive historical analysis of the history of the Major League Baseball industry from its inception to the present, we studied the relationship between value appropriation and creation. We found that when firms dominated in terms of value appropriation, they tended to neglect value creation. Conversely, when rent appropriation was more vigorously contested, value creation in the form of innovation increased dramatically.

## PAPER/PANEL SESSIONS 11:15 - 12:30

### THE IMPACT OF STRATEGIC MANAGEMENT PRACTICES ON PERFORMANCE

Paper	Track I	Borgia Room
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### Does Formal Strategic Planning Enhance Performance?

Nicholas O'Regan, *Middlesex University*  
Abby Ghobadian, *Middlesex University*

This study indicates that 58 percent of manufacturing firms in the electronics and engineering sectors have formal (written) strategic plans - considerable more than suggested in the literature. Formal plans tend to have medium to long term perspectives (over 3 years), focus on the firms' objectives and goals, have action plans for each functional area, and provide the necessary resources for the strategy implementation. However, the findings indicate that while formal planning firms place a greater emphasis on all the attributes of the strategic planning process compared with other firms, only a few of the differences in emphasis are statistically significant. In addition, there are no significant differences between the barriers to implementation in formal or informal planning firms.



## Implementing a Managerial Practice: Advantage to First and Second Movers

Alfred Marcus, *University of Minnesota*

Eitan Naveh, *Technion-Israel Institute of Technology*

In this paper, we develop a contingency theory of first and second mover advantage in the implementation of a managerial practice. Striving for technical efficiency and external pressure positively influence organizational performance, but whether the advantage belongs to the first or second movers depends on learning. It is through learning that technical efficiency and external pressure have a positive effect on organizational performance. Learning is more important than the timing of implementation in determining who will gain.

## Which Comes First, the Chicken or the Egg? An Empirical Investigation of the Relationship between TQM and Financial Performance

Kenneth York, *Oakland University*

Cynthia Miree, *Oakland University*

Proponents of TQM have implied a causal link between these methods and financial performance but have provided little evidence beyond individual case studies and anecdotal reports. Rigorous empirical studies are limited and the evidence is mixed. The purpose of this study was to compare the financial performance of companies that have won a quality award to other publicly traded companies to determine whether the adoption of TQM methods actually led to better financial performance. The results of the study indicated that TQM and non-TQM firms were distinguishable based on three financial performance models both before and after they won a quality award. This finding calls into question the causal link between TQM and financial performance.

## INTERNET AND STRATEGY: THE "NEW" REALITY OF THE INCUMBENT

Panel	Track A	Elizabethan Room A
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Yves Doz, *INSEAD*

Gabriel Szulanski, *University of Pennsylvania*

Thomas Eisenmann, *Harvard University*

This panel will explore the new reality for incumbent firms in the Internet Business Revolution. Three presenters will address different aspects of such reality spanning the creation of e-commerce strategies in established firms, the implementation of such strategies and the changing of established modes of strategy making and alliance building processes to make them suitable to the nature of new, harder to define opportunities. Prof. Eisenmann from the Harvard Business School will then synthesize the three presentations. He will also moderate the ensuing discussion.

## SELECTION OF PARTNERS IN INTERNATIONAL VENTURES: PERSPECTIVES FROM NORTH AMERICA, EUROPE, AND ASIA

Panel	Track G	Elizabethan Room B
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David Ahlstrom, *Chinese University-Hong Kong*

M Tina Dacin, *Queen's University*

Michael Hitt, *Arizona State University*

Edward Levitas, *University of Wisconsin-Milwaukee*

Jean-Luc Arregle, *Groupe EDHEC*

The focus of this panel session is on understanding the criteria used to select partners from a variety of different institutional contexts. Thanks to a large and unique international research program, we have been able to identify partners selection models of executives from different countries (U.S., Canada, France, Mexico, Poland, Romania, Russia, and China), providing a unique opportunity to study and understand the partner selection models across major contexts and major players. Our findings on partner selection will be analyzed according to different perspectives: a regional perspective, an economic development perspective, by grouping countries according to their emerging versus developed market context, and, finally, taking into account differences in institutional context as well as differences in transition paths chosen by these emerging market countries.

## INTER-FIRM KNOWLEDGE LEARNING AND TRANSFER

Paper	Track C	Elizabethan Room C
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## Technological Discontinuities and Inter-firm Cooperation

Frank Rothaermel, *Michigan State University*

Incumbent firms often face severe difficulties when confronted with technological discontinuous change. However, inter-firm cooperation between incumbents and new entrants has been suggested as one way for incumbents to adapt to radical technological change. We study 973 strategic alliances between incumbent pharmaceutical firms and new biotechnology firms. In particular, we are interested in the question of how incumbent pharmaceutical firms go about selecting alliance partners, among the population of new biotechnology firms, in their quest to adapt to the radical new technology. We propose that a new entrant's performance, economies of scale, ownership status, and geographic location are positively associated with the new entrant's attractiveness as an alliance partner. We find broad support for our model.

## Inter-organizational Learning: Enhancing Knowledge Advantage through Inter-firm Networks

Devi Gnyawali, *Virginia Polytechnic Institute & State University*

In this paper, I examine the question of how firms develop an important form of intangible capital--organizational knowledge--through inter-organizational relationships. I argue that inter-organizational learning occurs through complementary processes of knowledge acquisition and knowledge development. By adopting a network perspective, I suggest that network properties differentially influence a focal firm's ability to enhance knowledge through these learning processes. Centrality of the focal firm's position in its network, for example, could improve the focal firm's knowledge acquisition, whereas strength of its ties with other firms might enable the focal firm to more effectively engage in knowledge development. I develop several propositions linking network properties, inter-organizational learning processes, and knowledge advantage, and discuss research and managerial implications of the paper.

## Social Networks of Founding Teams and New Venture Performance

Balagopal Vissa, *London Business School*

This paper focuses on the impact of the founding team's social capital on the early performance of ventures in the software industry. By social capital I mean the stock of external relationships that enables the team to access valuable resources. I operationalise social capital as networks of relationships thereby linking theories on social networks and venture formation in high technology industries to investigate the performance consequences of variations in the personal networks of founding teams. I aim to broaden structural hole theory by incorporating the effects of inter-personal trust and the degree of innovativeness of the venture on the performance consequences of social networks in the context of new ventures. Using a sample of new software ventures, I develop specific hypotheses on how the founding team's networks impacts on the speed to market and growth trajectory of successful new ventures.

## Strategic Initiatives in Knowledge Management: Capitalizing Knowledge Webs

Thomas Clarke, *University of Technology-Sydney*

Christine Rollo, *University of Technology-Sydney*

In this survey of initiatives in leading companies across all industrial sectors there is considerable evidence that knowledge management initiatives are growing in number and significance. The corporate interest in knowledge management has been fueled by the remarkable increase in the market valuation of intangible assets. Knowledge only reaches its full potential to create economic value when it becomes embedded in organizational routines and processes. Companies tend to invest in technology rather than attempting organizational and cultural change. Information technology may be a necessary condition, but it is not a sufficient condition for knowledge management as one authority put it, "knowledge is a difficult thing to shrink-wrap."

## MANAGING KNOWLEDGE WEBS

Paper	Track C	Elizabethan Room D
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**Community Building: Theory and Practice**

Johan Wallin, *Synocus Oy*  
Henrik Hultin, *Synocus Oy*

In the new economy community building is seen as an important phenomena. The success of companies such as Amazon.com and e-Bay has been argued to be at least partly due to their role as community builders. However, other organizations, like Letsbuyit.com, which explicitly have based the business model on community building, have failed. This paper argues that a community in business, as a concept, is a set of customer relationships and that the customer relationship is the core building block of a community. Community building organizations have, first and foremost, to build multiple, interdependent one-to-one customer relationships between itself and potential members within the community. Community-building organizations, if they are successful, stimulate their customers to build similar one-to-one relationships among each other.

**Managing a Portfolio of Alliances: Empirical Evidence from a Cross-sectional and a Longitudinal Study**

Werner Hoffmann, *Vienna University of Economics & Business Administration*

Many firms today are embedded in a dense network of inter-organizational relationships with customers, suppliers and competitors. The position of the focal company in this intertwined relationships influences the competitiveness of the company significantly. Inter-organizational relationships are therefore recognised as an increasingly important source of competitive advantage. Goal-oriented management of alliance portfolios, i.e. the whole of the alliances of the focal firm, thus acquires a decisive importance for company performance. With that in mind, this research project has tried to establish what the aspects of managing a portfolio of alliances are and what determines the configuration and evolution of an alliance portfolio. We identified four important areas of activity: 1) portfolio strategy; 2) portfolio monitoring; 3) portfolio coordination; and 4) alliance management competence. We also explored which instruments, techniques and institutions are used by firms with many alliances to manage their alliance portfolio in terms of company strategy.

**Rent Appropriation in the New Competitive Landscape: Managing for Profitability in the Web of Relationships**

Boris Durisin, *Bocconi University*

In the new competitive landscape vast amounts of value will be generated. This article examines mechanisms that allow firms not only to create, but also to appropriate the rents generated with new ventures in the net-economy. The top management's task is not only to position the firm in a value generating network, but also to manage relationships in a way that it is poised to appropriate a substantial part of the value generated by the network. It must apply various strategies to enhance its own profit appropriation potential with regards to particular nodes in the network. As this demands a shift of attention to the management of network relationships, a new understanding of management is required.

**Minimal Network: Nokia's "Jazz Cafe"**

Nicola Marziliano, *Nokia*

How does a jazz band perform a piece of improvisation without loosing the control of rhythm and theme? How can a jazz band, based on highly skilled musicians, combine diversity and unity? Control is one of the most relevant issues in organizations as well as in jazz bands, in order to get innovation and creativity flow while, at the same time, allow play based on chunk of old repertoires and ways of doing. New organizational forms have been presented as flexible, adaptive and able to learn from their environments. For achieving these goals, some have been designed as networks. This article deals with minimal networks, the last frontiers of organizational design. Implications into an organizational case will be offered as an example of such theorizing.

## BUILDING AND NURTURING DYNAMIC CAPABILITIES

Paper	Track C	Essex Room
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**Building Strategizing Capabilities in Entrepreneurial Firms: Entrepreneurial Strategy Formation as Innovation and Routinization Under Uncertainty and Ambiguity**

Simon Grand, *University of St Gallen*  
Matthäus Urwyler, *University of St Gallen*

The process of strategy formation in entrepreneurial high-tech firms is by its very nature subject to multiple kinds of uncertainty and ambiguity. The present paper contributes to strategy research by: 1) conceptualizing entrepreneurial strategizing as strategy formation under uncertainty and ambiguity; 2) it discusses the ways in which building strategizing capabilities contributes to an in-depth understanding of organizational strategy formation; 3) it develops the argument that building strategic capabilities can be conceptualized as the interplay of two organizational procedures: the communication and justification of strategic initiatives and innovative ideas in managerial discourses, in order to gain explicit acceptance; and 4) the incorporation of these innovations into organizational routines, in order to locally shape the ongoing activities and self-evident actions driving the organizational behavior.

**Building Capabilities in High Growth Software Companies: A Comparative Empirical Study**

Mark Macus, *University of St Gallen*  
Simon Grand, *University of St Gallen*

This research project addresses one of the main challenges faced by entrepreneurial, rapidly growing firms as they mature and struggle to maintain their growth - the challenge to build board capabilities in order to be able to generate capital on public markets at competitive conditions and to master the numerous challenges that accompany rapid growth. The research question addressed in this paper is 'How do high growth firms in the software development industry build board capabilities?', and three theoretical building blocks are combined to provide a foundation and framework to address this question: the resource-based view of the firm, board and top management team literature, and new venture literature.

**Dynamic Capabilities: The Capacity to Act in New Ways**

Ken Smith, *University of Maryland*  
Shawn Lofstrom, *University of Maryland*  
Qing Cao, *University of Maryland*

The emerging stream of dynamic capability research emphasizes the routines/abilities of the firms to experiment, learn and change its resource configurations to create new value. We propose that dynamic capabilities involve the ability of the firm to undertake new types of action that create value. The process has four steps: search, discovery, new action, and learning. We contend that this process operates within and across three interrelated and co-dependent domains of action and learning: factor market (supply side) domain, organizational process domain, and customer market (demand side) domain. We argue that new value creation requires a cycling of the four-step process between the three domains. Illustrative propositions are offered to explain the role of dynamic capabilities in the value creation process.

**Knowledge-based Advantages from Prior Knowledge: Absorptive Capacity as a Moderating Variable on the Effects of Knowledge-stocks and Knowledge-flows in the Biotech-industry**

Terry Amburgey, *University of Toronto*  
Andreas Al-Laham, *University of Toronto*

The knowledge-based view focuses upon knowledge as the strategically most important resource of the firm and devotes itself to the role that knowledge plays in the development of knowledge-based competitive advantages. We develop and test five hypotheses regarding the effect of stocks and flows of knowledge and absorptive capacity on the rate at which biotechnology firms acquire patents. We specifically examine the moderating effects of absorptive capacity on the relationships between

stocks and flows of knowledge and outcomes. These hypotheses are tested on 839 biotechnology firms between 1973 and 1995. Our preliminary analyses suggest that our measures of stocks and flows of knowledge enhance the rate at which firms generate patents but that absorptive capacity does not have a moderating effect on these relationships.

### **Nurturing Innovation: Analysis of Dynamic Capabilities of Technological Incubators**

John McGee, *University of Warwick*

Jonathan Menuhin, *University of Warwick*

Our interest in the incubators project in Israel, is on the unique organization structure that aims to foster, facilitate and accommodate innovations. Since the management of innovation has become one of the leading issues in the management of the modern companies, we focus in this study on the managerial and administrative processes aimed to support it. The study examines these processes in technological incubators in Israel.

### **EXTENDING THE RESOURCE-BASED VIEW**

Paper	Track I	Hampton Room
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### **Competitive Advantage: Saving an Endangered Concept**

Jeremy Davis, *University of New South Wales*

Thomas Powell, *University of New South Wales*

The resource-based view of the firm is increasingly criticized for promoting unobservable constructs, causally-ambiguous causes and unfalsifiable propositions. We believe the problems arise from the theory's conflation of competitive advantage with firm performance. We summarize the main criticisms and propose three epistemological criteria for the resource-based view or any future strategy theory: 1) the identity between firms with competitive advantage and firms with superior performance must be an empirical question, not an assumption of the theory; 2) the theory must account for the observed fact that some firms with sustainable competitive advantages do not achieve sustained superior performance; and 3) the theory must allow the logical (and empirical) possibility of sustained superior performance in the absence of sustainable competitive advantage - this phenomenon cannot be dismissed by assumption.

### **Doing Without: How Firms Compensate for Resources that are Hard to Obtain**

J Rajendran Pandian, *University of Wollongong*

Paul Robertson, *University of Wollongong*

A B Sim, *University of Wollongong*

How can firms compete successfully when they do not have the resources commonly believed to be a strategic necessity in their industries? We argue that it is often possible to sidestep this problem by redefining the competitive situation in order to gain advantage from other strengths that a firm may have. To us, this does not simply involve generating a "vision", but instead flows from a hardheaded reappraisal of how customer needs can be fulfilled in practice. We illustrate this through an examination of a number of case studies of firms that have been successful despite having to "do without".

### **A Framework to a Better Understanding of the Acquisition of New Competencies: Integrating the Resource-based View and the Transaction Cost Economics**

Valerie Claude-Gaudillat, *Groupe HEC*

Bertrand Quelin, *Groupe HEC*

Despite the strategic impact of innovative offers introduced by new factors, little is known about how firms react to creative, destructive shocks. Our paper develops a framework aimed at understanding how firms face the coming of a new industry and access the new competencies necessary to be competitive in an environment characterized by a high-level of uncertainty. We construct a framework integrating two theoretical backgrounds: the resource-based view and the transaction cost economics. By referring to evidences drawn from the new "e-consulting"

industry, we show how our framework allows a better understanding of the governance modes chosen by firms to access new competencies in new industries.

### **REAL OPTIONS APPLIED**

Paper	Track F	Kent Room
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### **Real Options Reasoning and a New Look at the R&D Strategy of Pharmaceutical Firms**

Rita Gunther McGrath, *Columbia University*

Atul Nerkar, *Columbia University*

Net present value approaches to evaluating R&D investments have been widely criticized. An alternative, real options reasoning (ROR) has been forwarded, but as yet empirical support has been sparse. This study offers one of the very first substantial empirical studies of ROR at work in investment decisions. We show that the investment logic underlying ROR better explains the research strategies of pharmaceutical firms than does net present value logic. Radicality of a new technology, other opportunities within the portfolio of the firm and competitive intensity were found to have powerful effects in a longitudinal study of firm patenting, consistent with ROR and in contrast to the expectations of net present value.

### **A Real Options Approach to Strategy Making: Applications in the Global Semiconductor, Pharmaceutical, and Astronautics Industries**

Torben Andersen, *George Mason University/Johns Hopkins University*

Niels Tromholt, *Novo Nordisk A/S*

Thomas Carroll, *Lockhead Martin Corp*

The paper introduces real options theory as an important perspective to guide corporate strategy development processes. The real options approach to strategy making extends existing competitive and resource-based strategy analyses and provides corporations that operate in turbulent environments with the opportunity to develop more responsive strategies. Applications of the real options approach in corporate strategy development are discussed within the diverse settings of the dynamic global semiconductor market, research-intensive pharmaceutical industry, and technology driven astronautics field.

### **Integrating Game-theories and Real Options Analysis in Strategic Decision Making: Airbus, Boeing, and the Super Jumbo Jet Market**

Douglas Johnson, *Purdue University*

Nile Hatch, *Brigham Young University*

Over the past decade, game theoretic and real options analysis have exerted increasing influence on strategic management research. Game theory and real option analysis represent two complementary, yet distinct, approaches to understanding the strategic behavior of firms, namely the role of commitment and the role of flexibility. So far, the problems of how game-theoretic and options-theoretic reasoning could be usefully integrated together in the analysis of strategic decisions has received little attention. This paper seeks to begin to bridge this gap by developing an analytical approach to strategic decision making that integrates game theory and real options. We apply this approach to the strategic interaction between Airbus and Boeing in the Superjumbo Jet segment of commercial aircraft industry. This application illustrates how managers can practically implement this approach to decision making.

### **Understanding Responses to Strategic Issues**

Mark Milstein, *University of North Carolina-Chapel Hill*

Why do firms respond to strategic issues so differently? In part, that response variance is the outcome of ongoing decision processes by top managers and other organizational members. The process of top management team issue-buying provides better understanding of why top managers choose to exploit current products and processes or develop new capabilities in response to a particular strategic issue. Preliminary results of a study examining the top management team decision process in relation to the strategic issue of sustainable development point to the importance of top management team perceptions regarding issues,



knowledge, capabilities and payoffs. These results provide insight for understanding why firms might respond differently to a range of strategic issues, including globalization, knowledge development, and e-commerce.

**CORPORATE GOVERNANCE: INTERNATIONAL DIVERSIFICATION, INNOVATION, AND TECHNOLOGY**

Paper Track G Olympic Room

**Governance in High-tech Firms: Boards Matter**

Karen Schnatterly, *University of Minnesota*  
Scott Johnson, *University of Minnesota*

Previous research on how boards affect firm performance has used cross-sectional samples from multiple industries. In this study we focus on a single high-tech industry (semiconductors) and analyze the dynamic relationship between board characteristics and firm performance in the period from 1992 to 1999. In our static model we hypothesize that board size, independence, incentives and expertise are positively related to future performance. A dynamic model is needed to address the question of how changes in boards related to past and future performance. We find mixed support for both the static and dynamic models, which motivates further analysis of how boards affect firm performance and, more importantly, what forces cause boards to change over time.

**Governance and International Diversification: The Moderating Effects of Board of Directors, Technological Opportunity, and Firm Innovation**

Laszlo Tihanyi, *University of Oklahoma*  
Robert Hoskisson, *University of Oklahoma*  
Richard Johnson, *University of Missouri-Columbia*

This study examines the role of institutional investors, board of directors, technological opportunity and firm innovation in international diversification. Results from a sample of 139 large U.S. firms indicate an interactive effect for professional investment funds and outside board members on international diversification. Similar results were found for the interaction of pension funds and inside members of the board of directors. The study also showed that the long-term orientation of pension funds better facilitated the internationalization of industries with high technological opportunities and firms emphasizing innovation. These results suggest that separate institutional owners have a different stake in firm international strategies and these differential effects are accentuated when the effects of the board of directors, technological opportunity, and firm innovation are considered.

**Common Agency: Applications in Governance**

Heather Elms, *University of Florida*  
Shawn Berman, *Santa Clara University*

While the empirical governance literature relies heavily on agency theory as a theoretical framework, empirical governance researchers have not yet taken advantage of a relatively new agency theoretic development: common agency. Common agency theory, however, addresses one of the agency theory's key weaknesses. Rather than relying on traditional agency theory's bilateral principal-agent relationships, common agency theory addresses multilateral relationships, in which agents have multiple principals. Given the ubiquitous character of multilateral governance relationships (e.g., between chief executives, board of directors, shareholders, employees, governments, and communities) common agency theory's focus appears particularly useful to the field of governance. This paper examines several popular areas of governance research, and offers common-agency-based hypotheses for each. The paper additionally reports the results of empirical tests of these hypotheses.

**Internal Markets: Emerging Governance Structures for Innovation**

Liisa Välikangas, *Strategos Institute*  
Gary Hamel, *Strategos/London Business School*

In this paper, we consider alternative governance mechanisms for innovation. We begin by considering the wealth of scholarship on markets and hierarchies, and their implications for innovation. We then explore

the possibility of incorporating market elements into an organization's governance structure to support innovation activity. In contrast to the traditional distinction between market and hierarchy, we describe the emergence of a hybrid organizational form we call an "internal market". We hope to resuscitate organizational design as an explicit variable in the quest to create systemic innovation capability. This issue should be of significant interest to management, investors, and employees because of the likely major implications for corporate performance in innovation and, ultimately, survival.

**SOCIAL CAPITAL AND RELATIONAL ADVANTAGES**

Paper Track C Oxford Room

**The Paradox of Social Capital: Structural, Cognitive, and Relational Dimensions**

Linda Edelman, *Bentley University*  
Harry Scarbrough, *University of Leicester*  
Sue Newell, *Nottingham Trent University*  
Jacky Swan, *University of Warwick*  
Mike Bresnen, *University of Warwick*

Recently, there has been a shift in the way management scholars view the firm, from more traditional models that are based on ideas of opportunism, to newer knowledge-based theories that argue for a more socialized perspective. One of the key components of these new theories is social capital. In this paper, we question the contention that the accumulation of social capital has a positive and proportionate effect on the performance of projects in organizations. To do this, we use data collected from over 38 interviews of senior and middle managers firms across five different industrial sectors in the U.K. Findings indicate that while social capital has many beneficial effects, that there are also a host of less-beneficial aspects to utilizing social capital, which are under-explored in the current empirical literature.

**International Acquisition Strategy: A Network Perspective**

Timothy Kiessling, *University of Oklahoma*

Global trade has become the norm in today's marketplace. One very important form of international strategy increasingly is foreign acquisition. Yet these acquisitions often fail and are extremely difficult to value. Although expert mergers and acquisitions personnel often can untangle the web of differing tangible foreign accounting practices, intangible assets and intangible liabilities are either overlooked or impossible to value. One major intangible value associated with foreign target firms is the network of associated relationships developed over time. This paper explores valuation of international acquisitions from this network perspective in an attempt to identify the continuation of these valuable relationships within the network.

**Using Attraction Theory to Understand Market Relationships**

Violina Rindova, *University of Maryland*  
Rhonda Reger, *University of Maryland*  
Riki Takeuchi, *University of Maryland*

In this paper we propose a framework of the development of relational capital in markets, which focuses explicitly on how market participants select exchange partners based on their appeal and attraction. Most current research on inter-organizational relations focuses on trust and trustworthiness as key elements of relational capital. Drawing on the research on interpersonal attraction in social psychology, we propose that attraction precedes the formation of trust, and leads to a propensity to view a relationship in positive terms. In the paper, we examine how relationships develop as attraction progresses from initial appeal, to affiliation, and attachment. We argue that understanding the different levels of attraction is critical to understanding of the development of relational capital in markets.

### Trust and Its Alternatives

Sharon Alvarez, *Ohio State University*

Jay Barney, *Ohio State University*

There has been much written on the importance of building trust in cooperative arrangements (Ring and Van de Ven, 1994; Zaheer and Venkatraman, 1995; Gulati, 1995; Das and Teng, 1998). Inherent within much of the research on alliances and trust is the notion that partners are equal in terms of the capabilities they bring to the partnership. In alliances between entrepreneurial firms and large firms the partners often have unequal capabilities. Moreover, should the large firm act opportunistically the entrepreneurial firm does not have the resources to retaliate. This paper examines trust as a governance device and suggests that there are bundles of governance devices that can be used to govern alliances, one of which is trust. The paper also suggests that there are alternatives and substitutes for trust in alliances between entrepreneurial and large firms.

### Top Management Team Networks: A Relational Analysis of a Key Boundary-spanning Mechanism in Technology Firms

Kevin Clark, *Villanova University*

This research investigates how and when top management groups (TMGs) create value for their organizations. In contrast to prior research, which implicitly focuses on decision making, this study investigates the role the TMG plays in spurring organization-level innovation. Specifically, the TMG is cast as a critical boundary-spanning mechanism that facilitates the innovation capability of the organization's core. Adopting an information theory perspective the TMG gathers, processes, and distributes information attempting to enable the firm to be a first mover. The research captures the TMG's demographic composition and internal processes, but focuses on TMG social networks to explain how the team accomplishes its boundary-spanning function. Results demonstrate that the TMG does facilitate organizational innovation. Moreover, the networks and demography of the TMG appear to be important factors.

### THE MAINTENANCE AND DESTRUCTION OF MARKET LEADERSHIP

Paper	Track I	Victorian Room
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### The Visible Hand of Law: The Construction of Industry and Competition in Standard Oil and Microsoft Antitrust Cases

Vadake Narayanan, *Drexel University*

Clyde Stoltzberg, *University of Texas-San Antonio*

Mari Buche, *University of Kansas*

Researchers have focused on the outcomes of previous antitrust cases without addressing the judicial processes that led to the results. This timely study takes advantage of a high-profile case, Microsoft's Antitrust Case, and compares and contrasts the judge's rulings with those from the Standard Oil's Antitrust Case (1910). The central objective of this study is to compare the logical bases of two outcome determinative legal decisions using revealed causal mapping methodology. We identified the causal statements from the documents and produced maps from the concepts identified. In comparing the maps of the two cases, we found that within the Microsoft case the competitive environment was more complex, the use of precedent was more pronounced, and the rulings were based on traditional manufacturing industry perspective.

### Controversial Innovations, Social Barriers to Imitation, and Competitive Advantage: Profiting from Innovations in the Service Industry

Stefan Jonsson, *Stockholm School of Economics*

Innovations that are controversial in an industry context may be difficult for certain industry actors to imitate due to internal organizational resistance. Such social barriers to imitation may give rise to a temporary monopoly for an innovator even in industries where technical or legal barriers to imitation are very low, such as most service industries. This paper draws on existing strategic theoretical formulations of such social barriers to imitation (Rumelt, 1995; Oliver, 1997) and extends these by

focusing on barriers related to professionals in organizations. Testable propositions of drivers and effects of social barriers to imitation are formulated and illustrated by examples from the mutual fund industry in Sweden.

### The Rates of Change of Entrants and Incumbents in a Deregulated Industry

Tammy Madsen, *Santa Clara University*

Gordon Walker, *Southern Methodist University*

This study compares incumbents' and entrants' rates of change in assets following price and entry deregulation in the Trucking Industry (1980-1993). By specifying deregulation as an unambiguous break in industry history, we are able to be clearer than earlier studies about how differences in firm histories give rise to variance in firm growth rates. The results demonstrate that the asset growth rates of entrants and incumbents differ by size and within and across firm types. A baseline test shows that after deregulation, incumbents grow their asset base more slowly than entrants do. The findings suggest that two clocks, the industry clock and the internal firm clock, govern adjustment to industry change. After fundamental institutional change, the industry clock is reset but incumbents' internal clocks are not.

### Designing Incentive Systems that Shape Competitive Interaction

Javier Gimeno, *INSEAD*

Jay Dial, *Case Western Reserve University*

Metin Sengul, *INSEAD*

In the modern corporation, competitive actions are taken by agents (managers) with incentive structures designed by principals. How does this phenomenon influence competitive interaction and market outcomes? Prior research has recommended aligning managerial incentives to organizational performance. Yet, recent economic models on strategic delegation suggest when competitive spillovers in oligopoly are considered, it may be rational for principals to provide incentives that deviate from profit maximization in order to credibly preempt competitors, deter entrants, or influence competitive responses. We discuss the strategic role of managerial incentive contracts, divisionalization, and financial leverage on influencing competitive interactions, and ultimately organizational performance under competition. We discuss under what conditions it may be effective for principals to design formal and informal incentive structures that deviate from profit maximization.

### CREATING REGIONAL ADVANTAGE

Paper	Track L	Yorkshire Room
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### United Kingdom SMEs and the Discontinuation of Overseas Activities: A Follow-up Investigation into Practices within the Clothing Industry Eighteen Months On

Dave Crick, *University of Central England*

This paper reports on a follow-up study to an investigation concerning reasons why a sample of firms discontinued export activities and perceptions towards assistance that may motivate them to recommence overseas activities in the future. It provides a longitudinal, qualitative perspective that contributes to knowledge at the international marketing/entrepreneurship interface by reporting on their business activities eighteen months after the initial study was undertaken. Analysis establishes that differences exist between two groups of firms that had indicated in the original study that their discontinuation of exporting was a short-term measure compared with those that viewed the decision as longer term. The study provides recommendations for policy makers in the provision of trade assistance programmes.

### Strategies for Territorial Advantage: A Case Study of Ideon Science Park

Lars Bengtsson, *Lund University*

Jan-Inge Lind, *Lund University*

While most research on regional advantage focus on well-known and resourceful areas like Silicon Valley, Route 128, Austin etc. there have

been less interest in research on creating regional advantages in areas with a more “normal” level of resources. Earlier research has also neglected the management perspective on creating territorial attractiveness. In this paper we describe the successful case of creating territorial attractiveness through the case study of Ideon Science Park located in Lund, in southern Sweden. Among the strategies used by Ideon we find a balanced mix of small and large firms, facilitating industry - university interface, fostering an international attitude, creating the Ideon brand, organic growth of technology clusters. We compare and analyse the Ideon strategies with theories on regional advantage and network effects.

### Projects, Ideas, and Regional Development Strategy in Northwest Hungary

Ilona Papp, *Széchenyi István University of Applied Sciences*

Hungary had to face not only the challenge of globalization but the challenge of restructuring the market economy at the same time. In this respect the regions of the country had an important role. One of the most attractive region of Hungary from the point of view of foreign inventors was the so cold Northwest part of the country especially the town Gyo'r and its agglomeration. It was clear at the outset of the changing that well defined and clearly communicated regional strategic development programme could attract investments. In this paper the strong relationship between strategic objectives of the region and the development projects invested in the region will be highlighted based on a couple of examples.

### How to Improve the Process of Strategic Change Management in Transition Economy Enterprises

Verica Babic, *University of Kragujevac*

Stevo Janosevic, *University of Kragujevac*

This paper emphasizes a need for the improvement of the existing paradigm of strategic change management so that it suits specific characteristics of business ambient in which enterprises in the countries in transition exist. Hence, the first part of this work presents basic characteristics of the strategic change management process; the second part describes main obstacles for change implementation, while the third part gives a brief analysis of characteristics and limitations of strategic changes in Yugoslav enterprises. New corporate governance mechanisms, visions, knowledge and skills of top management, their ability to confront the change and to discover new possibilities are of a primary importance in development of strategic change management paradigm for transition economy enterprises.

## PAPER /PANEL SESSION 15:15 - 16:30

### THE CUSTOMER INTERFACE IN INNOVATION

Paper	Track General	Borgia Room
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#### Scenario Planning and Creative Strategy

Bjørn Brunstad, *Norwegian School of Economics & Business Administration*

Andreas Wangensten Hatlevik, *Accenture*

In the new economy, the importance of creativity in strategy making is often emphasized. Scenario planning was originally designed to help planners and strategy makers facing environments of high uncertainty and ambiguity, by carefully constructing stories/narratives of possible futures. Can scenario planning also be conceived of as a creativity tool in strategy making? It has been suggested that scenario planning contributes to creativity in strategy making, but this has not been studied academically. In this paper we draw on theory of creativity and creative problem solving to point at mechanisms that might explain a positive effect of scenario planning on strategy making creativity, and draw some implications for the use of scenario planning as a creativity tool in strategy making.

### Matching Firm Readiness Rhythm to Market Receptivity Rhythm in the Management of Technology-based New Products

Scott Dacko, *University of Warwick*

Olivier Furrer, *University of Nijmegen*

D Sudharshan, *University of Illinois-Urbana Champaign*

Ben Shaw-Ching Liu, *Butler University*

The success of a new product introduction depends on its timing. Too late an entry is likely to lead to significant loss of opportunity. Entered too early, a new product may not take off as customers and other partners may not be receptive enough. The problem therefore is of finding and entering at the right cycle of opportunity. This paper addresses the rhythm problem by developing a framework of the interaction between a firm's technological readiness and a market's receptivity in influencing a firm's performance. Starting with the proposition that the degree of match between the rhythm of firm's new product development process and the rhythm of market receptivity influences a firm's long-term performance, we identify the factors that are associated with the two rhythms.

### The Value of Embeddedness: An Empirical Investigation of Banks' Ability to Add Value to the Embedded Firm

Øystein Fjeldstad, *Norwegian School of Management BI*

Kent Eriksson, *Uppsala University*

Amir Sasson, *Norwegian School of Management BI*

The proliferation of network firms and the networking nature of established firms mainly due to factors as technology improvements and deregulation calls for developing understanding of value creation in and the management of this type of firm. Data on supplier/customer relationships and on the relationship between the individual firms and their main bank was collected from 265 firms. We find that a bank that has knowledge of their suppliers and customers, it has a higher value creation in the dyadic bank-customer relationship than other banks. Theoretical and practical implications of the ability of network firms to create higher value by being embedded in the broader networks of their customers in terms of segmentation, positioning, and the scale and scope decisions are discussed.

### Customer Care in a New World: Using New Technologies to Create Value

John Hall, *McKinsey & Company*

Sean Kell, *McKinsey & Company*

Deepak Khandelwal, *McKinsey & Company*

Steve Sacks, *McKinsey & Company*

Roger Zino, *McKinsey & Company*

Customer care is being dramatically transformed. New technologies from wireless to broadband; from the Internet to data mining, speech recognition, and artificial intelligence are providing companies with new capabilities to serve their customers. Customers' expectations are rising, remote interaction channels are multiplying, and competitors in a variety of industries are starting to respond with new service offerings and capabilities. To help companies succeed in this new world, McKinsey & Company examined both customer care organizations across a broad range of industries and interviewed hardware and software companies about future trends in customer care. We discovered that the best customer care organizations offer customer care along five new dimensions and execute against nine imperatives for success.



## THE INDIAN SOFTWARE INDUSTRY: EVOLUTION AND COMPETITIVE ADVANTAGE

Panel	Track General	Elizabethan Room A
	Jitendra Singh, <i>University of Pennsylvania</i> Tarun Khanna, <i>Harvard University</i> Prashant Kale, <i>University of Michigan</i> Sendil Ethiraj, <i>University of Pennsylvania</i> Som Mittal, <i>Digital Equipment India Limited</i> Phaneesh Murthy, <i>Infosys Technologies Limited</i>	

The Indian software industry has witnessed explosive growth during the last decade growing at over 50 percent annually. This presents an attractive opportunity to track the evolution of industry and firm level capabilities. The insights from studies at multiple levels of analysis can contribute significantly to the broader management and strategy literatures on the development of firm capabilities, particularly about how firms may grow while continuing to retain their adaptive capacities to move up the value chain. The panel discussion brings together industry professionals and academics doing research in this area to highlight the rich set of problems that this industry presents, to test our theories and refine them, and in the process help extend and replicate the success across time and space.

## EMERGING ECONOMICS: STRATEGIC RESTRUCTURING, RENEWAL, AND ADAPTATION

Paper	Track J	Elizabethan Room B
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### Adaptation Strategies of Industrial Companies in East Germany

Torsten Wulf, *University of Erlangen-Nürnberg*

The competitiveness of formerly state-owned companies is often regarded as one of the most important prerequisites for a successful completion of the transition process from a centrally planned towards a market economy in East Germany. Even though the changes in the macroeconomic environment posed a similar challenge to all companies, some seem to have been able to cope with these changes better than others, i.e. became competitive earlier. Therefore, the aim of this paper is to develop hypotheses regarding a characteristic adaptation pattern of formerly state-owned industrial companies in East Germany and to simultaneously elaborate hypotheses regarding causes for differences in their speed of adaptation along this pattern.

### Processes of Strategic Renewal in the Postindustrial Age: Evidence from the Legal Advisory Industry in Germany

Kai-Christian Muchow, *University of St Gallen*

Due to the combined impact of environmental shifts such as the globalization of client markets or the market entry of new competitors, professional service firms in many developed economies have become subject to increasing pressure for strategic reorientation. In some cases, this pressure has given rise to a complete re-creation of such firms. This study analyzes how existing interpretive schemes of professionals and organizational routines evolve in processes of strategic renewal. Evidence from the legal advisory industry in Germany suggests that the evolutionary patterns of the dynamic interplay between interpretive schemes and organizational routines which underlie successful strategic renewal are contingent on both the firms' structural characteristics and their ability to manage change processes according to job-related attitudes of organizational members.

### The Value of Restructuring in an Emerging Economy: Evidence from the Czech Republic

Mona Makhija, *Ohio State University*

Although the value creating effect of firm restructuring (including spin-offs, carve-outs and other divestitures) is generally well accepted for U.S. firms, there is very little evidence on the extent to which such arguments can be extended to firms in emerging economies. This study addresses this void in the literature by examining the issue of restructuring in the newly emerging economy of the Czech Republic. After controlling for factors such as performance, it is found that restructuring significantly

reduced the value of firms, despite the fact that Czech firms emerging from the communist era were highly diversified. This finding contradicts much work on restructured firms in the U.S., and supports the notion that sizable internal markets play an enhanced role in underdeveloped institutional environments.

### Multicultural Leadership Teams and Organizational Identification in International Joint Ventures

Jiatao Li, *Hong Kong University of Science & Technology*  
Katherine Xin, *Hong Kong University of Science & Technology*  
Madan Pillutla, *London Business School*

Many international joint ventures (IJVs) fare poorly. An important factor is that members of an IJV top management team (TMT), which generally comprises people from different cultures, often find it difficult to work together. In this paper we argue that social identity theory and organizational identification processes can help us understand why this is so. We propose that factionalism in a TMT is a significant hazard posed by member identification with different parents. In addition, identification with both the IJV and a parent firm can lead to significant role conflict for IJV top managers. Our analysis suggests that organizational identity and identification can be a valuable tool to facilitate the understanding of TMT functioning and IJV performance.

## PERSPECTIVES ON ENTREPRENEURSHIP

Paper	Track General	Elizabethan Room C
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### Corporate Strategy, Political Entrepreneurship, and Real Options in Transitional Public Policy Environments

Jonathan Doh, *Villanova University*

Corporate strategic management is increasingly conducted in an environment characterized by uncertainty. In this paper, I develop a framework for describing, modeling, and predicting entrepreneurial strategies in response to uncertainty generated by transitional public policy environments. Drawing from research on strategic management, entrepreneurship, corporate political strategy, and real options, I demonstrate how corporations disproportionately affected by changes in government policy and regulation use entrepreneurial political strategies to attain a favorable position in the marketplace once political and regulatory equilibrium is restored. Different entrepreneurial political initiatives are shown to be more or less effective depending upon the degree, pace, slope, and "inflection profile" of policy change. Recent examples of radical and unexpected changes in public policy environments underscore the value of modeling entrepreneurial political strategies in an increasingly turbulent market and non-market environment.

### Entrepreneurial Leaders: Born Once or Twice?

Ragnhild Kvålshaugen, *Norwegian School of Management BI*

The study investigates different predictors of leaders' entrepreneurial orientation. For a long time there has been an ongoing dispute whether leaders' behavior is a function of personality or social learning processes. More recently the middle position, the interactional view which argues that leaders' behavior is a function of both situational and dispositional factors, has gained increased interest. The study empirically tests the interactional view by examining to what extent leaders' entrepreneurial orientation is a function of problem solving style (primarily personality), social learning processes (educational background and type of work experience) and characteristics of present employer. The results from the study indicate that problem solving style and characteristics of present employer are the strongest predictors of entrepreneurial orientation.

### The Corporate Entrepreneurship: Performance Linkage in High Technology Firms: An International Comparative Study of Environmental and Organizational Influences

Jann-Marie Halvorsen, *University of Massachusetts*

Corporate entrepreneurship (CE) has been characterized by the entrepreneurial orientation (EO) construct, the dimensions of which include firm-level risk taking, proactiveness, innovativeness, competitive aggressiveness and autonomy (Lumpkin & Dess, 1996; Miller &

Friesen, 1982). This empirical study contributes to the EO-Performance configurational and contingency research (e.g., Antoncic & Hisrich, 2000; Bruining, 2000; Dess, Lumpkin & Covin, 1997) in three significant aspects. First, the sample firms represent a single, dynamic, high-tech service industry environment. Second, data is being compared across three countries, the U.S., Germany, and South Africa, to explore national differences in the EO discrete dimensions and their relationship to firm performance. Finally, the model posits strategic process, rather than content, as a competence that transcends situation-specific strategic choices in maximizing firm performance.

### Identifying Entrepreneurial Success Characteristics for Strategic Alliances: Comparative United States-China Study

Robert Mockler, *St John's University*

It's very easy to say "let's find an entrepreneurial strategic alliance partner". The difficult task is identifying what is meant by entrepreneurial in the specific situation under study and how one might go about finding and selecting, and building, an alliance management structure to suit a selected partner during the planning and negotiation phases of the strategic alliances development. Based on work done in developing strategic alliances and conducting executive seminars in China, and on lessons learned from entrepreneurship theory, this paper identifies relevant key considerations to improve the chances of success when entering strategic alliances in China.

### INTERNATIONAL COMPETITION AND THE EVOLUTION OF COMPARATIVE ADVANTAGE

Paper	Track H	Elizabethan Room D
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### Rethinking Trends: And How to Link Them to Scenarios

Franz Liebl, *University of Witten-Herdecke*

Scenario techniques are the method of choice for many companies to cope with environmental turbulence. However, scenarios do not prevent management from being surprised. Companies are regularly confronted with entirely unanticipated situations. Thus, although nobody would seriously claim that scenarios should predict the future in exact detail, it is striking how often situations occur that were excluded as "logically impossible" or "inconsistent" during the process of scenario-building. Obviously these flaws do not so much reflect the lack of creativity of workshop participants; they rather indicate an inherent methodological problem. The key to handling this problem lies in the concept of "trend." Trends are the driving forces of scenarios. Although they function as linchpins within the whole process, they lack a theoretical foundation. In this paper, the conceptualization of "trends" is investigated and, subsequently, reformulated to be useful for scenario-building.

### Industry Development as a Co-evolutionary Process: Was the Synthetic Dye Industry from 1857 until 1914 Already Part of the New Economy?

Johann Peter Murmann, *Northwestern University*

How new is the new economy. How different are the rules of competition today from rules in the 19th century? This paper tries sharpen our understanding the new economy by investigating the rise of the first science-based industry—synthetic dyes. Although British and French firms were leading the industry for the first decade, German firms surpassed their foreign rivals by 1870, steadily increased their lead and dominated the industry until 1914 with an 85 percent market share. The paper argues that the success of the German firms in comparison to British, French and U.S. firms can be best understood as a co-evolutionary process. German firm engaged in more effective collective action to change the rules of the game in their favor.

### Firm Heterogeneity and Industry Evolution: Morality Rates of the United Kingdom and Italian Motorcycle Manufacturers, 1985-1993

Filippo Carlo Wezel, *University of Bologna*  
Andrea Lipparini, *Catholic University-Milan*  
Alessandro Lomi, *University of Bologna*

A number of studies have emphasized organizational diversity as a potential source of competitive advantage, both at the firm and at the industry level. In this paper we further investigate this line of research by using information about the histories of 1,119 motorcycle producers operating in U. K. and Italy in the period 1895-1993. The results invite to a new interpretation of the implications of firm heterogeneity in the two countries. A considerable degree of organizational diversity within the Italian industry helped producers to face the Japanese threat. Yet, the level of organizational heterogeneity assumes a U-shaped relationship with firm's mortality. The fragmentation of the system into many niches leads diversity to collapse and individual failures generate chain reactions in the whole population.

### Industry Evolution: An Exploration of the Impact of Institutional, Technological, and Strategic Factors

David Methé, *Sophia University*  
Junichiro Miyabe, *Nomura Research Institute*

We examine the process by which an industry evolves over time. We put forth a framework that contains institutional, technological and strategic factors that economic and organizational research suggests will influence industry evolution. We study changes in these factors in the personal computer standard in Japan and the impact this had on firm entry and survival. In the study, we collected data on 212 firms operating in the Japanese personal computer industry from its birth in 1976 until 1999.

### ACQUIRING AND ABSORBING KNOWLEDGE

Paper	Track C	Essex Room
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### Acquisition of Knowledge in Technology Adoption

Loren Falkenberg, *University of Calgary*  
Jaana Woiceshyn, *University of Calgary*

This research examines the learning processes underlying technology adoption decisions in upstream petroleum firms. During the exploration for new technologies, and the evaluation of them, firms can learn about new ideas in the external environment, learn more about their own needs, and improve their competitiveness. Differences in learning processes were noted across firms in terms of the types of intellectual capital utilized, monitoring and focused search activities, assessment activities, and coordinating structures to disseminate information. Each of the firms studied varied in their learning processes, and eventual outcomes, according to how these basic elements were combined. The findings suggest that firms create a competitive advantage when they structure learning processes to identify and adopt technologies that align with the firm's strategic goals.

### Knowledge Creating Practices and Theory of "Ba"

Emiko Tsuyuki, *Japan Advanced Institute of Science & Technology*

Creating knowledge has become an important issue for management. However, the focus still remains on investing in IT. While investing in IT seems indispensable, IT is alone insufficient to acquire a sustainable competitive advantage, because IT can only deal with explicit knowledge but cannot create implicit knowledge. There are some Japanese companies, such as Eisai, NTT-East and Mayekawa that have already realized that investment in activating implicit knowledge is even more important than that in IT. They nourish the origin of source of implicit knowledge, known as "Ba". "Ba" literally means "physical space" or "place", but the concept is actually far richer than that. This paper is an introduction to some practical ideas for externalizing tacit knowledge through creative "Ba" in order to innovate effectively.

## Does Capturing Intangible Assets through Mergers and Acquisitions Payoff?

Asli Musaoglu Arikian, *Ohio State University*

Intangible assets are accumulated through either a direct route, or an indirect route (by-products of daily operations). One of the direct methods of acquiring/developing intangible assets is mergers and acquisitions, since target firms can be conceptualized as bundles of resources. The main concern of this paper is to determine whether acquisitions create abnormal returns in markets for intangible assets? Related literature suggests that, on average, shareholders of target companies earn significant gains whereas shareholders of acquiring companies break even at best. However this result does not say anything about the performance differences of bidders that acquire highly tangible or intangible targets. Findings of this study suggest that acquirers of highly tangible assets, on average, break-even; whereas acquirers of highly intangible targets, on average, lose market value.

## THE PROCESS OF MANAGEMENT: MICRO-STRATEGIES AND ORGANIZATIONAL CHANGE

Paper	Track General	Georgian Room
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### The Speed of Strategic Decisions and the Impact of Corporate-induced Context

Maximilian Kownatzki, *University of St Gallen/University of California-Irvine*

Christoph Lechner, *University of St Gallen*

Guenter Müller-Stewens, *University of St Gallen*

Martin Josef Deiss, *University of St Gallen*

This paper deals with decision speed as an intermediary outcome in strategic processes and the impact of two contextual parameters: 1) corporate content and 2) corporate process involvement at the SBU-level. We explored why and how these two types of contextual parameters, induced by the corporate management, influence decision speed; i.e. how decision speed can be influenced through the alteration of corporate-induced contextual characteristics. We found that in deregulated, turbulent environments, low content involvement and high process involvement applied by the corporate management of a multi-business firm which is diversified and exposed to various customer groups, leads to high decision speed at the SBU-level. In contrast, in regulated, stable environments, high content involvement and low process involvement applied by the corporate management of a single-business firm, which is integrated and exposed to a low number of varying customer groups leads to low decision speed.

## Determinants of Innovation Capacity and Success: An Empirical Model of How Top Management Practices Influence Innovation in Traditional Technology-based Firms

Joaquim Vilá, *IESE Business School-Navarra University*

Pablo Cardona, *IESE Business School-Navarra University*

This research identifies constructs related to top management practices which are linked to innovation capacity and success. It tests the extent to which top management priorities, Organizing practices for innovation, culture, organizational climate, resources allocated to innovation, and competitive environment influence innovation in traditional firms operating in fields subject to technological change. A sample of 246 firms is used to build a structural equation model of determinants of innovation capacity and success.

## Micro-strategies: A Decline in Strategic Comprehensiveness

James Douglas Orton, *University of Nevada-Las Vegas*

This paper reviews the roots of micro strategic theory from three perspectives: 1) Weick's statement of "small wins" is elaborated through discussions of the diverse contexts of industrial competitiveness (Teece, 1987, global change organizations (Cooperrider & Dutton, 1999), and attempts to "break the code of change" (Beer & Nohria, 2000); 2) the Honda Motorcycle Company's entry into the U.S. market (Honda B-1959) is used as an empirical reference point to explore a variety of

small win strategies, including strategy content theories (Honda A-1975), organizational learning theories (Pascale, 1984), resource-based theories (Honda C-1996), and chaos theories (Pascale, 2000); and 3) Inkpen and Choudhury's (1995) intriguing concept of "strategic absence" is reframed as "micro strategic presence," and used to create a list of the qualities of a successful micro strategic recommendation.

## Making the Rubber Hit the Road: An Empirical Test of Knowledge Management Strategies Using Simulation

Paul Friga, *University of North Carolina-Chapel Hill*

Knowledge Management (KM) research is long on theory and short on empirical evidence. One of the difficulties in moving forward with such research is operationalizing the key KM constructs and variables. This study presents a framework for capturing important elements of KM and tests propositions using computer simulation. The key variables tested include the number of employees, hiring rates, read/discuss incentives, codification investment, turnover, codification/discussion rates and KM costs. The model tests the hypothesis that firms should choose a dominant KM strategy (codification versus personalization) but should avoid a split (50/50) approach. Results show that high codification strategies can lead to lower performance (measured as shared knowledge/dollar) and that system dynamics, resulting from changes in turnover and incentives, significantly affect knowledge sharing outcomes.

## TOP MANAGERS AND THEIR TEAMS: ADDING, PRESERVING, OR DESTROYING VALUE?

Paper	Track J	Hampton Room
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### CEOs as Relief Pitchers: How Many Saves do they Make?

Margarethe Wiersema, *University of California-Irvine*

The replacement of a firm's CEO represent one of the most significant events for the future of the firm given the potential impact of the CEO on the strategic direction of the firm. While much of the succession research has focused on precursor conditions to executive turnover, little is known about what happens to the organization after a CEO is dismissed due to unacceptable performance. This study examines the performance records for newly appointed CEOs who replaced dismissed CEOs due to poor performance. Using both accounting and stock market performance measures, our findings indicate that these "relief pitchers" are no better than their predecessors in improving the performance of the firm. It appears that board and external market pressures for improved shareholder performance are not met when firms hire replacement CEOs.

## Taking A Fresh Look at Upper Echelons Theory

David Waldman, *Arizona State University-West*

Mansour Javidan, *University of Calgary*

Upper echelons theory rejects the deterministic view of organizations and proposes that senior executives play a critical role in the performance of their organizations. The theory has generally focused on background and demographic characteristics of CEO's. We argue here that the upper echelon theory should be expanded to encompass such personal qualities as charismatic and transformational leadership. The connection between top managers and firm outcomes may depend to a large extent on the managers' charismatic leadership, especially under conditions of perceived environmental uncertainty. In an uncertain environment, the effects of the strategic change may be mediated by charismatic leadership. Charismatic relationships with followers can help ensure the effective implementation of strategic decisions initiated by top executives. We conclude with suggestions about possible research directions.

## Fixing the Blame: Exploring the Use of External Experts as Scapegoats of Top Management Teams

Matthew Semadeni, *Texas A&M University*

Albert Cannella Jr, *Texas A&M University*

A theory of scapegoating is discussed with four necessary conditions: power asymmetry, information asymmetry, expandability, and expulsion. In addition, two assumptions are proposed: 1) that the scapegoat is not entirely to blame; 2) that the scapegoat is damaged by the scapegoating;



and 3) a limitation of scapegoating is that the cost increases each time it is used, making repeated scapegoating unlikely. The theory is used to examine the scapegoating of external experts by the top management team. All four conditions are possible in the TMT-expert relationship, making experts susceptible to scapegoating. It is not always clear, however, what damage to the scapegoat occurs when an external party, such as an expert, is scapegoated, potentially making it organizationally expedient to use experts as scapegoats.

### **Teams at the Top: A Theory Building Approach to the Study of Top Management Configurations**

Kevin Clark, *Villanova University*

This research is an empirical attempt to address some of the criticisms levied at top management group (TMG) research. Specifically, the use of demographic proxies for unmeasured process constructs, and the shortcomings of traditional bi-variate approaches. Utilizing a configurational methodology, the demography and process of 80 TMGs of high technology firms are investigated. Six dimensions of TMG are measured, including leadership behavior, experience, heterogeneity teamwork, communication, and power. Eight configurations, or types, of TMGs are developed and linked to important organization-level outcomes like innovation and financial performance. The research is an inductive effort aimed at building theory.

### **PROCESSES FACILITATING STRATEGIC DECISION MAKING IN THE FACE OF TURBULENT ENVIRONMENTS**

Paper	Track K	Kent Room
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### **The Relative Influence of the Linear and Adaptive Views of Strategic Decision Making**

Jill Hough, *University of Tulsa*

Margaret White, *Oklahoma State University*

This study examined the relative influence of the linear and adaptive views (Rajagopalan, Rasheed, Datta & Spreitzer, 1998) of strategic decision making (SDM). The linear view suggests that the context defines the relationship between process and outcome while the adaptive view recognizes the importance of how decision makers deal with the context. Relationships between environmental factors, decision-maker characteristics, managerial actions, SDM process, and process outcomes were examined in a simulated decision making environment using a sample of 364 managers. A partial hierarchical model supported complementary effects for the two views of SDM. Surprisingly, 21 percent of the variation in decision quality was explained by the decision itself.

### **Strategic Change Processes for Turbulent Environments**

E Craig McGee, *Solutions*

Today's turbulent business environments demand that organizations respond fast with a great deal of flexibility. Traditional strategic planning with well defined planning horizons and analytical frameworks are insufficient for environments of turbulence, ambiguity and discontinuity. This paper will describe approaches to creating strategic capability in organizations that are more effective in unpredictable business environments. The premise of this paper is that a core strategy in chaotic environments is creating a core capability around being flexible and adaptive. One approach consists of convening large groups of people for multi-day work sessions to identify key business drivers, evaluate current structures and systems, and develop recommendations for redesigning structures and systems. This approach has been used at Sysbase, Microsoft, United Airlines, and Bank of America.

### **Fueling Strategy-making: The Impact of Changing Management Logics on Organisational Practices**

Marjolijn Dijksterhuis, *Erasmus University-Rotterdam*

Exposed to more and more information, it has become a challenge to managers to balance speed and effectiveness in strategic decision making. In this paper, we claim that a thorough understanding of the role of management logic in strategy making processes is needed to cope with today's demands. A framework has been developed integrating insights from previous studies on strategic decision making and managerial

cognition. We have investigated the plausibility of the framework's underpinnings in two case studies; one conducted within a Dutch financial conglomerate and one conducted within a U.S. financial corporation. The paper reports on the findings.

### **Thinking Strategically and Making Strategic Choices at the Top: A Cognitive Model**

Jacques Lauriol, *Groupe ESC ROUEN*

Damon Golsorkhi, *University of Paris IX-Dauphine*

In this paper, we propose an integrative cognitive model of thinking and making strategic choices at the top in a Top Management Team (TMT) Following a literature review on this topic, we seek to link: 1) the foundations of individual thinking and acting strategically (as a non-linear, complex and highly interactive process); and 2) the collective dimension of this process, through the concept of "shared knowledge", which is the result of several dialectical factors combinations (consensus/dissension, lack of resources, stability/change in the context of action, planning/improvisation...). This shared knowledge is also a constraint of the organizational memory and the organizational context, through two sorts of rationality (interactive and interpretative), and two process (sense making and sense giving). The final part of this paper explains the "building process", which brings both individuals and groups in a social construction of thinking and making strategic choices.

### **GROWTH, DIVERSIFICATION, AND INTEGRATION**

Paper	Track G	Olympic Room
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### **Old Truths and New Insights on Growth**

Denise Fleck, *McGill University/Coppead/UFRJ*

The paper scrutinizes The Visible Hand (Chandler, 1977) seeking to answer the question "What is Chandler's theory on how and why did the modern business enterprise (MBE) appear and grow?" Four processes have been identified – MBE formation, MBE development, industry formation, industry development. Their analysis within a process-oriented view (Mohr, 1982) has disclosed chains of necessary conditions in growth-related processes. The examination of the microcomputer industry growth in the light of Chandler's ideas, provides evidence that his insights are potentially trans-historical. Moreover, the paper explores further some of Chandler's ideas – continuing growth and firm-industry co-evolution, advancing two growth-related dilemmas managers face in the course of corporate growth processes. Finally, implications for the management of corporate growth are discussed.

### **Toward a Dynamic Analysis of Technological Resources and the Direction of Corporate Diversification: Evidence from Spanish Industrial Firms**

Francisco Javier Forcadell Martinez, *University of Rey Juan Carlos*

Luis Angel Guerras-Martin, *University of Rey Juan Carlos*

This study proposes a dynamic resource-based framework for the interrelation of technological resources and the direction of corporate diversification. The aim is to integrate earlier work which analyzed the relation in one direction or the other: resources to diversification or vice versa. The study tries to support the theoretical propositions with an exploratory empirical analysis. The Survey of Business Strategies has been used for this purpose. This is a representative sample of Spanish manufacturing firms for the period 1990-1997. The results show more accentuated relations from the demand side (based on markets served and using management's segmentation criteria) than from the supply side (based on the sectoral classification codes for activity). Also, the relations are stronger when the internal R&D intensity (proxy for more specific technological resources) is considered than for external R&D intensity (proxy for less specific technological resources).

### **Making and Buying: Contingencies, Antecedents, and Motivations of this Dual Procurement Choice**

Anne Parmigiani, *University of Michigan*

Firms delineate their boundaries by choosing which activities to perform within the firm and which to outsource. Some activities, however, span these boundaries and are conducted both internally and externally. While

strategy literature has largely ignored this alternative and treated the procurement decision as dichotomous, my work investigates this choice and proposes motivations, antecedents, and contingencies for internal and external sourcing. This procurement mode allows the firm gains in knowledge and flexibility, but requires manufacturing and relational capabilities and is more complicated to manage than a pure make or buy choice. Therefore, firms will employ this making and buying strategy only for inputs vital to firm and customer outcomes.

#### THE RESOURCE-BASED VIEW OF ACTION

Paper	Track I	Oxford Room
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#### Resource-based Research: From 1984 - 2000 and Beyond

Gary Stockport, *University of Western Australia*  
Fernando Chaddad, *Accenture*

Resource-based research (RBV), known as such since Wernfelt (1984), started generating significant research output during the 1990s. We have analyzed over 100 RBV articles published between 1984 to 2001, from both academic and managerial publications. Our findings show that typically resource-based research has been theory-building, secondary source-derived and qualitative in nature. The advent of the new economy poses the question as to whether resource-based research is useful to scholars and to practicing managers alike? In order to address this question, our recommendations suggest that resource-based research in the latter half of 2001 and beyond be significantly different from the past.

#### Strategic Management Practices Under Conditions of Turbulence in a Developing Country: The South African Experience

Heinrich Oosthuizen, *University of Stellenbosch*

The findings of this research suggest that those organisations demonstrating above-average performance are not those that display more contemporary strategic management practices. This is unexpected. The above-average-group is characterised by a focus on external positioning and a rigid approach to planning. They reflect a "structure-follows-strategy" belief and performance evaluation emphasises quantitative operational criteria. The below-average-group puts emphasis on the new resource-based approach which alludes to competencies and capabilities. Planning maintains a traditional base but is strongly biased towards an adapted, new economy model. Implementation tends to be integrated with formulation and evaluation includes strategic control measures. However, traditional financial and market criteria were applied to determine and classify performance and, given the conditions of the new economy, findings may be questioned.

#### Positional versus Resource-based Rents in Strategic Groups Research: An Exploratory Study of the National Biking League

James Pappas, *Oklahoma State University*  
Bill Wooldridge, *University of Massachusetts-Amherst*  
Karen Flaherty, *Oklahoma State University*

This paper seeks to further develop strategic group theory by analyzing the competitive dynamics within a single industry, the National Biking League. Accepting the theoretical underpinnings of both industrial economics and the resource-based view of the firm, quantitative and qualitative analyses were used to explore performance differentials based on market positioning strategies and the deployment of inimitable resources and capabilities. We found that firms within the same industry deployed different strategic tactics with diverse results. While one strategic group utilized product-market strategies, competitive advantage often rested upon unique and complex historicity.

#### Contextuality within Activity Systems

Michael Porter, *Harvard University*  
Nicolaj Siggelkow, *University of Pennsylvania*

To further our understanding of creating and sustaining firm competitive advantage, we need to recognize two types of contextuality within firms' activity systems. First, the benefit of activity configurations can be

contextual, while some activity configurations are generically beneficial, others gain their value only as part of particular strategies. Second, interactions among activities can be contextual. While some interactions between activities are an inherent property of the activities themselves, other interactions are determined contextually by other activity choices made by a firm. We argue that competitive advantage is likely to be more sustainable if it is based on activities that are strategy-specific and that have contextual interactions with other activities.

#### KNOWLEDGE TRANSFER IN INTER-FIRM COLLABORATION

Paper	Track G	Victorian Room
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#### Choosing the Right Alliance Portfolio: Knowledge Transfer and Network Profile

Jonghoon Bae, *INSEAD*

This study examines the effects of alliance portfolios on parent firms' performance. First, a set of alliances a parent firm has developed is characterized by two network profiles, exploration and exploitation. Second, the cumulative effects of an alliance portfolio are aggregated at a parent firm level. Third, the performance implication of an alliance portfolio is examined with respect to knowledge transfer. It is hypothesized that the cost of knowledge transfer is jointly determined by a focal firm's ability to learn and its partners' ability to teach. Based on different network profiles of alliance portfolios, the hypothesis is tested against the collaborative agreements in the U.S. telecommunications industry, 1992-1999. The results are used to give a contingent valuation of alliance portfolios.

#### An Integrated Theory of Alliance Performance

Siegfried Gudergan, *University of Technology-Sydney*  
Timothy Devinney, *University of New South Wales*  
R Susan Ellis, *Mt Eliza Business School*

We develop and test a resource-based model to explain alliance performance. The empirical testing combines two cross-sectional surveys and is supplemented by case research on 25 alliances. The findings are as follows: Alliance performance captures both economic effectiveness and justice issues. Results show that alliance effectiveness is driven by raw inputs and their flexibility. Alliance competence and the amount of effort reflect the raw inputs to the alliance, while the adaptability of that effort and innovation within the alliance reflect flexibility. Competence complementarity has an indirect affect on alliance effectiveness through alliance competence. Along with alliance innovation and investment, competence complementarity determines the level of alliance competence. Alliance innovation, in turn, occurs as a result of alliance learning and creativity.

#### Research Logic, Partner Conflict, and International Alliance Success

David Sirmon, *Arizona State University*  
Peter Lane, *Arizona State University*

This paper studies the strategic reactions of the three largest Swiss newspaper publishers in 1997/1998 facing the Internet. A framework for firms to react strategically to a highly uncertain environment is proposed. The framework is empirically employed by assessing the uncertainty created by the Internet for newspaper publishers in general, showing that the Internet exhibits properties of a 'disruptive innovation'. The actual uncertainty assessment of the three publishers is then portrayed. The results of this empirical study show that while the three largest Swiss daily newspapers made similar assessments of the extent of the uncertainty created by the Internet, they took rather different strategic postures and adopted different strategic instruments to support their postures.

# **Micro-mechanisms for Enhancing Learning from Alliances: An Empirical Investigation of Alliances in the New Economy**

Miguel Rivera, *Groupe HEC/University of Michigan*  
 Pierre Dussauge, *Groupe HEC*  
 Will Mitchell, *Duke University*

The aim of this paper is to investigate which mechanisms can be set up by a firm in order to enhance the learning opportunities provided by the alliances it participates in, while minimizing the risks of losing valuable resources to a potentially competing partner. We argue that resource transfers between alliance partners can be explained by their coordination, creation, and protection abilities. In turn, these abilities are determined by micro-mechanisms, among which several are firm-specific: the alliance/firm interface, characterized by its centralization and its diversity, the firm's previous alliance experience, and the firm's learning and protective intent, which can be based on training, incentives, or culture. The theoretical model is tested in the form of a structural model on a sample of Internet alliances.

## **Firm Resources and Organizational Contexts: Variation in New Technology Acquisition**

Johannes Liebach Lüneborg, *University of Aarhus*

This research examines technology acquisition in the retail-banking sector in Denmark, Norway, Sweden and Finland. The acquisition and implementation of new technologies implies important organizational changes and this paper seeks to identify systematic variation in how this is done. The paper draws on both resource based and transaction cost perspectives to examine which factors drive technology acquisition. By considering how different national and organizational contexts moderate the impact of resources and specific assets, this study links industry and firm level characteristics to show how the influence of firm resources depends on the firm's environment. Despite the similarities of the Nordic countries the data show systematic variation in firms' mode of change for new information technologies.

### **BUSINESS MODELS AND VALUE-CREATION IN E-BUSINESSES**

Paper	Track A	Yorkshire Room
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## **B2B Marketplaces: A Deep Insight into the Italian Market and a Comparison with the United States Situation**

Raffaello Balocco, *Polytechnic of Milan*  
 Isabella Gandini, *Polytechnic of Milan*  
 Umberto Bertelè, *Polytechnic of Milan*

The paper will show the results of a study being carried out by the Observatory of the Milan Polytechnic (managed by AIP – Associazione Impresa Politecnica) on B2B electronic commerce in Italy and has a dual purpose: 1) to study in depth the marketplace phenomenon in Italy in order to have a complete and detailed picture; and 2) to compare the Italian situation with the international environment, in particular with that of the U.S. As far as the first objective is concerned analysis was carried out on two levels. At the first level the most relevant initiatives were assessed and analysed online. At the second a sample of the main Italian B2B players were interviewed to include in more detail the business models, the value chains, the organization, performance and economics.

## **Dot Com Mania: Its Influence on Managerial Decision Making and Resulting Market Value Destruction in e-Business Ventures**

Paul Drnevich, *McKinsey & Company*

The peak and subsequent decline of glossy unsupported valuations among e-business models has been the source of much conjecture, speculation, and analysis. Before March 2000 we witnessed a continuing propagation of ever-questionable value propositions rushed upon an eager, and overcapitalized, IPO market. Perhaps either the return to rational performance metrics, or the over consumption of investment capital by "me too" e-business models finally brought an end to an exciting period of irrational exuberance. What caused the flood of venture capital, incredible IPO market, and inane market valuations for

unprofitable business models? What affects did these market valuations have on managerial decision making and how much economic value was created, transferred, or simply destroyed during this period? This paper examines possible relationships and lessons from this period

## **The Evolution of Netsourcing Business Models: Learning from the Past and Exploiting Future Opportunities**

Wolfgang Buchholz, *eic-partner*  
 Norbert Bach, *University of Giessen*

This paper develops a conceptual framework for business models in B2B-e-markets. Following the perspective of the procurement function we refer to the activities on an electronic market as netsourcing. In this context and for this unit of analysis the paper addresses two questions: 1) what are the constituent components of a netsourcing business model? and 2) are there typical combinations of those components, i.e. archetypes of netsourcing business models? The findings are based on our own experience in e-business and procurement consulting, reports/studies published by investment banks and strategy consulting firms, and some exploratory empirical results. The paper concludes with an outlook on future business opportunities in netsourcing and proposals for future research.

## **Business Models and the Market Capitalization of e-Business Firm**

Raffi Amit, *University of Pennsylvania*  
 Christoph Zott, *INSEAD*

Using a unique data set of 200 publicly held e-business firms, this paper examines empirically the relationship between the design of a firm's e-business model and its market capitalization. Complementarities, lock-in and novelty of business models are identified as important drivers of a firm's market valuation. While these drivers are fundamental sources of value creation, they are shown to also foster value appropriation. However, the efficiency value driver, which effects value creation, does not account for much of the variation in the market capitalization of e-business firms. This counter intuitive finding may result from the tradeoff between increased total value and decreased bargaining power of the firm, effects which might cancel each other out.

### **PAPER/PANEL SESSIONS 16:30 - 17:45**

#### **COMPETING THROUGH INTERNAL AND EXTERNAL NETWORKS**

Paper	Track I	Borgia Room
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## **Reinventing Place: The New Role of Location in e-Business**

Ralf Reichwald, *Technical University-Munich*  
 Frank Piller, *Technical University-Munich*  
 Kathrin Möslin, *Technical University-Munich*

Location decisions in electronic business are not a question of 'anytime & anyplace'. The gradual dissolution of temporal and spatial constraints in business processes through information technology paradoxically shows a gaining importance of location in many fields. This paper discusses the new role of 'place' in electronic business. Based on the outcome of organisation and location theory, on the one hand, and exploratory research in 28 electronic business pilots on a national, multi-national as well as global scale, on the other hand, the paper will show that location does by no means loose its importance in electronic business. Quite the contrary is the case. The role of location, however, has to be redefined in organisation as well as location theory.

## **Market and Resource-based Determinants of Alliance Structural Integration**

Bing-Sheng Teng, *George Washington University*

Strategic alliances are formed in various structures -- joint ventures, minority equity alliances, and non equity alliances -- with different levels of inter-firm integration. In strategy research, a fundamental question is the relative importance of the external environment (or market) and a firm's internal characteristics (or resources) in determining firm strategy. This paper investigates both the market-based and resource-



based determinants of alliance structural integration. Two market-based factors (industry alliance intensity and inter-partner competition) and two resource-based factors (partner nationality and alliance experience) are examined. A multi-industry analysis of 414 alliances suggests that both perspectives are highly relevant. The results show that a low level of alliance structural integration is encouraged by high industry alliance intensity, inter-partner competition, domestic partner firms, and partner alliance experience.

### Industry Analysis Revisited: A Critique and Proposed Revision

Arlyn Melcher, *Southern Illinois University-Carbondale*  
Charnchai Tangpong, *Southern Illinois University-Carbondale*

The existing industry analysis represented by Porter's Five Forces is based on economic assumptions of profit maximization and market mechanisms. This approach seems inadequate in describing the structure of various industries and its influence on the behavior of firms such as automobiles and computer chips. By integrating behavioral assumptions of firms--bounded rationality and uncertainty reduction--with classical economic assumptions, this paper develops that firms arrange a negotiated environment through horizontal and/or vertical inter-firm cooperation. Their aim is to achieve target profits rather than maximize profits and generate greater uncertainty. This paper identifies patterns of rivalry among sets of firms that flow from these assumptions. They alter the intensity of rivalry, entry barriers, scale/diversity of competition, and threat of new entrants in the industry.

### CORPORATE SCOPE: EXPLORING FOCUSED STRATEGIES

Panel	Track General	Elizabethan Room A
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Patrick Viguerie, *McKinsey & Company*  
Joe Timko, *McKinsey & Company*

Corporate scope, whether to focus or diversify, is central to corporate strategy. Focused corporations can galvanize a leadership team around a specific goal, simplify the underlying business system, and streamline traditional corporate center roles. Modern finance theory provides strong support for the focused model. However, a narrow scope may limit potential and under leverage valuable capabilities. Scarce resource theory offers powerful arguments in support of broader scope. This panel discussion will address the role of strategic focus and breadth in value creation, addressing three issues through analysis and case examples: 1) are the strategic and financial arguments for and against focus fundamentally in conflict?; 2) do highly focused companies tend to outperform more diversified players?; and 3) are there benefits of moving toward or away from focused business models?

### COMPETITIVE ADVANTAGE IN THE NEW ECONOMY

Paper	Track A	Elizabethan Room B
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### An Empirical Study of Alliance Value Creation in e-Businesses

Sendil Ethiraj, *University of Pennsylvania*  
Harbir Singh, *University of Pennsylvania*  
Prashant Kale, *University of Michigan*

This study examines value creation through alliances in the e-business environment. Although the relationship between costs and benefits of alliances is considered important, there is little empirical work on this issue. We observe that alliance value creation differs significantly across different e-business types. We also find that costs/expenses incurred to create specialized/co-specialized assets through alliances are linked to positive alliance value creation. On the other hand, expenses incurred to access non-durable assets such as alliances for market access do not create value.

### Profitable Growth in Internet Business: Strategy Tales and Truths

Subramanian Rangan, *INSEAD*  
Ron Adner, *INSEAD*

The Internet is prompting newcomer and veteran companies to unwittingly pursue some dangerous paths to growth. As a consequence, the gulf between the pursuit and achievement of profitable growth is widening.

Noting that what is technologically feasible is not always strategically desirable, we explain the full implications of seven popular strategy misconceptions relating to first mover advantage, reach, "customer solutions," "the Internet sector," best-of-breed partner leverage, "born global firms," and technology as strategy. We propose several decision frameworks and safeguard questions to help managers to better assess these risks and better distinguish possibility from profitability.

### Winning the Web Wars: A Blueprint for Advantage in the Online Marketspace

Jeffrey Dyer, *Brigham Young University*  
William Hesterly, *University of Utah*

This paper offers a framework (supported with data) to make discriminating predictions of who will win the future web wars in different industries. Our research shows that online B2C winners will largely be determined by the value of complementary assets at meeting the customer's needs. More specifically, the value of "complementary" physical, human, and intangible assets is largely determined by product-selection complexity and the specialized operational complexity associated with managing physical product flows in the value chain. When complexity is high, online e-tailers will need complementary brick and mortar assets to succeed. Our framework also explains: 1) what pure plays will need to do to effectively compete with their now formidable "clicks and mortar" competitors; and 2) why many conventional retailers have problems when they follow conventional wisdom and spin-off their online business.

### Rethinking Business-level Strategies for the Electronic Marketplace

Jennifer Oetzel, *University of North Carolina-Chapel Hill*

This study tests rival theories of competition online by assessing the relative effectiveness of differentiation and low-price business-level strategies in the online brokerage and book markets. The economic efficiency, or frictionless market perspective, suggests that the Internet will force firms to compete primarily based on price. In contrast, the traditional strategy perspective suggests that firms gain competitive advantage through the presence of market asymmetries, such as product differentiation advantage, first-mover advantage, etc. Results offer little support for the frictionless market perspective. Although low-price and differentiation strategies are both correlated with higher market share, product and service differentiation strategies explain a greater portion of the variance in market share online.

### THE ROLE OF INNOVATION AND KNOWLEDGE DYNAMICS ON INDUSTRY EVOLUTION

Paper	Track I	Elizabethan Room C
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### The Influence of Inter-organizational Network Structures on the Success of a First-mover Strategy

Anna-Martina Kröll, *University of St Gallen*

This paper considers inter-organizational networks in their effects on a first mover strategy with innovative products in the new economy. Inter-organizational networks are conceptualized as a possible entry form. Following the social network analysis, the focus lies on effects of network structures. It is argued that the resource character of the a network structure can help companies to establish a first mover advantage by supporting the member companies to: 1) being faster than competitors outside the network; 2) building market entry barriers; and 3) minimizing First mover disadvantages. Structural characteristics like range, density, centrality, strong ties, closeness, weak ties, and structural holes are considered.

### Catching the Innovation Wave in Low-tech Environments: A Longitudinal Empirical Study in the Fashion Industry

Rossella Cappetta, *Bocconi University*  
Paola Cillo, *Bocconi University*

Many studies have developed an understanding of the determinants of superior performance in innovation strategy by focusing on high-tech industries. This paper contributes to this issue by analyzing the fashion

industry where the main driver of innovation is not the development in technology as changes in the dominant styles. To meet this objective, we trace the evolution of style in the Prêt-à-Porter segment of the fashion apparel industry, through a content analysis of the leading magazines in the field. Our analysis spans from 1984 to 1999, and reconstruct the emergence, relative diffusion and decline of styles in fashion. The empirical analysis shows the validity of a cyclical model of innovation for a low-tech environment and provides major implications in terms of success and survival.

### Human Capital and Organizational Change: Resetting the Clock?

Gino Cattani, *University of Pennsylvania*  
Johannes Pennings, *University of Pennsylvania*  
Filippo Carlo Wezel, *University of Bologna*

To date research on organizational change has produced mixed results. In this paper we advance this line of research by exploring the consequences of core changes on firm survival. Using data on the whole population of Dutch accounting firms during the 1880-1986 period, we trace organizational change to movements of human capital across firms. We distinguish between movements occurring within and across geographical areas, finding the former to increase competition whereas the latter cooperation. Our results suggest that movements of human capital account for the co-evolution of firms with their environments. This paper shows the importance of the interaction between micro and macro phenomena in shaping the evolution of an industry.

### Dual Network Strategies: Managing Knowledge-based and Efficiency-based Networks in the Italian Motorcycle Industry

Andrea Lipparini, *Catholic University-Milan*  
Gianni Lorenzoni, *University of Bologna*  
Maurizio Zollo, *INSEAD*

Our paper provides further insights to the debate around successful strategy-making processes in the motorcycle industry. With the aid of relational data collected in the period 1995-2000, we argue that sources of competitive sustainability inhere not so much within the firm but reside in networks of specialized suppliers. In vertically fragmented settings the ability to integrate knowledge residing both inside and outside the firm's boundaries emerges as a distinctive organizational capability. The study highlights the importance of firms' relational capability and network resources for explaining strategic behaviors. Evidences also suggest that strategy and organizational form should evolve one at a time and in the same direction. When the "periphery" of a network contributes as much as the center to generate sources for a sustained competitiveness, the potential of the network-like organization increases.

### Old Truths Revisited: Entrepreneurial Behaviors in Hostile Environment: "Only the Brave Will Survive? Maybe..."

Andrea Lanza, *Bocconi University/University of Calabria-Arcavacata*

This paper deals with the identification of effective entrepreneurial behaviors in hostile environments. Extant contributions in the strategic management, organization theory and behavior, and economics pose that entrepreneurship is a complex phenomenon, which need to be addressed in a multidimensional perspective (i.e. strategic posture, behavioral attitudes, economic performance, and so forth). Yet, to date many scholars remark the lack of a conceptual framework for entrepreneurship. This paper aims at identifying a typology of entrepreneurial behavior rooted in the entrepreneurship field of research, by means of which observing pattern of entrepreneurial performance in a hostile environment. Via a confirmatory factor analysis a typology emerged from data collected in hostile environment-based firms. This typology resulted constituted by four behaviors: relational, arbitrating, self-referential and imitative.

## VENTURE PERFORMANCE

Paper	Track E	Elizabethan Room D
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### Maximizing Foreign Firm Value at Time of IPO: Using United States Markets to Enhance Legitimacy and Market Capitalization

Timothy Reed, *Air Force Institute of Technology*  
Kurt Heppard, *United States Air Force Academy*

The degree to which foreign firms have been successful in attaining funds prior to a U.S. IPO should serve as a "track record" and strong indicator of legitimacy. Our study finds that the greater the total value of funds previously acquired by the firm, the greater the global proceeds on the day of the U.S. IPO are. Also, foreign firms do not necessarily seek to maximize the amount of capital raised on U.S. markets. Rather, these firms complete U.S. filing to gain legitimacy. Our research indicates that the lower the proportion of capital raised in the U.S. relative to the capital raised elsewhere, the greater the total funds raised on the day of the U.S. IPO are.

### Investor Certification of Venture Capital Investments: Does Top-end Backing Lead to Improved Value Creation?

Tuukka Seppä, *Helsinki University of Technology*  
Markku Maula, *Helsinki University of Technology*

Employing data from 2,327 venture capital investments in U.S. information and communications technology companies between 1982 and 2000, this paper contributes to the understanding of the financing strategies and the valuation of privately held startup companies, and the investment selection strategies of venture capitalists. From the theoretical perspective, the paper extends the literature on agency theory, asymmetric information, and certification in the context of privately held companies. Our paper documents that venture capitalists' reputation strongly affects their ability to select investments, to certify them, to add value, and to utilise negotiation power in the valuation of new investments. Furthermore, our paper demonstrates how startups can pursue successful financing strategies, and how venture capitalists can take advantage of their valuable role as certifying and value-adding investors.

### Money and Knowledge Sources of Ownership Control and the Performance of High Technology Startup Firms

Susanna Khavul, *London Business School*  
James Post, *Boston University*  
Shlomo Kalish, *Jerusalem Global Ventures & Yazam.com/Tel Aviv University*

If they are to survive, high technology startups must speed ideas into products and products to markets. This research considers how the sources and structures of ownership control and resource position of high technology startup firms affect their performance. The research context for the study is the emerging high-technology sector in Israel. The study shows that money is necessary but not sufficient for high technology startup firms to overcome the liability of newness. That is, the sources and structures of ownership control makes a difference in how likely and how quickly firms will complete new product development. However, it is the resource position of the firm not the source or structure of its ownership control that makes a differences in how likely and how quickly firms will complete new international sale.

### The Impact of Rounds of Venture Capital Funding on the Evolution of Startup Firms

Antonio Davila, *Stanford University*  
George Foster, *Stanford University*  
Mahendra Gupta, *Washington University-St Louis*

This paper examines the role of rounds of venture capital financing in the growth of startups. We investigate two potential theoretical arguments to explain why the timing of these events has a significant effect upon employee growth, average salary, and turnover. In particular, we explore whether startups suffer from limited financial resources and venture capital funding unbinds this constraint. We also explore the role of

venture capital funding events as signaling mechanisms both within the startup as well as to outside parties. We find that limited financial resources are more prevalent in early rounds of venture capital financing, while signaling affects growth in later rounds. Finally, the paper documents differences in growth and managerial talent between venture backed and non-venture backed startups.

#### RE-THINKING THE ROLE OF THE CUSTOMER IN E-BUSINESS

Paper	Track A	Essex Room
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#### Mobile Internet Strategy: A Reference Framework and An Empirical Survey on the Italian Market

Andrea Rangone, *Polytechnic of Milan*

Filippo Renga, *Polytechnic of Milan*

The paper will show a framework and the results of an empirical analysis of mobile Internet applications for the Italian consumer market performed by the Observatory on mobile Internet of AIP (Associazione Impresa Politecnico). The main objectives of the analysis are: 1) to understand the strategies carried out for mobile Internet applications with reference to both traditional Web operators, who also extend supply to WAP applications, and "specialist" operators, who operate exclusively in mobile and; 2) to evaluate the coherence of WAP applications, on one hand, with the limits set by the technology at present available (both network and interface) and, on the other hand, with the opportunities offered by mobile applications. The survey has analysed 116 WAP sites and more than 330 WAP application.

#### Is Network Theory Applicable to Competition in the Digital Age? Some Findings from Prototypical Digital Organizations

John McIntosh, *Bentley College*

Eonsoo Kim, *Korea University*

Su Jin Han, *Korea University*

Contemporary studies of firm networks tend to conceptualize them as formal arrangements of medium to long term duration. However, the transient market opportunities, rapid change, and low cost, easy connectivity in the digital world suggest that theories developed in the brick and mortar world must be revised to account for these differences. This paper tests existing theory by studying how prototypical digital firms in the online photo distribution industry use multiple, informal, temporary electronic networks to deal with demand uncertainty and technological uncertainty. Using a sample of 138 firms we discovered that participation in electronic networks, formed around portals, reduced demand uncertainty. A second finding indicates that small firms used relational capital with technology providers to mitigate technological uncertainty more than large firms.

#### The Impact of the Internet on the Product Development Process

Gianmario Verona, *Bocconi University*

Emanuela Prandelli, *Bocconi University*

As firms become more specialized and technology advances at a rapid pace, the conventional approach to creating knowledge within the boundaries of the firm grows inadequate. Firms need the contribution of their customers and other partners to catalyze their process of new knowledge generation and, mostly, their innovation processes. While firms in business-to-business markets have traditionally involved customers closely in their processes of new product development, firms in consumer markets have rarely collaborated with them to co-create new offerings. We analyze how advances in information and communication technology, and especially in the Internet, now allow consumer market firms to directly involve both customers and complementors into their innovation processes, gaining a competitive edge. We explore how to leverage these specific knowledge contributions, considering both click and mortar companies and pure Internet players.

#### Customer Affiliation or Customer Lock-in? Towards an Integrated Frame to Sustain Competitive Advantage on the Web

Emanuela Prandelli, *Bocconi University*

Gianmario Verona, *Bocconi University*

In the Internet economy it seems difficult to sustain business models in the long run. One reason is that firms are competing in a frictionless economy, where information overload substitutes information shortage and customers can freely float from competitor to competitor. Therefore, while in the past firms could behave opportunistically by leveraging information asymmetry, today customers can behave opportunistically, reducing the attention to any specific relation they develop. This demand-side situation mines the sustainability of advantage on the Web. We show that companies competing successfully on the Internet base their strategies on a complex mix of customer-based strategies: they act not only to build their customers' trust and enhance customer visits to their websites (affiliation), but also to prevent their customers' switch and transform visits into continuous purchase (lock-in).

#### DESIGNING ADAPTIVE ORGANIZATIONS IN A CONSTRAINED WORLD

Paper	Track D	Georgian Room
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#### Inter-temporal, Economies of Scope, Organizational Modularity, and the Dynamics of Diversification

Constance Helfat, *Dartmouth College*

Kathleen Eisenhardt, *Stanford University*

The question of whether corporations add value beyond that created by individual businesses has engendered a good deal of debate. This debate has focused in part on the benefits versus costs of related and unrelated diversification. A standard explanation of the benefits of related diversification has to do with the utilization of, or reduction in, excess resources within the firm to obtain intra-temporal economies of scope. In contrast, this paper deals with inter-temporal economies of scope that firms achieve by transferring excess resources among related businesses over time, as firms exit some markets while entering others. Such inter-temporal scope economies also can rely on a decentralized and modular organizational structure, suggesting that corporations need not share resources contemporaneously in order to benefit from related diversification.

#### Technology Conversion: From Innovation to Commercialization

Laura Cardinal, *University of North Carolina-Chapel Hill*

Michael Fern, *University of North Carolina-Chapel Hill*

In our examination of new product development, we focus on the nature of the technological conversion process and its corresponding impact on product development achievement. In its broadest sense, technological conversion encompasses the requisite routines and activities for transforming an innovation into a commercializable product. We present the results from a qualitative study that provides initial support towards the applicability of the developed theory. Intriguingly, conversion processes appeared paramount vis-à-vis other project characteristics that likely influenced the degree of project success. The evidence illustrates that although two distinct innovations may initially hold equal financial promise, the conversion process accounts for a preponderance of the outcome. The data suggests that mastery of the conversion process will significantly enhance the performance of the innovating firm.

#### Sequencing of Technological and Organizational Changes and the Effect on Implementation Success

Inger Stensaker, *Norwegian School of Economics & Business Administration*

Anne Cathrin Haueng, *Norwegian School of Economics & Business Administration*

This paper is concerned with implementation of strategic changes that involve major organizational changes as well as the application of new IT systems. The purpose of this empirical paper is to examine the effects of alternative ways of implementing significant changes both in IT-system(s) and in the organization. The focus is thus on the implementation of



different components and the effect sequencing has on implementation success. We explore four different alternatives with regards to sequencing of respectively organizational changes (OD) and information technology (IT). Each approach is discussed with regards to advantages and disadvantages, and propositions predicting the effects of different sequences on implementation success in terms of goal attainment, costs, and time used are presented. Finally, the propositions are tested empirically through a survey.

### Evaluating How Strategies Support Objectives

Christer Karlsson, *Stockholm School of Economics*

Mikael Weimarck, *Chalmers University of Technology*

An important aspect of strategies is the degree to which they support the objectives. The paper describes a model that indicates the degree of consistency between strategies and objectives and the degree of consonance among strategies of a firm. The model is called the consistency model. The match between objectives and strategies is referred to as strategic consistency. The match between different strategies in terms of being mutually supportive of the objectives is referred to as strategic consonance. The model has been tested in the case of Volvo and its automotive business areas. The issues studied were sourcing, partnering and globalization. Perceptions regarding the supportive ability of different strategic alternatives were gathered among the top managers as well as a group of distinguished strategy professors.

### ORGANIZATIONAL RESOURCES AND CAPABILITIES: NEW PERSPECTIVES AND TESTS

Paper	Track J	Hampton Room
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### Opening the Resource-based View's Black Box: Catalytic Resources, Services, and Value

Mark Hansen, *Brigham Young University*

Lee Tom Perry, *Brigham Young University*

The arguments developed in this paper are based on the premise that Penrose's (1959) distinction between resources and services has largely been overlooked in contemporary RBV reasoning. References to a "black box" and criticism's of tautology that have been leveled at the RBV (Priem & Butler, 2001) are addressed by explicitly recognizing the distinction between resources and services. The central argument of the paper is that effective leaders act as catalysts in converting relatively homogeneous resources into heterogeneous services. Tautology is avoided by recognizing the difference between the expected value of resources and the actual value of services. These arguments are supported when tested in a non-tautological manner by examining the actions of new CEO's and the resulting economic performance.

### The Development of Capability: Towards an Ecological Perspective

Steffen Raub, *Groupe HEC Geneva*

Arne Deussen, *Asian Institute of Technology*

As we recognized a lack of clarity regarding the level of analysis at which capabilities, we have chosen to conduct two in-depth case studies of capability evolution at different levels of analysis to investigate processes of capability evolution. Given links between the idea of capability evolution and strategy process research we will also discuss how the results of our study fit in with existing strategy process frameworks. Case #1 illustrates capability evolution in a Swiss retail chain. It traces the development of autonomous initiatives, which culminated in a capability in 'ecological retailing'. Case #2 focuses on a large Swiss holding company. In this case, the unit of analysis is capability at the level of various business units (organizations) encouraged by various measures of management at a holding level. Results led us to suggest an additional stage in the processes of strategy as analyzed from the perspective of an "intraorganizational ecology".

### Hard Choices: Developing New Capabilities or New Businesses

John Camillus, *University of Pittsburgh*

John Naman, *University of Maryland*

Willie Hooks, *SGI*

Organizational leadership has to commit to developing new capabilities, developing new businesses, or perhaps attempting to develop them both. Each of these three types of changes pose different challenges. The differences involved in making these three types of changes are so fundamental that different organizational architectures are required for the changes to have reasonable probabilities of success. Developing new capabilities involves conventional planning processes and often permits continuation of the existing line structure. Developing new businesses involves shifts in the power structure and changes in the organization's mission. Developing new capabilities and new businesses simultaneously pose a difficult challenge and are at times inadvertently and often unsuccessfully attempted by managers. How to recognize and organize differently for each type of change is discussed.

### TIMING, SEQUENCE, AND DESIGN OF COMMITMENTS

Paper	Track F	Kent Room
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### Chains of Real Options and New Assets Creation in the Entrepreneurial Process: Theory and Cases in e-Business

Young-Rok Choi, *Hallym University/Rensselaer Polytechnic Institute*

Dean Shepherd, *University of Colorado-Boulder*

Previous research on the entrepreneurial process has not sufficiently addressed the role of a decision maker's uncertainty in explaining complex firm developments. A real options perspective is a useful theoretical lens to incorporate uncertainty and decision making. We conceptualize the entrepreneurial process by considering uncertainty, the honeymoon period(s), learning, and new asset creation. We develop a theoretical framework to view the entrepreneurial process as a path-dependent chain of real options, in which the honeymoon (the venture's initial stage of formation) acts as a real option. As an application, e-business cases are analyzed using our real options framework and we present a number of important implications for entrepreneurs.

### The Dynamics of Uncertainty: Timing of Investments in a Transforming Industry

Karen Belanger, *Columbia University*

The decision of when to act in the face of an industry-transforming change is likely to substantially affect the firm's performance in the period during and after the environmental shift. Uncertainty as to environmental outcomes, opportunities for investment, competitive moves, and organizational inertia all affect not just what to invest in, but also when. Researching the choice of when to invest made by managers before and during deregulation in the electric industry in the U.S. provides evidence of which firms invested proactively vs. reactively and how inertia affects organizations differently. Although there has been much discussion about how to invest in uncertain markets (e.g., real options), managing uncertainty and competitive dynamics in a changing environment also requires consideration of when organizations invest.

### When Does Real Options Logic Fail? Choosing the "Very Best" Option in Winner-take-all Markets

Asli Musaoglu Arikan, *Ohio State University*

Ilgaz Arikan, *Ohio State University*

Panayiota Konstantina Kiousis, *Ohio State University*

In this paper, our central question is: How should a firm invest its capital into a sequence of investment opportunities, if for reasons of external competition, it wishes to invest in the very best option? We discuss an alternative scenario of high uncertainty but limited flexibility, than the one typically described in the real options literature, and thereby extend investment decision models by highlighting the shortcomings of the traditional real options logic. The investment strategy we propose is particularly applicable in markets where "winner-takes-all" such as, pharmaceuticals, biotechnology and other high-technology industries, in

which a firm faces with a sequence of investment options and cannot revisit foregone opportunities due to intense rivalry. Further we consider optimal strategies when investing firms have varying levels of risk preferences.

### Uncertainty and the Likelihood of Entry: An Empirical Assessment of the Mediating Role of Sunk Costs

Douglas Johnson, *Purdue University*  
Timothy Folta, *Purdue University*

Real options models consider that uncertainty has a direct effect on the willingness to invest, and that the effect of uncertainty increases as the irreversibility of investment increases. This interaction between uncertainty and irreversibility has not been empirically demonstrated because existing literature has tended to assume that all investments are equally irreversible. We address this issue in the following three ways. First, we validate that uncertainty is moderated by investment irreversibility. Second, we relate the irreversibility of entry to a firm's corporate strategy, and demonstrate that uncertainty is moderated by the relatedness of the target industry. Finally, we provide evidence regarding the tradeoff between the option to grow and the option to wait - the effect of uncertainty varies in the presence of growth options.

### Resource Accumulation, Flexibility, and Strategic Commitment

Gonçalo Pacheco de Almeida, *INSEAD*  
Peter Zemsky, *INSEAD*

We study the extent to which competing firms use real options. Specifically, we develop a formal game-theoretic model of investment under uncertainty in which firms can exploit the option to wait or the option to switch by investing in flexible resources. Our model combines the notion of strategic commitment drawn from I/O economics with an assumption of time-consuming resource accumulation drawn from strategy. Contrary to received wisdom, we show that the ready access to flexible resources can increase the prevalence of strategic commitment. Moreover, we find that when resource accumulation is sufficiently time consuming, the benefit to early investment does not come from commitment but rather from the ability to take advantage of an initial price premium.

### REVISITING DIVERSIFICATION THEORY

Paper	Track G	Olympic Room
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#### The Selective Entrepreneurship Puzzle

Thomas Ehrmann, *University of Münster*  
Rainer Biedermann, *University of Münster*

The paper tries to capture and integrate the systematic differences in performance between independent ventures (IVs) and corporate ventures (CVs) in a simple model. We assume that the managers of the parent company and of the CV respectively are bound by a contract. Both groups of managers have some form of access to the firm's profit  $\pi$ . The manager of the parent company derives some benefits from interfering with the activities of the CV, which puts the latter at a disadvantage. But he also incurs costs through transferring valuable resources (og. brandname) to the CV. We analyse different cases of a CV's "cost-benefit" account from belonging to a parent company. We show when the CV can out compete the IV.

### Balancing Intrinsic and Extrinsic Motivation for Managing Firm Boundaries

Margit Osterloh, *University of Zürich*  
Jetta Frost, *University of Zürich*

We discuss motivational factors as an important determinant of the efficient boundary between firms and markets. Firm boundaries decisions are discussed within transaction cost economics and the knowledge-based view. However, within the two approaches, motivation is assumed to be exogenously given. They do not differ between motivational factors influencing decisions inside and outside the firm. This assumption is insufficient. Firms can enable another kind of motivation than markets can do: firms are able to manage motivation by balancing intrinsic and extrinsic motivation. This requires a corresponding set of coordination

mechanisms. These capabilities establish the sustainable competitive advantage of firms. It is crucial because they enable firms to solve the problem of social dilemmas. The capability of managing motivation contributes to defining the efficient boundary between firms and markets.

### A Stakeholder Theory of Corporate Diversification

Heli Wang, *Ohio State University*  
Jay Barney, *Ohio State University*

Corporate diversification can benefit a firm's equity holders directly, through exploiting economies of scope and synergies, and indirectly, through its impact on the willingness of a firm's other stakeholders to make firm specific investments. In determining its corporate diversification strategy, a firm must consider both these direct and indirect effects, as well as the effect of low cost substitutes for diversification. These substitutes can include the use of financial instruments and a portfolio of real options. The implications of these effects for a firm's corporate diversification strategy are examined. Conditions under which related diversification, unrelated diversification, and no diversification are all consistent with the interests of equity holders are identified.

### Firm Risk Management Policies: Financial Hedging and Corporate Diversification

Heli Wang, *Ohio State University*  
Seongyeon Lim, *Ohio State University*

Under what conditions will a firm engage in related or unrelated diversification to manage its risk exposures? Under what conditions will a firm use financial hedging markets to manage its risk exposures? Although it first appears that financial hedging and firm diversification may be substitutes in managing risks, this paper argues that is often not the case. Specifically, this paper develops a stakeholder theory of firm risk management and shows that financial hedging and diversification are more often complementary rather than substitutive means of risk management. Therefore, the introduction of financial hedging markets can increase the incentive for corporate diversification.

### COMPETING IN THE FACE OF NETWORK EXTERNALITIES - II

Paper	Track B	Oxford Room
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#### Examining Versioning Strategies in Computer Software

Scott Turner, *University of North Carolina-Chapel Hill*  
Rich Bettis, *University of North Carolina-Chapel Hill*  
Barry Bayus, *University of North Carolina-Chapel Hill*

In this paper, we study how firms approach versioning in computer software. Versioning is a strategy where multiple product variants, or versions, are released within a particular product family. Cross-sectional versioning attempts to increase sales by targeting new or different customer segments (i.e., Quickbooks 2001, Quickbooks 2001 Pro), while longitudinal versioning attempts to increase sales via upgrade purchasing by existing customers as well as purchasing by new customers (i.e. Quicken 99, Quicken 2000). Our theoretical lens is one of pacing. Research suggests that, in developing new products, firms use time- or event-based pacing. Specifically we try to determine which factors explain whether software firms release new versions within existing product families. In our statistical test, we analyze monthly business application software data from 1993-1998.

### Untangling the Gordian Knot of Appropriability and Network Externalities: Strategic Choices when Commercializing a New Technology

Mark Pruett, *George Mason University*  
Hun Lee, *George Mason University*

Beyond the basic question of how dominant technological designs emerge in new technologies, there is a critical question of particular relevance to strategic management--what implications does that process have for firms' strategies? Understanding the process is more than just responding to technological uncertainty; it may also provide a basis for the firm to dominate the prospective technological change. To explore that question, we examine the impact on strategic choice of two critical conditions in

the emergence of a dominant design: appropriability--the firm's ability to retain the value of an innovation--and network externalities--the strength of the market's preference for standardized technology. Drawing on dominant design, strategic management, law and economics literature, we model the strategic alternatives these conditions create for firms.

### Increasing Returns, Strategic Alliances, and Firm Value in the Electronic Marketplace

John Mezias, *University of Miami*

Namgyoo Park, *University of Miami*

JaeYong Song, *Yonsei University*

The promise of increasing returns has driven many e-commerce firms to use strategic alliances to rapidly increase customer base. Arthur (1990, 1996) defined increasing returns as a mechanism of positive feedback magnifying early winners' advantages. However, empirical studies have not investigated if e-commerce firms' alliances increase firm value. Using an event study, we investigate how strategic alliances of e-commerce firms affect firm value as measured by stock prices. Preliminary results indicate that alliances involving e-commerce firms have a positive affect on firm value. Supporting our arguments for increasing returns, we also find that alliances among e-commerce firms generate significantly greater firm value than alliances involving non-net, brick and mortar firms; and that marketing alliances generate significantly greater firm value than technology alliances do.

### The Role of Relational Capability in e-Business

Dovev Lavie, *University of Pennsylvania*

The adoption of the Internet as a technological platform for conducting business shapes organizational capabilities designed to take advantage of the unique characteristics of virtual markets. In such markets, a relational capability - the capacity to form and maintain valuable interactive relationships with the firm's stakeholders, becomes a critical source of competitive advantage. A relational capability is manifested in mechanisms such as positive network externalities, affiliate programs, virtual communities, personalization, customization, and loyalty programs. A sample of publicly traded U.S. and European e-businesses is analyzed to demonstrate the contribution of a relational capability to the market valuation of e-businesses.

### VALUE OF BRAND, REPUTATION, AND EMPLOYEE KNOW-HOW

Paper	Track C	Victorian Room
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#### Global Corporate Reputation as Intangible Capital

James Cordeiro, *State University of New York-Brockport*

Joachim Schwalbach, *Humboldt University-Berlin*

Drawing on the Fortune Global Reputation Surveys from 1997 to 2000, we reexamine some of the key findings of earlier researchers who have used the domestic Fortune Reputation Surveys to test the universality of these findings. We find that the global results are very similar to the domestic results in terms of (a) the correlation and factor loading of reputational attributes, (b) the determinants of reputation. We also explore industry and country effects and find weak evidence that reputations are positively correlated with future corporate financial performance.

### New Insight on Intangible Resources and Competitive Advantage: An Empirical Test of the Importance of Organization Reputation and Employee Know-how

Alice Stewart, *Ohio State University*

Henry Zheng, *Ohio State University*

In this paper, we examine the relative effect of two commonly discussed intangible resources, organization reputation and employee know-how. This study makes two contributions: 1) we provide a measurement methodology that empirically evaluates the employee know-how of one organization relative to others in the same industry; and 2) we test the interplay of two intangible resources, organizational reputation and employee know-how, and determine the relative effect of each on performance. Results of the analysis suggest that reputation positively affects employee know-how. Employee know-how then directly impacts performance. Thus unlike earlier research, we empirically show that

the effect of reputation on performance is indirect rather than direct. We believe that this is a first step toward the development of more sophisticated models of how intangible resources affect organizational performance.

### The Value of Learning in Managing Innovation: Exploring the Relationship between R&D Learning Curve and Firms' Performance in the Telecom Industry

Paolo Boccardelli, *Luiss Guido Carli University*

Alessandro Grandi, *University of Bologna*

Raffaele Oriani, *University of Bologna/Luiss Guido Carli University*

Mats Magnusson, *Chalmers University of Technology*

This paper explores the impact of the R&D learning curve on performance by capturing its effect on the development and utilization of organizational capabilities. In R&D project work, managerial competencies are used to influence the exploration and exploitation of technological competencies. Competencies of selection and creation play a crucial role in leading the evolutionary traits of technological competencies, while those of combination, integration, and transformation enable organizations to efficiently embed technological competencies in products and processes. The combined use of these competencies over time influences R&D outcome in terms of innovation and efficiency. By studying R&D projects in two business units at Ericsson, the relationship between the R&D learning curve, in terms of accumulation of managerial competencies, and performance is investigated.

### Realistic Valuation of New Economy Organisations: Introducing the People Factor into Business Valuation for Strategic Purposes

Mike Spark, *Swinburne University of Technology*

This paper assesses past approaches to business valuation for their adequacy and applicability for strategic organizational decisions, including purchase or disposal of the operational entity. It introduces a framework based on five categories of assets, including a new people category. It proposes a more practical and comprehensive approach to business valuation than the current accounting-based version. The concept of Synergistic Capital (SC), created by the author, is introduced, and its proposed relationship to the term Imaginative Capital (IC) is examined. The need for global consistency in business valuation is addressed, along with the need for further discussion and research on a worldwide scale to match the perceived global implications.

### PERSPECTIVES ON E-STRATEGIES

Paper	Track A	Yorkshire Room
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#### Surviving the Internet Gold Rush: What Types of Growth Lead to Success?

William Gerard Sanders, *Brigham Young University*

Steve Boivie, *University of Texas-Austin*

We examine alternative modes of growth in high stakes/high risk environments. The roles of internal, relational, and acquisitive growth in the development of market share, net income, and shareholder wealth are examined. We analyzed the growth of 207 publicly traded e-business firms and found that acquisitive growth and growth through alliances resulted in higher levels of market share and market capitalization. Net income was negatively affected by acquisitive growth but positively related to growth through alliances. Acquisitive and relational growth both decreased the odds of subsequent bankruptcy while relational growth increased the odds of becoming a takeover target. Similar results were found when examining the growth strategies of firms involved in human genetics, another economic domain with high stakes and high levels of risk.



### **A Critical Assessment of First-mover Advantage in Business-to-Consumer e-Commerce**

Nigel Melville, *JambaTalk Inc*

James Robins, *California Polytechnic State University*

The idea of first-mover advantage has staged a remarkable comeback during the last few years, re-emerging with the Internet boom of the late 1990's. Being first to market has been touted as a critical success factor in e-commerce. However, the recent decline of many Internet companies has resulted in increasing doubt about the existence and salience of first-mover advantage. This paper presents a critical assessment of the potential for first-mover advantages in Internet retailing. We find that the claims that have been made for first-mover advantages in Internet retailing seem to be significantly overstated. Two mechanisms that do offer the likelihood of important competitive advantages for Internet retailers are firm reputation or branding and network externalities.

### **m-Business Rush! First Movers Advantages in the Global Wireless Data Industry**

Ronald Rivas, *Bentley College*

This study tests whether first mover advantages are moderated by network externalities and the profile of accumulated resources before entrance. This study uses a growth model that includes order of entry, new resource accumulation, and past resource profiles in the wireless data industry from 1998 to 2000. It suggests that carriers benefit from first-mover advantages in a larger proportion than mobile data providers. However, the sustainability of such first mover advantage is questionable. This paper concludes by suggesting a model for sustainable competitive advantage in the wireless data industry.

### **Value Creation in the Information Economy: Competitive Dimensions in Cyberspace**

Mark Kriger, *Norwegian School of Management BI*

Espen Andersen, *Norwegian School of Management BI*

Lars Huemer, *Norwegian School of Management BI*

What are the processes by which the Internet is recreating the rules of business competition? How are strategy implementation processes evolving and changing in e-businesses? This paper addresses these questions by developing a framework for understanding some of the dimensions of competing that are changing with the increased use of the Internet. The proposed 'Kite Model' utilizes concepts and theory from four overall domains: technical innovation, theories of time, aesthetics of design and behavior, and interpersonal relationships. In-depth cases on Amazon.com, Apple Computer, Nokia, Medtronic and Involvelearning.com will be used along with the model to explore and illustrate several differing ways in which strategic process is changing in the emerging Internet economy. In addition, actionable recommendations for firms to compete effectively will be generated.

**PAPER / PANEL SESSION 08:00 - 09:15**

**THE DIFFUSION AND IMPLICATIONS OF CORPORATE GOVERNANCE SYSTEMS**

**Paper** **Track G** **Borgia Room**

**Corporate Governance and CEO Compensation in the Transition Economies: A Polish Experience**

Joanna Dzialo, *University of Lodz*

Piotr Urbanek, *University of Lodz*

Corporate governance in countries undergoing economic transformation is poorly penetrated area. A process of privatization, a growing role of foreign investors, a dynamic development of a capital market, mean that the shift to corporate governance can be observed also in transition economies. The paper introduces a simple model used to examine the remuneration-setting process. It is a point of departure for formulating several research hypotheses: Among potential determinants of CEO compensation there are such factors like: supervisory board orientation (financial or industrial), firm size, complexity of decision making process, form of control over the company, the role of the State Treasurer, company performance. Statistical tests are conducted on a sample of about 200 Polish companies listed on the Warsaw Stock Exchange over the 1998-1999 period.

**The Emergence of a Shareholder Value System in Germany and its Effects on Firm Performance: Theory and Evidence**

Anja Tuschke, *University of Passau*

William Gerard Sanders, *Brigham Young University*

This paper addresses the question of how shareholder-value based corporate governance mechanisms emerge in locals that are imbued with institutional and political preference for stakeholder values. Based on an analysis of large German firms, we examine the determinants and implications of the adoption of shareholder friendly governance mechanisms. Specifically, we study the adoption of executive stock-based incentive systems and voluntary adoption of U.S. style GAAP accounting standards. We find that diffuse ownership structure is positively associated with the adoption of stock-based incentive plans and that these stock-based incentive plans are positively associated with the adoption of GAAP. Additionally, both stock-based compensation and the adoption of GAAP are positively associated with higher levels of subsequent firm performance.

**The Relationship between TMT Compensation, Innovation, and Performance: An Empirical Study**

Peter Stanwick, *Auburn University*

Scott Campbell, *Auburn University*

This paper examines the complex relationship between compensation levels of the Top Management Team (TMT) and firm performance. Data for this study was collected for the years 1992 through 1999 for industries identified as high or low technology. The results show that levels of vice president compensation have a stronger direct relationship with firm performance than CEO compensation. In addition, the study showed that the selection of variables used to measure firm performance has a significant impact on the relationship between TMT compensation and firm performance. The authors also found that the role of innovation also impacts the relationship between TMT compensation and firm performance.

**Strategy as Ideology: Has the Shareholder-value Orientation Diffused in Germany?**

Edward Zajac, *Northwestern University*

Peer Fiss, *Northwestern University*

This study develops a framework for analyzing strategy as ideology. We focus on how the emergence of agency theory has led to an almost unquestioned belief that managers in large corporations should be held more accountable for maximizing shareholder value. We show that such a presumption of context-free theory and heavy reliance on U.S. data lead to the neglect of social, institutional, and cultural idiosyncrasies

associated with taking an Anglo-centric focus. In this paper, we focus on the adoption of a strategy in a different institutional environment by examining how the shareholder value orientation has diffused in Germany. We do not find wholesale adoption of the practice; instead, adoption was mediated by political processes in which different players renegotiated the acceptable model of corporate strategy. The study suggests that greater attention should be focused on the process by which ideology affects the evolution of intended strategies to realized strategies.

**CONTRASTING ESTABLISHED TECHNOLOGY FIRMS AND STARTUPS**

**Panel** **Track E** **Elizabethan Room A**

Michael Dowling, *University of Regensburg*

Michael Mirow, *Siemens AG*

Dodo zu Knyphausen-Aufsess, *Otto-Friedrich University-Bamberg*

Andreas Zaby, *Curacyte Health Sciences AG*

Martin Gagen, *3i Corporation USA*

This panel will deal with the question of how differences between established "incumbents" and startup firms can actually be determined and explained. In the opening presentation, Prof. Dodo zu Knyphausen-Aufsess will present a theoretical overview using the concept of business models. Prof. Michael Mirow will argue that the corporate headquarters provide value-added to a diversified firm that is both fundamentally different and beyond what a VC provides. Martin Gagan will argue that VCs do not simply provide "dumb money" but become deeply involved in the management of their ventures thereby fulfilling a similar role as the corporate headquarters. Finally, Andreas Zaby, will be able to comment on these views from the perspective of a new venture that has received significant VC financing.

**EVOLUTION AND UNDERSTANDING**

**Paper** **Track General** **Elizabethan Room B**

**The Mobile Newspaper: The Disruptive Nature of Mobile Internet in the Newspaper Industry**

Bob de Wit, *University of Maastricht/Strategy Academy*

Martyn Rademakers, *Strategy Academy*

The emergence of mobile Internet technology provides newspaper companies with new challenges. We argue that mobile Internet technology makes it possible to link existing strengths of newspapers with interactivity, mobility and customization. By characterizing a newspaper as a mobile information provider, criteria can be generated to distinguish disruptive technologies from complementary ones in the newspaper industry. The disruptive nature of mobile Internet increases the pressure on newspaper companies to reconfigure their business model. New ways of generating income from news and information services are to be captured and the rise of new competitors need to be taken into account. A new competitive arena is emerging in the mobile Internet industry, particularly for newspaper companies.

**Accumulation Advantage within the Strategy Discipline: Determinants and Relationship to Paradigm Development**

Brian Boyd, *Arizona State University*

Sydney Finkelstein, *Dartmouth College*

Steve Gove, *Arizona State University*

The strategy discipline has been described as paradigmatically underdeveloped (Pfeffer, 1993). We test this assertion by drawing on Kuhn's (1996) argument that research outcomes in paradigmatically less developed disciplines are influenced more by particularistic (i.e., political and social) than universalistic (i.e., merit) factors. We examine determinants leading to the accumulation of primary research outcomes. Accumulation effects occur when research outcomes are unevenly distributed among members of a scientific community – an effect noted in multiple scientific disciplines. Using a sample of 945 faculty, we find that the form of accumulation effects among strategy faculty is comparable to other disciplines and that universalistic factors are far more important

in driving research outcomes than are particularistic factors. This finding counters the notion that strategy is paradigmatically underdeveloped.

### Understanding Strategic HRM: Roles and Culture in Australian Local Government

Titien Ahmad, *University of Technology-Sydney*

John Rodwell, *Deakin University*

Stephen T T Teo, *University of Technology-Sydney*

The public sector has been urged to be more effective as governments adopt private sector managerial practices. However, empirical evidence does not explain the adoption of strategic human resource management (HRM) in these organizations. To address this issue, we examined the adoption of strategic HRM in 64 Australian local government entities from the perspectives of the senior management team. We found four clusters of organizations, each with different degree of strategic HRM. Our findings suggest that human resource practitioners have an important role within the organizations especially in the alignment between organizational culture and HRM in the strategic management process. The present study contributes to the ongoing debate regarding the status and influence of HRM as a value-adding corporate headquarters function.

### ORGANIZATIONAL ADAPTATION AND CHANGE: UNFAMILIAR ACTS IN UNFAMILIAR CONTEXTS

Paper	Track General	Elizabethan Room C
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### New Perspectives on Change: Learning the Transformative Capability by Internalizing Actions and Meanings of Transformative Education

Santa LaRocca, *Bocconi University*

Transformative capability is the essence of transformative leadership. It is the ability to learn how to learn and can be developed in a short amount of time. Education in transformative leadership can be guided by the meta positivist-constructivist mental opposition. The secret may be to "teach meta without meta" and to let the practice of sense making build awareness of organizational identity deconstruction and reconstruction for radical changes. Teaching transformative capability is an auto logic process. Making sense out of personal transformation is the premise for leaders to face change as a way of life as well as to assume the task of building teaching organizations. Research in this field may be driven from the Action research methodology, as well as from the Constructivist Grounded Theory Method.

### Partnering with the Unfamiliar: Lessons from the Case of Renault and Nissan

Harry Korine, *London Business School*

Kazuhiro Asakawa, *Keio University*

In the wake of globalization, companies are increasingly concluding partnership agreements outside their traditional spheres of familiarity. In partnerships between the unfamiliar, the process of alliance formation takes on very special significance. How do you approach a stranger with a view to building a long-lasting commitment? Of the many odd couples being created today, the partnership between car-makers Renault from France and Nissan from Japan is perhaps one of the least likely to form. We have studied the nine-month Renault/Nissan alliance formation process in great depth. Based on unique data from both parties to the agreement, our study suggests how executives can use the alliance formation process to overcome the liability of unfamiliarity and sow the seeds for long-lasting cooperation.

### Integrating Resource-based and Industrial Organization Views of Organizational Innovation: Towards a Unified Model of Antecedents

John Mezas, *University of Miami*

Jeffrey Kerr, *University of Miami*

Thomas Bauer, *McKinsey & Company*

The diverse literature on innovation has not produced an accepted understanding of the innovative process or its antecedents (Wolfe, 1994). This paper models organization-level innovation by building

upon and reconciling the resource-based and industrial organization economic views. The resource-based view helps identify resources and capabilities firms use to enhance and exploit intellectual capital. Industry structure determines financial resources availability and the likelihood of appropriating returns to innovation investments. After developing propositions specifying antecedents of organizational innovativeness based on each perspective, we offer propositions based on interactions between variables normally treated separately by these perspectives. We believe that the resource-based and industrial organization views are complimentary and that integrating them provides a richer, more comprehensive understanding of organization-level innovation than either achieves on its own.

### Nokia: An "Old" Company in a New Economy

Sverker Alänge, *Chalmers University of Technology*

Pascal Miconnet, *Chalmers University of Technology*

History shows that becoming No. 1 often has been the starting point to decline. The world leader in the cellular terminal market Nokia is not immune to this virus and the company's main challenge is to remain in its leading position. At the 1998 SMS conference, the managing director of Nokia Mobile Phones presented Nokia's approach to strategy in a highly uncertain market: Nokia's company culture, supported by an agile organizational structure, serves as the backbone for the proactivity and rapid decision making needed for sustained leadership. This article reports on how this top management perspective on the Nokia strategy approach is shared at other levels within the organization, as well as on the subtle mechanisms used to socialize the employees in an extremely fast-growing organization.

### DECISION AND PROCESS PERSPECTIVES OF STRATEGY

Paper	Track K	Elizabethan Room D
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### Strategic Decisions in a Russian Entrepreneurship: Flexibility in a Turbulent Information-Technology Industry

Sheila Puffer, *Northeastern University*

Daniel McCarthy, *Northeastern University*

Alexander Naumov, *Moscow State University*

This paper traces the development of decision processes in Russia's computer and information-technology sectors. These processes are illustrated by the activities through the 1990s of Aquarius Systems Inform, a computer company which evolved through many different strategic and organizational manifestations. Most of these were in anticipation of, or in response to, continuous changes in the information-technology industry as well as the economic, legal, and political environments throughout the decade. We emphasize the decision making process of the company's managers as they encountered obstacles and opportunities. The work is based on interviews with the company's founder and other senior executives.

### Strategic Decisions: Building and Destroying Process Legitimacy

Michael Roberto, *Harvard University*

This research focuses on the concept of legitimacy as it pertains to strategic decision making processes. Scholars have argued that managers would like others to perceive their decision making processes as legitimate, because this positive perception enhances decision acceptance and commitment (Feldman & March, 1981). Researchers also have argued that trying to bolster one's legitimacy can be risky, because others may perceive these attempts as self-serving and manipulative (Ashforth & Gibbs, 1990). This research examines how managers try to enhance the legitimacy of strategic decision making processes within organizations. Through an extensive field study, I build a concise taxonomy of the methods that managers employ to bolster procedural legitimacy when making strategic choices. Moreover, I demonstrate how these efforts often backfire and actually decrease the legitimacy of decision making processes.



## **The Performance Effects of Strategy Processes**

Philipp A F Wilhelm, *University of St Gallen*

The increasing need for flexibility and of shrinking time frames of the firms have stimulated the development of project-based enterprises (PBE). The PBE seems in contradiction with a resource-based view and knowledge-based view on a key issue: accumulation of competencies through internal interaction and their consequent routinization as a source of advantage. Each PBE ends when its single target is achieved, and so end interactions between its members. We argue that complementary interactions survive the dissolution of the PBE and are replicated in following projects. We test our theoretical arguments with social network analysis techniques on interactions that had taken place in 782 movies distributed in the U.S. between 1995 and 1999. While complementary interactions tend to be repeated, non complementary interactions do not.

## **The New Role of Scenarios: Combining Strategic Planning and Strategic Early Warning**

Alexander Fink, *Scenario Management International AG*  
Andreas Siebe, *Scenario Management International AG*  
Oliver Schlake, *Scenario Management International AG*  
Jens-Peter Kuhle, *Scenario Management International AG*

Today, many planning situations are too complex to develop a strategic direction directly out of external scenarios. Here, it is suitable to develop more than one set of scenarios. A successful extension of scenario planning is the combination of external scenarios with systematically developed strategy options or business models. This is part of the traditional role of scenarios in strategic planning. But strategic planning is often criticized because of its rigidity and inflexibility. More and more companies recognize the importance of a continuous early warning process. Scenarios could significantly help to integrate the open-ended process of strategic early warning and the result- and performance-focused process of strategic planning.

## **LINKING AND LEVERAGING KNOWLEDGE WITHIN THE FIRM**

Paper	Track C	Essex Room
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## **High Performing Knowledge Networks: A Study of the Greek Management Consulting Industry**

Stefanos Vassiliadis, *University of St Gallen*  
Kai-Christian Muchow, *University of St Gallen*

This paper shows, that knowledge networks are an organizational form which is well suited to tackle the challenges of the new business environment. Our empirical work, studying the Greek management consulting market, has shown that knowledge networks constitute a new source of advantage for the company, since they also represent distinct capabilities and competencies in their own right. We observed that the knowledge and the network relationships that promote the utilization of it can be viewed as intangible capital. The examined companies achieved higher performance through linking networks to strategy. A set of business goals were used to classify these knowledge networks. All of examined activities associated with the exchange and building of knowledge through networks resulted in a higher performance for the company.

## **Applied Knowledge Management in Innovation Processes**

Anja Schulze, *University of St Gallen*

Technology triggers growing networks with the effect of an explosion of knowledge one has access to. Subsequently, the importance of "managing" this immense knowledge base has grown significantly. While the efficiency of many business processes relies mainly on the exploitation of existing knowledge or the dissemination of new knowledge, innovation processes have to focus on the efficient creation of new knowledge. This paper is guided by an analysis of the knowledge creation process within the innovation process with the following finding: Approaches to knowledge management that are useful in one phase of the innovation process might be useless or even harmful in other process stages. The results can be utilized in developing specific management actions aiming to meet the challenge to innovate constantly and effectively.

## **Organizational Knowledge as Foliage**

Thomas Durand, *École Central Paris*

Our intent is to better understand the formation of strategy in organizations. We view strategy as organizational knowledge. We thus investigate the processes of learning in organizations and the nature of knowledge. We sequentially discuss (a) an overall theoretical framework around the concept of social representation, (b) a review of knowledge, competence and learning in the strategic management literature, (c) a referential model for organizational competence combining knowledge, know how and attitudes, in turn introducing the metaphor of "competence leaves", suggesting to view organizational knowledge as foliage, (d) the role of leaves as elements of competence (save resources, structure learning, give meaning, overlap and contradict with other leaves to shape the overall foliage) and (e) approaching 'competence leaves' empirically to grasp organizational knowledge and thus the formation of strategy.

## **Building Relational Wealth in the New Economy: How can Firms Leverage the Value of Organizational Social Capital?**

Harry Van Buren III, *University of Northern Iowa*

The new economy, with industries like telecommunications, e-commerce, and various computer-based technologies leading the way, is supposed to change the way that every business operates. But it is also the case that there are fundamental principles of organizing collective action that are just as relevant for new economy businesses and the new economy itself as they are for more established firms and industries. In this paper, I will briefly describe how firms can build what will be called 'relational wealth' by leveraging the value of an intangible asset called organizational social capital. I will then discuss how the new economy differs from the old and how the two economies are very much alike in terms of how firms might best organize collective action.

## **MANAGERIAL ADAPTION OF REAL OPTIONS**

Paper	Track F	Georgian Room
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## **Are Real Options Real? Real Options as a Formal Expression of TMT's Thinking in Strategic Decision Making**

Adrian Atilio Caldart, *IESE Business School-Navarra University*  
Joan Ricart, *IESE Business School-Navarra University*

In highly uncertain environments, traditional investment valuation techniques, based in the calculation of DCFs, suffer from a lack of realism that reduce their practical applicability. Real options theory arose as an attempt to solve this problem by incorporating flexibility in the analysis, making quantitative studies reflective of actual strategic decision making. However, real options' logic adoption by practitioners has been slower than expected. In order to find out the reasons of this apparent lack of interest in real options among executives, we conducted a survey among a sample of top managers trying to find out if real options are actually representative of the way managers think about strategy and, therefore, if it can be expected to see a massive practical adoption of the method in the near future.

## **Explaining Variance in Firm Performance: The Role of Strategic Investment Process and Analysis**

Todd Alessandri, *University of North Carolina-Chapel Hill*

The evaluation and selection of capital investments is increasingly more difficult with the dramatic changes in the environment and the nature of competition. Managers struggle when evaluating investments in the face of various obstacles, such as imperfect information, ambiguous competitive conditions, and alignment with current and/or future strategic directions. However, the field's ability to provide guidance is limited given an incomplete understanding of the capital investment process. Strategy researchers have focused on the social and political aspects of the process, while finance researchers have emphasized the metrics used by firms at an aggregate level. This study integrates strategy and corporate finance perspectives, delving into the relationship between perceptions of environmental uncertainty and the analysis tools and procedures employed by large firms to evaluate investment alternatives.

## How to Benefit from Real Options in the Real World

Thorsten Gerhard, *Arthur D Little International Inc*  
Lars Sakwerda, *Arthur D Little International Inc*

For many years now the academic literature has been proposing a new investment valuation paradigm. Recognizing the inherent weaknesses of discounted cash flow analysis in situations of uncertainty, the literature has highlighted the idea of thinking about physical investment in terms of real options. This concept has surely conquered the academic world, but if you look for practical evidence, you scarcely find companies that apply the real options concept systematically. Why is that? Our experience shows that firms find it hard to implement the real options approach, although most practitioners concur with the criticism of DCF valuations and see the need for a different approach. This paper summarizes the main obstacles to implementing the real options approach and proposes a three-step-implementation guide to resolve them.

## Real Options are not the Cure-all: When Managers use Flexible Investment Structures

Karen Belanger, *Columbia University*

In a new economy era, when uncertainty and volatility in the environment is perceived to be high, real options have been touted as a solution to the difficulties of managing uncertainty. However, the costs of flexibility and maintaining multiple real options can be substantial. In a descriptive analysis, this research considers the flexibility inherent in the type of investment structure chosen by firms and the source of uncertainty inherent in the content of the specific investment decision. An analysis done at the level of the investment decisions made by organizations suggests that managers do use flexible investment structures to deal with some sources of uncertainty, but that options style investing is not a blanket solution to managing uncertainty.

## IMPLICATIONS OF A LEARNING PERSPECTIVE FOR INNOVATION AND INTUITION

Paper	Track K	Hampton Room
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### Learning Organizations: Fad or New Form?

Constance James, *Pepperdine University*

While scholars consider a learning organization to be a breakthrough organizational form in terms of its adaptive capability, little is known about its structural properties. This paper uses the common elements of theories about N Forms, the managerial view of the firm, and dynamic capabilities to build a structural and strategic approach to learning organizations. This paper suggests that it develops a set of dynamic capabilities, such as transformational leadership, open information, participative strategies, teamwork, and strong egalitarian cultures. These capabilities are distinctly different from run-of-the-mill organizational learning. Thus, this paper distinguishes organizational learning as something that all organizations do, whereas learning organizations engage in a particular form of organizational learning that emphasizes the collective learning across organizational boundaries.

## Intuition in Strategic Decision Making: Old Truths and New Insights

C Chet Miller, *Wake Forest University*  
R Duane Ireland, *University of Richmond*

A form of tacit knowledge, intuition is neither the opposite of rationality nor a random guessing process. Examples of using intuition as a basis for organizational decisions abound. Increasing environmental uncertainty and dynamism, coupled with stories of success through intuitive decisions suggest that intuitively dominated decisions may become more common in 21st century competition. Previously, we argued (Miller and Ireland, 2000) that intuition-based decisions commonly lead to negative outcomes. Positive outcomes result from use of only a certain type of intuition in only firms with cultures and strategies emphasizing exploration for new competitive advantages. Focusing attention on current firm performance as a key force promoting intuitive decision making, we advance propositions about the relationship between performance and two types of intuition (holistic hunch and automated expertise).

## Adoption of a Process Innovation with Learning-by-Doing: Evidence from the Semiconductor Industry

Michael Leiblein, *Ohio State University*

This article analyzes the adoption of a new process technology in the global semiconductor manufacturing industry. The paper extends research on the relationship between learning-by-doing and technology adoption by examining the stability of learning effects across technological generations. While the results indicate that production experience with the immediately preceding technological generation is associated with a higher likelihood of adoption, we find no evidence that experience with older technologies or regional knowledge spillovers influence adoption. Finally, the results indicate that large firms and memory manufacturers have a higher likelihood of adoption than small firms and non-memory manufacturers, respectively.

## A Longitudinal Study of Organizational Learning, Unlearning, and Innovation Among Private Firms in a Transitional Economy

Marjorie Lyles, *Indiana University*  
Kevin Steensma, *University of Washington*  
Laszlo Tihanyi, *University of Oklahoma*  
Charles Dhanaraj, *Indiana University*  
Jeffrey Barden, *Duke University*  
Katalin Szabo, *Budapest University of Economic Science*  
Eva Kocsis, *Budapest University of Economic Science & Public Administration*

Many theorists describe organizational learning as being comprised of three stages: understanding, assimilating, and applying (Cohen & Levinthal, 1990). Despite its elegance, little is known about the details associated with each stage or the impact on performance and survival. This is particularly critical in the private sector in transitional economies since it affects the regional economic health. Private firms such as IJVs develop competitive advantages by learning from their foreign parents and by creating learning processes. We report about survey data from 150 IJVs. A longitudinal perspective of the learning, the contribution of the foreign parents, and the development of new ways of viewing their competitiveness are possible.

## CORPORATE STRATEGY OUTCOMES

Paper	Track G	Kent Room
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### Joint Venture Success is More than Survival: A Relationship-based Measure

Russell Lacey, *University of Alabama*  
Louis Marino, *University of Alabama*  
Robert Morgan, *University of Alabama*

Despite the abundance of research on joint ventures relatively little work has considered the role and importance of relational exchanges relative to assessing the success of these cooperative agreements. To address this important issue we develop a relationship based measure of joint venture success that directly captures multidimensional partner motivations for forming joint ventures and test this measure using LISREL. The results provide empirical evidence that trust, commitment and interdependence each has a positive relationship to the continued cooperation of JV partners. These findings suggest that both dedication-based motivations and constraint-based motivations contribute to future cooperation. This paper also highlights some of the significant shortcomings of survival and duration based measures and offers an alternative framework for developing a more complete JV performance measure.

## The Implications of an Innovative Strategy for Capital Structure

Jonathan O'Brien, *Purdue University*  
Yoon-Suk Baik, *Purdue University*

Although the finance literature acknowledges that a firm's capital structure may be influenced by industry dynamics, it has given very little attention to the potential for a firm's competitive strategy to also serve as a significant determinant. In this paper, we argue that firms pursuing a strategy of product market innovation need to maintain a greater degree of financial slack in order to ensure competitive sustainability. Since firms

within an industry compete on the basis of differing capabilities, this perspective helps to explain why as much variation in capital structure is observed within industries as across industries. Our empirical analysis assesses how strategy and industry structure interact to determine optimal capital structure, as well as the potential performance consequences of misalignment between these considerations.

### The Evolution of Corporate Effects on Business-unit Performance: New Insights Challenging Revisionist Truths

Gerry McNamara, *Michigan State University*  
Paul Vaaler, *Tufts University*

"Revisionist" strategy researchers hold that corporate strategy is relatively unimportant to understanding performance of affiliated business units. We investigate this view using Compustat data from 1979-1998. Dividing the data into seventeen successive four year windows, we decompose the variance in business-unit returns and find, contrary to the revisionist view, that variance in returns linked to corporate effects increases from nil in the early 1980s to approximately 40 percent of overall variance by the mid 1990s. We conclude that revisionist views are misplaced. They rely on evidence from firms operating in the 1970s and early 1980s. We conjecture that new insights on the strategic capabilities of multi-business corporations since the mid 1980s have reshaped corporate strategy thinking and reinvigorated it as a research field and professional practice area.

### USING AND TRANSFERRING KNOWLEDGE ACROSS AND WITHIN FIRMS

Paper	Track J	Olympic Room
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### From Strategic Information Systems to "Corporate Software": The Changing Nature of Information Flows as a Strategic Asset in Five Banks

Albert LeJeune, *University of Québec-Montréal*  
Thomas Roehl, *Western Washington University*

Information flows and the capacity to handle them are an increasingly important part of the strategic decisions of firms. IT initiatives are playing a critical role in driving the design of new information flow systems and the processes (the human, structure, information and tools dimensions) to handle them. By carefully coding and modeling the interviews and information gathered from IT and business senior managers at five Canadian banks, we attempt to develop a more strategic description of the information flow that mixes humans and computers. We address the three following questions : What is the notion of "corporate software" applied to information flows? What information flow is hard to copy or takes time to copy? What are the development paths of the five banks?

### The Determinants of Knowledge Integration: Corporate Level Evidence from Continental European Firms

Raymond van Wijk, *Erasmus University-Rotterdam*  
Andrew Pettigrew, *University of Warwick*  
Frans A J van den Bosch, *Erasmus University-Rotterdam*  
Henk Volberda, *Erasmus University-Rotterdam*  
Richard Whittington, *Oxford University*

Based on a questionnaire administered to the Chief Executives of Continental European firms, this paper probes how corporate determinants and complementarities between them influence knowledge integration. Two views have emerged on how determinants of knowledge integration complement each other. The first follows from scholars advocating the emergence of radically new forms of organizing; the second from scholars suggesting that traditional forms of organizing are being extended by elements associated with new forms of organizing, so that organizations are more typically innovative rather than radically new. Support was found for the second view. Firms with a product-based structure or many hierarchical levels gained substantial additions to knowledge integration when these elements were extended with project-based structures, new human resource practices, information technology, and decentralization.

### Knowledge Acquisition and Assimilation for Strategic Intervention

Marta Geletkanycz, *Boston College*

In an environment characterized by rapid, discontinuous change, organizational success is predicated on management's ability to recognize the need for and effect new strategic initiatives. Yet if managers read their environment and formulate strategies based on their past knowledge and experience--a central tenet of management research--how is adaptation to a new and dynamic competitive landscape possible? One answer may lie in processes of new knowledge acquisition and assimilation at top executive levels. The current study undertakes an analysis of competing means by which new, outside information and perspective are acquired by top executives. It finds that competing approaches yield different effects on strategic innovation and firm performance. Implications for strategic leadership and competitive advantage in an era of dynamic change are discussed.

### PERSPECTIVES ON STRATEGIC FORESIGHT AND PLANNING

Paper	Track I	Oxford Room
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### Applying Memetic Theory to Organizational Life: If Evolution Has No Foresight, What is Organizational Foresight?

Jill Shepherd, *University of Strathclyde*  
Gerry Johnson, *University of Strathclyde*

We argue that in an ever more uncertain and dynamic environment, extant work on strategy is too macro and assuming of the control the manager has over the future. This paper attempts to generate alternative insights by exploring the explanatory potential of a theory that is inherently micro and macro, explains why the knowledge base of the world is transforming faster over time and incorporates an alternative view of agency. Memetic theory, the social science branch of evolutionary theory is applied to organizational life. Central to evolutionary theory is the notion that foresight does not exist. Using memetic theory the paper redefines managerial agency arriving at a reconstruction of 'foresight' that involves complexity and reflection within which man is a, but not the, agent.

### Advancing Resource-based Theory by Responding to its Critics

Margaret Peteraf, *Dartmouth College*

By acknowledging and responding to the critics of Resource-based Theory (RBT), this paper addresses, head-on, the most central problems with the theory, whether real or perceived. It distinguishes among those critical and legitimate concerns, which may hamper the progress and contribution of RBT, from other more misguided criticisms, which are based on confusion, misunderstanding, or ideological differences. It addresses the first set of criticisms by offering some solutions for these concerns. It addresses the second set by seeking to understand the source of the confusion, clarifying issues, providing better definitions, and otherwise responding. In so doing, this paper sharpens the theory and removes some barriers to its understanding, application, further development, and diffusion.

### Structural Configurations, Planning System Dimensions, and Planning Outcomes: Reexamining their Relationship

Dimitrios Koufopoulos, *Cardiff University*

Organisational and strategic management theorists have paid considerable attention on the organisational structure and strategy relationship. Organisational structure has been seen by organisational theorists as an indisputably important factor in determining either strategy (e.g. Hall and Saias, 1980) or performance (e.g. Gupta, 1987). On the other hand, strategic management research has experienced an unequal growth where "content" issues have received more attention than "process" topics (Huff & Reger, 1987). Whereas, a substantial research has been accumulated regarding the strategy-structure theme, only limited work reports on the structure-planning system relationship as well as on the outcomes and effectiveness of planning systems. Based on a large U.K. sample,



the study attempts to improve upon the structure, planning system, and outcomes relationship.

### **Making Strategy Complex Adaptive**

Johan Roos, *Imagination Lab Foundation*  
Bart Victor, *Vanderbilt University*

The essential product of conventional strategy making is the implementation plan. This plan anticipates the key decisions, bounds and directs the expected flow of resources, and establishes time, target, and reward constraints well into the future. It was the dismal failure of such forward thinking strategies that is bemoaned at many companies. We propose that the failures of the conventional approach are inherent in their conception as a means to anticipate and control the future. The purpose of this paper is to propose a conceptual framework of a new approach to developing strategic intent for an enterprise. This approach will be grounded in the assumptions of complex adaptive systems theory. This approach will apply a process of simultaneous formulation and implementation. We call the process strategy in real time.

### **METHODS, MODELS, AND MEASUREMENT OF STRATEGY**

Paper	Track General	Victorian Room
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### **Keeping it Open: How Open Source Management can Change an Intelligent Organization**

Parthapratim Chakraborty, *Lehman Brothers*  
Shub Deb Gupta, *PricewaterhouseCoopers LLP*

This paper develops the concept of Open Source Management (OSM), a unique management strategy that positively impacts the process of generation, validation, acceptance, and implementation of ideas in an intelligent organization, resulting in an increase in the number of and an improvement in the quality of ideas generated. Drawing parallels with open source software, OSM is proposed as the strategy that creates and optimizes an intelligent organization. This paper pioneers the Open Source concept and shows that the strategy can be generally applied across all companies in any industry. We characterize OSM and study its optimality under different conditions with special emphasis on the impact of network externalities on the implementing firm. We propose actions to help create an open source organization and OSM techniques.

### **Modules and Interfaces: Design Tools for Shaping Intra and Inter Organizational Ties**

Marco Zamarian, *University of Bologna*  
Maurizio Sobrero, *University of Bologna*

In this paper we combine the theoretical discourse on modular design with our empirical evidence, drawn from a sample of leading Italian packaging machinery firms, to propose an evolutionary model of product development architecture, where the modularity concept impacts on a firm's problem-solving activities at several levels. Modularity is usually conceived, in a first stage, as a template to think about, and to work on, physical artifacts. In a second phase the goal of developing modular artifacts can become a guideline to structure research, development and engineering teams. In a third step, modularity can affect the management of inter-firm division of labor, shaping relational ties between business partners, along the lines of the definition of modules at the product level.

### **A Methodology for Evaluating the Viability of e-Businesses**

Richard Insinga, *State University of New York-Oneonta*

e-Business was termed the new economy, which led some to believe that old business models no longer applies. Since the dot com crash in early 2000, however, it appears that the new economy met the old models of valuation, and the old prevails. New business models are needed to understand the environment that spawns e-businesses and to enable a better evaluation of the value of a given e-business. These models are evolutionary, not revolutionary. This paper will present a methodology that will lead to a better understanding of the place that e-business can occupy in traditional industries. In many cases, it will be seen that a supporting role, founded on the trend toward outsourcing of certain functions, will provide a stable place for e-business to occupy.

### **A Resource-based View of Inter-firm Cooperation: Explaining the Capture of Value from the Deployment of Strategic Resource within Technological Alliances (An Empirical Analysis)**

Boualem Aliouat, *University of Lille 2*

While there has been a substantial amount of research on technological alliances, few is known about the effects of strategic resources transfers among alliance partners on the value generated. The previous literature has highlighted the role that functional, positional or cultural capabilities may play in the management of alliances. Models of business performance have recently documented the role of such variables too. Our study explores indirect and direct effects of functional, positional and cultural resources on alliances profitability. We identify and analyze the main factors that affected value creation. Results reveal the importance of consequence of past actions which have produced reputation with customers, flexibility of the value chain, technological know-how, ability to learn and ability to cope with change on the success of development of new technology and new products, sales, net profit and sustained market share.

### **THE BOUNDARIES OF THE E-BUSINESS**

Paper	Track A	Yorkshire Room
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### **From e-Business to e-Corporations: Arguments for the Bundling of e-Businesses**

Stephen Chen, *University of California-Los Angeles*

Contrary to the experiences in old economy businesses and the expectations of some academics and consultants, e-business has not led to widespread deconstruction and unbundling of businesses, or at least not yet. This paper suggests several reasons why this has not happened and argues that in certain circumstances bundling can be a good strategy. Three significant trends that favor bundling of e-businesses are highlighted. First, high stock market valuations have provided resource surpluses to diversify and acquire other businesses. Secondly, "customer dominated logic" is replacing "managerial dominant logic". Thirdly, windows for profits are small and difficult to sustain in many e-markets. In such environments a strategy of seeking out profits in new and growing markets may make more sense than attempting to dominate an existing market.

### **SMEs and e-Commerce: Preliminary Results in the Textile District of Como**

Lucia Piscitello, *Polytechnic of Milan*  
Francesca Sgobbi, *Polytechnic of Milan*

e-Commerce might appear as a tool for reducing the impact of the traditional constraints to the competitiveness of SMEs, as it allows to reduce space and time distances, as well as transaction and coordination costs. Nonetheless, reckoning on the fact that SMEs will "naturally" receive major benefits from the new technologies certainly constitutes a serious underestimation of their structural and knowledge disadvantages in comparison to larger firms. In fact, SMEs suffer from several obstacles to their admission in the Information Society. The present paper aims to empirically investigate whether electronic markets actually can favor SMEs globalization strategies. The evidence is provided with reference to the manufacturing industrial district of Como, that traditionally constitutes an example of winning SMEs' network surrounded by a 'marshallian atmosphere' characterised by common industrial culture and intense input-output interactions.

### **Vertical Dis-integration, Value Chain Re-configuration and the Changing Strategic Landscape: Evidence from Mortgage Banking and Lessons Learned**

Michael Jacobides, *London Business School*

In the post-bubble economy, some things, such as reconfiguration of business systems, have changed. This project looks at a "textbook case" of business unbundling & repackaging - mortgage banking in the U.S. Based on extensive archival and qualitative evidence, rather than anecdotal, ad-hoc theorizing, we look at the drivers of the value chain changes, and at why labour is now divided between institutions rather

than within them. In theoretical terms, we suggest that the dominant transaction cost economics cannot account for much of variation, re-frame how we should look at the problem, suggest a strategic role for information technology, and provide fresh theoretical perspectives. We then provide a managerially relevant framework for strategizing in this evolving and unbundling landscape, identifying the key issues along the way.

### **Structural Inertia within Personal Computer Distribution Channels: Internal Constraints or Strategic Choice**

Warren Ritchie, *Volkswagen of America*

Why do similar organizations respond at different rates to an environmental opportunity? Since beginning in the early 1990's, Internet commerce has created an opportunity for firms to offer shopping and transaction alternatives to consumers. As of December 1999, sixteen of the 31 largest personal computer OEMs distributing in the United States had not adopted an Internet direct sales channel. Two theoretical perspectives were used to develop an explanation for the inertia demonstrated by the non adopters. Organizational ecology suggests that inertia is attributable to the constraining effects of internal structure. The strategic choice perspective proposes that organizations may be inert by choice. Significant relationships with inertia are found with organizational size, information stickiness, CEO age, and organizational slack.

#### **PAPER / PANEL SESSION 11:00 - 12:15**

### **PROMISE VERSUS REALITY: OUTCOMES OF STRATEGIC ALLIANCES**

Paper	Track G	Borgia Room
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### **Getting Successful Cooperative Relationships: Evidence from Technological Strategic Alliances**

Angeles Montoro-Sanchez, *Complutense University-Madrid*

Technological strategic alliances between firms has become a growing subject of interest to both companies and researchers. The goal of this paper is to identify the most important organizational factors associated with the success on cooperation agreements. To do this, I have chosen trust, commitment, communication, coordination, conflict and control as organizational key factors for the success of the collaboration agreements and I have tested their impact in a sample of international strategic alliances, exactly 136 cooperation agreements belonging to the research and development European program Eureka. The results from multiple regression models have allowed me to analyze the effect of these factors on performance alliances. The conclusions indicate that communication, trust and control are the factors which most intensively and directly affect and influence on strategic alliances success.

### **How Does Trust Influence Conflict? Results from International Cooperation Agreements**

Angeles Montoro-Sanchez, *Complutense University-Madrid*

The purpose of this paper has been to analyze and to contrast the impact of trust on interorganizational conflict in a sample of international cooperation agreements. To do this, I have studied, on the one hand, the influence of trust on functional and dysfunctional conflict, and on the other hand, the link between trust and constructive and no constructive conflict resolution techniques. Results have shown that trust allows increase the positive effects of conflict to eliminate it when it is dysfunctional. Moreover, trust affects to the techniques used to solve conflict. Exactly, when trust is high, partners use with more frequency constructive instead of destructive conflict resolution techniques. Specifically, trust affects positively to solve the problems and to face the disagreements in a joint way.

### **Managing the Networked Organisation: An Internal Tension Perspective**

Antoine Hermens, *University of Technology-Sydney*

Thomas Clarke, *University of Technology-Sydney*

This paper examines strategic alliances as paradoxical organizational structures incorporating contradictory forces. There is little consensus

about what ways and under what circumstances each tension, individually or collectively, translates into collaborative effectiveness/alliance performance. This paper hypothesizes that alliance dissolution will follow a process of accelerating imbalance amongst the internal competing forces in the alliance and that alliances characterized by initial imbalances are more likely to be unstable. The authors discuss the theory that alliance stability can be determined by balancing multiple conflicting forces of firms and markets. The study analyses six dominant internal competing forces (tensions). Building on the internal-tension framework and a case study analysis between four international airline companies, we link the synthesis between paradoxical internal competing forces to alliance outcomes.

### **Managerial Discretion and Value Creation in Global Alliances**

Marta Vidal Suárez, *University of Oviedo*

Esteban García-Canal, *University of Oviedo*

This paper analyzes how managerial discretion can destroy shareholders' wealth when firms form global strategic alliances. Separation between ownership and control can lead managers to enter into strategic alliances that are negative from the perspective of shareholders. Managers may lack the motivation to commit the necessary efforts to negotiate and define the alliance. They can also pursue their own specific goals. Two specific situations concerning managerial discretion are analyzed: long tenured CEOs and public corporations in which the State holds an equity position. Using a sample of global alliances created by Spanish listed corporations, the results show a negative impact of these two factors on abnormal returns associated to global alliance formation.

### **WHERE AND HOW TO PLAY IN MOBILE DATA SERVICES**

Panel	Track F	Elizabethan Room A
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Mark Chow, *McKinsey & Company*

Will Daugherty, *McKinsey & Company*

Rahul Shukla, *McKinsey & Company*

Mukund Venkatesh, *McKinsey & Company*

Data services will grow from less than ten percent to almost 50 percent of mobile industry revenues by 2005. This growth will be generated by the emergence of five distinct services that each require unique assets and feature a different set of competitors. The simple integrated value chains that have been developed to deliver voice services will be replaced by a much more complex and disintegrated 'value map'. Understanding where and how revenues flow through this map, what skills and assets are required to succeed in new roles, and which tactics can tip the balance of power for each role will be critical for all players entering mobile data services.

### **FOSTERING ENTREPRENEURIAL THINKING WITHIN THE FIRM**

Paper	Track K	Elizabethan Room B
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### **Toward a Theory of Cognition for an Innovation Strategy**

Bettina Ripken, *University of St Gallen*

Decisions about innovations are always complex and take place in an uncertain environment. How top managers deal with this situation is by definition a question of their cognitive processes, their perceptions of risks and chances, their assessments of success and failure probabilities, short their interpretations of the provided and accessible information. In this paper, innovation strategy is seen as a tool to challenge traditional thinking of managers and to influence managers' interpretations of internal and external innovations towards decision making, which increases the ability to innovate. The goal is to look at different theories, models and insights of social cognition in order to scrutinize their impact for the formulation of an innovation strategy.

## The Conditioning and Knowledge-creating View: Managing the Source of the Strategy Process

Martin Wielemaker, *Erasmus University-Rotterdam*

Tom Elfring, *Erasmus University-Rotterdam*

Because initiatives represent seeds of strategic renewal, they have become an object of study for strategy process researchers. Yet, strategy process researcher has been accused of only looking at the organizational conditions that drive the selection of initiatives, failing to account for their creation. Although the knowledge-creating view looks at the content-wise development of such initiatives, it fails to recognize that knowledge-creation is carried out in an organizational context that must also deal with knowledge-exploitation. This paper offers a synthesis of the conditioning and knowledge-creating views of initiatives through an integrative framework that was used for analyzing 25 initiatives in three different large firms in the Netherlands. It has lead to interesting findings for both practitioners and academics as to the factors that facilitate positive outcomes of initiatives.

## The Double-loop Strategy Process: Strategy Making Among Spanish Internet Banks

Eduardo Bueno Campos, *University of Madrid/Euroforum*

Maria Paz Salmador, *Universidad Autónoma de Madrid & Imagination Laboratory*

Based on case studies, this paper is an attempt to describe the strategy process within Spanish Internet banks, which are operating in a hyper-competitive, fast-changing, and emerging environment. When analyzing the findings using the theoretical lens of knowledge and complexity, interesting theoretical and practical implications might be drawn. According to the results, the process may be understood as emergent from the complex and real-time interaction of three interrelated constructs: strategic acting, strategic thinking, and strategic imagining. These constructs form a double-loop strategy process as it seems to contain Nonaka and Takeuchi's (1995) knowledge creation model twice. This double spiral emerges out of the interaction of various agents involved in the process, contributing to their positive co-evolution and to a real-time awareness of the business landscape.

## External and Internal Environmental Strategic Triggers of Corporate Entrepreneurship and Entrepreneurial Behavior

R Duane Ireland, *University of Richmond*

Donald F Kuratko, *Ball State University*

Jeffrey Hornsby, *Ball State University*

The realities of 21st century competition demands that firms concentrate on growth. Among other factors, knowledge and innovation are critical to corporate efforts to grow in ways that can satisfy stakeholders' expectations. A dynamic process, corporate entrepreneurship (CE) helps firms identify and exploit entrepreneurial opportunities. CE is triggered by various external environmental conditions, including hostility, dynamism, and heterogeneity. Each trigger stimulates opportunities for the firm to use CE to exploit current competitive advantages and explore for new ones. Linked with effective CE practices is entrepreneurial behavior on the part of organizational actors. In addition to discussing conditions stimulating or triggering CE and the entrepreneurial behavior on which it is grounded, we examine four tasks decision makers must complete for CE to be successfully practiced.

## SCIENCE STRATEGY: THEORY, PRACTICE, AND MEASUREMENT

Panel	Track D	Elizabethan Room C
	Peter Lane, <i>Arizona State University</i>	
	Richard Klavans, <i>Center for Research Planning</i>	
	Wayne Rosenkrans, <i>AstraZeneca Pharmaceuticals US</i>	
	Mark Rereck, <i>International Specialty Products Corporation</i>	
	Juha Ylä-Jääski, <i>Nokia</i>	

Science is an increasingly important competitive factor in both high and low technology industries. However, the strategy literature has surprisingly little to offer firms on the strategic management of science. One explanation for this gap is the historic failure to distinguish between

the "R" and the "D" of R&D. Yet scientific research entails fundamentally different socio-cognitive processes than does technology development and can influence firm performance in different ways. To stimulate a more detailed exploration of science strategies, this panel will present insights from academics, executives, and consultants working in that area. A theoretical framework and measurement tools will be presented along with analyses of science strategies linked to three areas of science: biology (pharmaceutical and biotech firms), chemistry (chemical firms), and physics (electronic firms).

## MANUFACTURING IN THE NEW ECONOMY: A STRATEGIC ASSET

Panel	Track H	Elizabethan Room D
	Vinzenz Schwegmann, <i>McKinsey &amp; Company</i>	
	Gernot Strube, <i>McKinsey &amp; Company</i>	

Manufacturing does not appear to be connected with key characteristics of the new economy such as declining transaction costs, globalization or the focus on intangible assets and capital for shareholder value creation. In reality manufacturing will define tomorrow's winners. Five golden rules to success: 1) exploit manufacturing as a core lever of the business strategy to keep customer and financial market rewards; 2) extract maximum value through redesign of value chain and best-of-breed owners; 3) create system of maximum customization delivered incredibly fast, even for highly complex products; 4) implement a lean operating system, relentlessly eliminate inflexibility; 5) instability and waste across all processes; and 6) selectively employ technology (e-tools) to enforce compliance, boost performance and exploit new business arenas based on intangible capital.

## STARTUP: INCUBATOR'S GEOGRAPHIC IMPACT

Paper	Track E	Georgian Room
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## The Determinants of the Location of "New Media" Firm Foundings in the United States

Carter Lloyds, *University of Southern California*

This study examines the determinants of the location of firm foundings in the emerging "new media" industry. Emerging industries such as new media have several unique features such as the lack of established markets for the outputs of firms and a dearth of clusters of previous foundings. Drawing on the resource based view, a real contribution of this dissertation is its focus on resource bundles. Based on empirical findings using Poisson regressions, the founding location of new firms in new industries is positively associated with the presence of needed resources, resource bundles, moderated legitimacy constraints and agglomeration economies, and it is negatively associated with the competition for resource bundles.

## How Effective are Technology Incubators? Evidence from Italy

Massimo Colombo, *Polytechnic of Milan*

Marco Delmastro, *Polytechnic of Milan*

This paper aims to analyse whether science parks have been successful in fostering the establishment and growth of new technology-based firms. For this purpose, a sample composed of 45 Italian NTBFs which at the beginning of 2000 were located within a park is compared with a control sample of off-incubator firms. Aspects considered in the study include the personal characteristics of the founders of the NTBFs, the motivations of the self-employment choice, the growth, innovative and relational performances of firms, and firms' access to public subsidies. Altogether, the empirical results offer a more positive view of science parks than is usual in previous studies and support the view that such institutions are an important element of a technology policy that targets NTBFs, especially in a country like Italy which is characterized by a rather weak national innovation system.



## Reinventing the Corporate Strategy Paradigm: Business-NGO Alliances and a Sustainability-based View of the Firm

Nancy Higginson, *University of Calgary*  
Harrie Vredenburg, *University of Calgary*

The emergence of sustainable development on the world stage has been accompanied by an unprecedented surge in civil society activism. Firms must now operate within an expanded social system where stakeholder groups make demands on corporations that go far beyond the traditional functions of goods and services production. Strategic management is challenged to also incorporate environmental and social concerns into corporate strategies. Drawing from the resource-based view of the firm, knowledge-based view of the firm and strategic alliance literatures, the paper presents an argument for a sustainability-based view of the firm. Here, knowledge-creation and utilization through business-NGO alliances form the basis of a firm's competitive strategy. BC's coastal forest products firms are used as case studies for theory development.

## Competitive Advantage in Science Parks: The Swedish Example of New Technology Based Firms' Use of Location Resources

Marie Löwegren, *Lund University*

In contrast to other studies on Science Parks this one is using case studies from one Swedish Science Park (Ideon) in order to find how NTBF's use the resources that could be found in the location, and whether the resources could be sources of competitive advantage in the resource-based view sense. The resources that provide competitive advantage are here defined as those that could help the small NTBF to grow. Firms in the IT industry and the biotechnology industry are the objects of study. An analytical framework that reveals three categories of resources to be found in the Science Park location; university related resources, Science Park facilities, and cluster effects, is developed. It is argued that the combination of resources that forms the Science Park concept could be a source of competitive advantage.

### INTANGIBLE RESOURCES FOR COMPETITIVE ADVANTAGE

Paper	Track C	Hampton Room
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## Intangible Capital in Industrial Research: Effects of Network Position on Individual Inventive Productivity

Jukka-Pekka Salmenkaita, *Nokia/Helsinki University of Technology*

The paper investigates the effects of collaboration networks on inventive productivity within industrial research environment. Two kinds of network structures are distinguished: structural holes offering opportunities of information brokerage to individuals, and network closures supporting co-specialization of individuals. Hypotheses of the effects of network positions on the development of technological know-how are tested based on longitudinal individual-level network data. The analysis provides partial support both to the structural hole and network closure argument. However, contrary to the literature emphasizing innovation via inter-organizational collaboration, the positive effects of ties between the research center and business units are highlighted. The interpretation of these results seems to call for more refined models of firm boundaries to better explain how the research activities are organized within firms.

## Do Alliance Networks Affect the Value of a Firm's Intellectual Capital? Evidences from the Global Pharmaceutical Industry

Beiqing (Emery) Yao, *University of Pittsburgh*  
Susan McEvily, *University of Pittsburgh*

Intellectual capital, which encompasses patents, trademarks, copyrights, and knowledge otherwise held by the firm or its employees, has become an increasingly important source of competitive advantage. At the same time, firms are finding it increasingly difficult to keep abreast of changes in scientific and technological knowledge without the greater cooperation of other organizations, including their competitors. Alliances are an important means of accessing knowledge externally, but may increase the leakage of a firm's knowledge to others. We examine how specific

characteristics of a firm's alliance network affect the value of its patents, as indicated by the number of citations they receive. We find that network size is less important than characteristics of alliance partners, and that network density, rather than efficiency, positively affects patent value.

## The Role of the Board of Directors in Building and Leveraging Intangible Capital: The Context of High Technological Intensity

Sanjay Goel, *University of Minnesota-Duluth*  
Patrice Luoma, *Quinnipiac University*

The development and maintenance of intangible resources and core competencies is especially critical to the competitive success of technology intensive firms (where intangible assets are a key source of firm value). The challenge of managing such firms imposes unique requirements on knowledge and skills required of directors and the role served by the board. Using the resource-based and strategic human resource perspectives, we propose a model of the board of directors aimed at building firms' intangible (and strategic) capital. In addition, using the board itself as a unique resource, we propose conditions under which boards may be superior in leveraging the intangible capital of the firm for competitive advantage.

## Intangible Resources in Action: Lessons from a Case Study

Joe Peppard, *Cranfield University*  
Anna Rylander, *Intellectual Capital Services Ltd*

For most high-tech companies the key to creating value can be found in intangible resources and in their deployment. However, intangibles are largely ignored by traditional management tools. This paper argues that the intellectual capital (IC) perspective, with its origins in practice and its action oriented focus, has much to offer in revealing how resources are used in creating value, and thus complements traditional financial, strategic, managerial and resource-based perspectives on value creation. This is illustrated through telecommunications software company APION which adopted an IC approach to identify the necessary IC resources and determine how best to develop and deploy them, in order to construct and implement a growth strategy. As a result a dramatic increase in shareholder value was realized.

### STAKEHOLDER PERSPECTIVES ON CORPORATE STRATEGY

Paper	Track G	Olympic Room
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## Alliances with Governments: A Transaction Cost Perspective on the Case of the XL Program

Magali Aline Delmas, *University of California-Santa Barbara*  
Janice Mazurek, *University of California-Santa Barbara*

Although there is considerable research on inter-firms alliances not much is known on the characteristics of alliances between firms and governments, which are formed to develop technological innovation or to reduce pollution. This paper proposes a transaction cost economics approach to assess the potential costs of such alliances. Unlike firms, government agencies are not profit seeking and their decision process also may be more complicated. We propose that the uncertainty over regulatory credible commitment impacts the transaction costs of the alliance. Our analysis is illustrated by the case of Project XL (eXcellence and Leadership) developed by the U.S. Environmental Protection Agency (EPA) which allows individual companies to be granted regulatory flexibility provided that they reduce pollution discharges below current regulatory standards.

## From Disparity to Synthesis: How do Inter-sectoral Alliances between Corporations and Environmental Non-profit Organizations Work?

Ted London, *University of North Carolina-Chapel Hill*  
Dennis Rondinelli, *University of North Carolina-Chapel Hill*  
Hugh O'Neill, *University of North Carolina-Chapel Hill*

To proactively address rapid environmental change and blurring organizational boundaries, a new type of inter-organizational relationship has recently emerged. This is the inter-sectoral alliance, a relationship

that joins corporations and non-profit organizations, partners with fundamentally different governance structures and missions. The alliance/learning literature offers a theoretical framework that guides our study of the paradoxes inherent in these collaborations. Through interviews of partners currently involved in inter-sectoral collaborations, we investigate how these alliances emerge and grow, and the distinct forces that sustain them or lead to their dissolution. Our results indicate that competitive advantage is the primary corporate rationale for considering these alliances. Additionally, our results highlight that alliance partners use a wide variety of creative mechanisms to bridge great gulfs in thinking, trusting, and learning.

### **Redefining the Corporation: Business Strategy, Corporate Citizenship, and Stakeholder Networks**

James Post, *Boston University*

Sybill Sachs, *University of Zürich*

Lee Preston, *University of Maryland*

The private and public governance of the modern corporation is under debate. The modern corporation needs to be “redefined” in the minds of its managers and constituents, and in law and public policy, to reflect its observable characteristics. We elaborate the “stakeholder view” of the corporation as a distinctive model of strategic management that emphasizes the link between organizational wealth and network relationships. We illustrate the value of a constituent-oriented approach through the experience of three firms that have incorporated such principles and procedures into their operations. Their strategies for success are in accord with the stakeholder view of the corporation. Research sponsored by the Alfred P Sloan Foundation; forthcoming book published by Stanford University Press.

### **Strategic Change and Governance: The Influence of Stakeholder Groups**

Esther Solomon, *Fordham University*

This paper presents the empirical data from a research project including responses from 240 managers in the New York area, regarding their perceptions of the influence of stakeholder groups on strategic changes in their organizations. It focuses on the desired outcomes of these change initiatives, identification of the critical change stakeholders, evaluation of their characteristics, and analysis of variations in change assessments among subgroups viewing different stakeholders as the key change initiators. The results of this study suggest that different stakeholder groups may be perceived as drivers for different aspects of strategic changes. Elucidation of the complexities involved in stakeholder dynamics may facilitate the development of governance strategies and processes pursuing performance excellence along with improved corporate social performance through increased transparency and constructive dialogue among the relevant stakeholders.

### **NEW ECONOMY AND NEW STRATEGIC REALITIES**

Paper	Track A	Yorkshire Room
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### **Winning Strategies for e-Business: Eight e-Strategies**

Angela Andal, *Wolff Olins*

George Yip, *London Business School*

We have lived through the most extraordinary upheaval in e-business. The economy has proved to be a brutal environment for startups. In the stampede to stake their claim in the e-world, many have failed, few have performed as well as expected. What crucial element have these companies overlooked? This paper consists of two parts the first is an historical piece, which provides eight strategies for e-commerce, based on the idea of gaining and sustaining competitive advantage on the Internet. The second part underscores the importance of having a brand idea at the heart of a business strategy. This brand idea must be both stable and flexible, able to drive growth in an intelligent market, and at Internet speed.

### **Partnering in the New Economy: Lessons from Experience**

M Tina Dacin, *Queen's University*

Paul Olk, *University of Denver*

In order to avoid being pre-empted in the market, many dot com companies face time-based pressures to lock-in critical partnerships. However, research on alliance formation suggests it is important to take time to find suitable partners. Thus, dot com startups face two sets of liabilities. One is the lack of time for partner search and uncertainty of information about potential partners. Another is that they lack alliance capabilities, are themselves untested, and may have to work harder to sell themselves as prospective partners. Using data from case histories, we try to understand how dot com startups manage these liabilities. We interviewed a number of dot com managers about their partner selection processes. We find that social and relational factors play an important role in partner selection dynamics.

### **e-Business: The New Market Reality and its Implication for Competitive Strategy**

David Horne, *California State University-Long Beach*

Margrethe Wiersema, *University of California-Irvine*

During the past year, the landscape for e-business has dramatically changed and become less hospitable. Online commerce growth has slowed and not met earlier market forecasts; corporate enthusiasm for e-business initiatives has waned; stock prices of e-businesses have tumbled; VC funding has shrunk; e-business bankruptcies abound; and many e-business models that were lauded less than eighteen months ago have been shredded. The implications of this new market reality for e-business impacts both “old economy” companies deciding on an appropriate e-business strategy and the new economy pioneers. The retailing industry has been the focus of much of the Internet wave and thus merits special attention on any subsequent discussion. This paper examines the new e-business reality and offers some lessons learned from such an analysis.

### **Can We Apply “Old” Strategic Frameworks to Firms in the New Economy?**

Norman Sheehan, *University of Saskatchewan*

Alexandra Bjertnaes, *Accenture*

Most business people are taught the SWOT approach as a way of structuring an investigation into a firm’s strategic position. While the SWOT approach is still valid for studying firms in the new economy, the underlying frameworks traditionally used to evaluate a firm’s strengths, weaknesses, opportunities and threats (the resource-based view, value chain and five forces) were developed for old economy firms. We review how the characteristics of the new economy impact each of the frameworks and then discuss if they need to be updated. We conclude that despite innovative elements within the new economy, the “old” strategic frameworks are still applicable, albeit requiring some modifications which are discussed.