Publications Archive (through 2012)

Title: *The Knockoff Economy: How Imitation Sparks Innovation*
Authors: Kai Raustiala and Christopher Sprigman
Date: September, 2012
Format: book
Source: Oxford University Press

Title: *The Physics of Business Growth: Mindsets, System, and Processes*
Authors: Jeanne M. Liedtka and Edward D. Hess
Date: March, 2012
Format: e-Book (Kindle)
Source: Stanford University Press

Title: *Grow to Greatness: Smart Growth for Entrepreneurial Businesses*
Author: Edward D. Hess
Date: March, 2012
Format: Book
Source: Stanford University Press

With so much attention focused on small and medium-sized businesses (SMBs) and their critical importance to the revitalization of the economy, Professor Ed Hess has set out to debunk the myths of business growth and to set forth a research-based approach to SMB growth: growth can create value but if it is not properly managed it can destroy value. And in some cases, too much growth too fast can destroy a SMB business.

Title: *The DNA of Business Growth v. The Myths of Business Growth: A Case for Smart Growth*
Author: Edward D. Hess
Date: January, 2012
Format: e-Book (Kindle)
Source: Darden Business Publishing

“All growth is good” is one of the four myths that are dispelled in *The DNA of Business Growth v. The Myths of Business Growth: A Case for Smart Growth*. By searching the disciplines of biology, economics, strategy, finance, and organizational design and behavior, Edward Hess provides evidence that the U.S. Growth Model has no theoretical or empirical support and summarizes the state of the art knowledge about what we know about how businesses grow. A must read for every business builder, manager, and leader.
In this article we speak of roads taken and paths yet to be traversed. Over the past decade, entrepreneurship researchers have accumulated considerable work related to opportunities. Here we outline new possibilities opened up by that work and seek to recast entrepreneurship as a science of the artificial in three ways: understanding opportunities as made as well as found, moving beyond new combinations to transformations, and developing a new nexus around actions and interactions.

We analyze how corporate venture capitalists (CVCs) differ from independent venture capitalists (IVCs) in nurturing innovation for entrepreneurial firms. Using the NBER Patent Citation database, we find that CVCs help their portfolio firms achieve a higher degree of innovation productivity, as measured by their patenting, although these firms are younger, riskier, and less profitable compared to the entrepreneurial firms backed by IVCs. To establish causality, we use both an instrumental variable approach and a differences-in-differences approach, and show that the above baseline results are unlikely to be driven by better project selection abilities on the part of CVCs. Finally, our analysis suggests that the mechanisms through which CVCs are able to better nurture innovation are their greater tolerance for failure and their superior knowledge of the entrepreneurial firms’ technology due to the strategic fit between CVCs’ parent firms and the entrepreneurial firms backed by them.

The Financial Crisis and the Great Recession that followed illustrate the sensitivity of the economy to a housing bust. This paper shows that financial integration both amplified the volatility of housing prices and economic sensitivity to housing-price shocks. We exploit variation credit-supply subsidies across local markets from the Government-Sponsored Enterprises to construct an instrument for housing price changes unrelated to fundamentals. Using this instrument, we find that a 1% rise in housing prices causes a 0.25% increase in economic growth. This effect is larger in localities more financially integrated with other markets through bank ownership ties. Financial integration thus raised the effect of collateral shocks on
the economy, thereby increasing economic volatility.

Title: *Designing for Growth: A Design Thinking Tool Kit for Managers*
Authors: Jeanne Liedtka and Tim Ogilvie
Date: June, 2011
Format: Book (Columbia Business School)

Practicing managers don't have much time for buzzwords and platitudes. Managers are doers, and when they hear about a promising solution, they want to know how to do it. Design thinking is one of those topics that has burst onto the scene accompanied by lofty promises but precious few practical details. Designing for Growth is the book that provides those details. It goes beyond the theory and philosophy of the recent books on design thinking, showing you how to apply design thinking in a step-by-step way to solve complex growth opportunities.

Title: *Growing an Entrepreneurial Business: Concepts and Cases*
Author: Edward D. Hess
Date: March, 2011
Format: Book (Stanford University Press)

This book is designed for courses that focus on managing small to medium sized enterprises. In developing and teaching his own course, author Edward Hess discovered the need for a text that focuses on the management challenges of growing a successful entrepreneurial business. Therefore, this book focuses on the major management challenges that successful start-ups encounter when leaders decide to grow and scale their businesses.

Title: *Entrepreneurship as Method: Open Questions for an Entrepreneurial Future*
Authors: Saras D. Sarasvathy and Sankaran Vekataraman
Date: March, 2011
Format: Research paper

In this essay, we outline the provocative argument that in the realm of human affairs there exists an entrepreneurial method- analogous to the scientific method spelled out by Francis Bacon and others with regard to the natural realm. We then suggest a series of open questions that we believe will help future scholars spell out the contents of such a method and ways in which it can be put to work in the design and achievement of socioeconomic ends. At least one normative implication of accepting the argument would be to teach entrepreneurship not only to entrepreneurs but to everyone, as a necessary and useful skill and an important way of reasoning about the world.

Title: *Napsterizing Pharmaceuticals: Access, Innovation, and Welfare*
Authors: James W. Hughes, Ph.D.; Michael J. Moore, Ph.D.; Edward A. Snyder, Ph.D.
Date: January, 2011
Format: Research Paper
We analyze the effects of a hypothetical change from the status quo with patent protection on pharmaceuticals to a world in which all patent rights on both existing and future branded drugs would be eliminated. Our analysis takes into account stylized facts concerning the nature of competition between branded and generic competition, the value of the flow of potential new drugs, the effective patent life under the existing Hatch-Waxman framework, and, most critically, the essential features of prescription benefit coverage whereby consumers pay relatively low marginal prices (copayments) for their prescriptions. Our calibration of a simple model indicates that the costs of Napsterizing pharmaceuticals exceed the benefits by a ratio of about 3 to 1.

**Title:** Incentives for Complex R&D Products  
**Authors:** Raul O. Chao, Kenneth C. Lichtendahl, Yael Grushka-Cockayne  
**Date:** January, 2011  
**Format:** Working Paper

R&D projects are critical to innovation and growth, but are often plagued by organizational and project challenges. The organization hierarchy makes it difficult to manage R&D projects because knowledge and development effort needed to deliver project value are decentralized from managerial authority. Making matters worse, complexity in R&D projects often arises from interactions between the attributes that determine a project’s potential value. In light of these challenges, how should the firm structure incentives to ensure that managers reveal the true potential of a project and invest adequate resources to create value? Leading economic models of R&D often consider agency or complexity, but not both. In this paper, we develop a model that shows how an idea that emerges from search on a complex landscape is intimately tied to an agency problem of adverse selection and moral hazard. Our results show that incentives depend on both the mode of search employed in an organization as well as the complexity of the project. When organizations employ local search (exploitation), incentives should be set higher the more complex is the project. Conversely, when organizations employ distant search (exploration), incentives should be set lower the more complex is the project. The reason for this difference is the distribution of idea quality resulting from local or distant search on a complex landscape.

**Title:** Made as Well as Found: Researching Entrepreneurship as a Science of the Artificial  
**Authors:** Saras Sarasvathy, Sankaran Venkataraman and Nicholas Dew  
**Date:** Forthcoming (in production)  
**Format:** Book (Yale University Press)

**Title:** Firm Responses to Secondary Stakeholder Action  
**Source:** Strategic Management Journal, Vol. 27, No. 8, pp. 765-782  
**Authors:** Charles E. Eesley and Michael Lenox  
**Date:** Fall, 2010  
**Format:** Research Paper

In this paper, we explore the conditions under which secondary stakeholder groups are likely to elicit positive firm responses. To this end, we build upon and advance Mitchell, Agle, and Wood’s (1997) stakeholder saliency and identification framework by defining saliency in terms of actions, not perceptions, and by proposing that power, legitimacy, and urgency arise out of the
nature of stakeholder - request - firm triplets. To test this framework, we build a unique dataset of over 600 secondary stakeholder actions within the United States, all concerning environmental issues over the period 1971-2003.

**Title:** Sustainable Development and Entrepreneurship: Past Contributions and Future Directions  
Authors: Jeremy K. Hall, Gregory A. Daneke, Michael J. Lenox  
Date: September, 2010  
Format: Research Paper

This article discusses the emerging research concerned with sustainable development and entrepreneurship, which is the focus of this special issue of the Journal of Business Venturing. Entrepreneurship has been recognized as a major conduit for sustainable products and processes, and new ventures are being held up as a panacea for many social and environmental concerns. However, there remains considerable uncertainty regarding the nature of entrepreneurship's role and how it may unfold. We begin with an overview of sustainable development and the role of entrepreneurship and outline recent contributions exploring this role. We then summarize the papers presented in this special issue and conclude with suggestions for further research.

**Title:** VIPE Financing: Venture (Capital) Investments in Public Equity  
Type: Technical Note  
Source: The Handbook of Venture Capital (Oxford University Press)  
Authors: Susan Chaplinsky and David Haushalter  
Date: Fall, 2010  
Format: Research Paper

This paper studies 1,655 venture investments in public equity ("VIPEs") over 1995-2008. Although it has been conjectured that venture capital firms (VCs) have increased investments in public equity over time, we find little evidence to support this claim as VIPEs represent less than 2 percent of total VC investment in most years. VCs appear to invest in VIPEs to leverage their experience and to capitalize on perceived undervaluation of the issuer’s equity shares. Consistent with this, VIPEs are highly concentrated in a few industries and VCs purchase stakes at a price 47 percent below the issuer’s previous year’s high price. Post-issue average and median benchmark adjusted returns are negative for 6, 12, and 24 month intervals. The findings do not suggest that the experience VCs gain from investing in private companies results in an ability to consistently identify undervalued public companies.

**Title:** Smart Growth: Building an Enduring Business by Managing the Risks of Growth  
Author: Edward D. Hess  
Date: March, 2010  
Format: Books & Journals

Wall Street believes that all public companies should grow smoothly and continuously, as evidenced by ever-increasing quarterly earnings, and that all companies either "grow or die." Introducing a research-based growth model called "Smart Growth," Edward D. Hess challenges
this ethos and its dangerous mentality, which often deters real growth and pressures businesses to create, manufacture, and purchase noncore earnings just to appease Wall Street.

Smart Growth accounts for the complexity of growth from the perspective of organization, process, change, leadership, cognition, risk management, employee engagement, and human dynamics. Authentic growth is much more than a strategy or a desired result. It is a process characterized by complex change, entrepreneurial action, experimental learning, and the management of risk. Hess draws on extensive public and private company research, incorporating case studies of Best Buy, Sysco, UPS, Costco, Starbucks, McDonalds, Coca Cola, Room & Board, Home Depot, Tiffany & Company, P& G, and Jet Blue. With conceptual innovations such as an Authentic Earnings and Growth System framework, a seven-step growth funnel pipeline, a Growth Decision Template, and a Growth Risks Audit, Hess provides a blueprint for an enduring business that strives to be better, rather than simply bigger.

Title: The Catalyst: How You Can Become an Extraordinary Growth Leader
Authors: J. Liedtka, R. Rosen and R. Wiltbank
Date: March 2009 (Crown Business)
Format: Books & Journals

Mid-level managers may have absolutely no clue where to begin in the quest for growth; or they may have some ideas but not a shred of data to prove that any of them will move the revenue needle. And these managers face not only stretch goals but also, paradoxically, the many obstacles to achieving them — such as inflexible processes and a passion for data and analysis — that are common in large organizations. The most valuable lessons for these managers come straight from their peers: the managers within mature, established corporations who have the talent and skill for driving organic growth. Like chemical catalysts, they make things happen quickly that wouldn't without them, mostly by virtue of their ability to navigate between two worlds: the corporate world, designed for stability and control, and the entrepreneurial world, which is defined by uncertainty. It is the stories of these growth leaders that the authors tell in The Catalyst.

Title: R&D Intensity and the NPD Portfolio
Source: Darden School Working Paper
Authors: R. Chao and S. Kavadias
Date: 2009
Format: Research Paper Series

A key metric for the assessment of innovative activity at the firm level is R&D intensity. R&D intensity is the ratio of a firm's R&D investment to its revenue (the percentage of revenue that is reinvested in R&D). Empirical and anecdotal evidence suggests that R&D intensity within an industry is remarkably consistent. Despite this consistency in R&D spending, firms tend to be differentiated with respect to their NPD portfolio strategy and overall performance. This study aims to explain the observed consistency in R&D intensity for firms within an industry, despite the varying choices in terms of how much the firm invests in R&D and how resources are allocated among projects in a portfolio. We consider the implications of firm level factors, such
as NPD portfolio composition, as well as industry level factors, such as competition intensity and environmental stability. We find that R&D intensity alone does not explain firm performance. Rather, it is the proper alignment between R&D intensity (how much the firm invests) and NPD portfolio strategy (how the firm invests the money) that drives profitability. More importantly, the proper alignment critically depends on two industry factors — competition intensity and environmental stability.

**Title:** Effectual Versus Predictive Logics in Entrepreneurial Decision-Making: Differences Between Experts and Novices
**Source:** Journal of Business Venturing (Vol. 24, Issue 4, Pages 287–309)
**Authors:** N. Dew, S. Read, S. Sarasvathy and R. Wiltbank
**Date:** 2009
**Format:** Research Paper Series

In support of theory, this study demonstrates that entrepreneurial experts frame decisions using an "effectual" logic (identify more potential markets, focus more on building the venture as a whole, pay less attention to predictive information, worry more about making do with resources on hand to invest only what they could afford to lose, and emphasize stitching together networks of partnerships); while novices use a "predictive frame" and tend to "go by the textbook." We asked 27 expert entrepreneurs and 37 MBA students to think aloud continuously as they solved typical decision-making problems in creating a new venture. Transcriptions were analyzed using methods from cognitive science. Results showed that expert entrepreneurs framed problems in a dramatically different way than MBA students.

**Title:** Residential Segregation Influences on the Likelihood of Being Self-Employed
**Source:** Entrepreneurship Theory and Practice (Vol. 33, No. 2)
**Authors:** G. Fairchild
**Date:** 2009
**Format:** Research Paper Series

Geographic and environmental influences on economic action have a long history in managerial research. This paper develops and estimates a model of the potential of a broad set of U.S. racial minority groups to enter self-employment based on individual, household, and metropolitan area level factors. The model allows for an analysis of two distinct residential segregation processes on self-employment likelihood. Results indicate that clustering by race has group-specific influences, increasing the likelihood of self-employment for some groups and diminishing for others. Higher levels of racial exposure raise the likelihood of entrepreneurial careers for all groups, but especially for blacks.
Title: Beyond Hubris: How Highly Confident Entrepreneurs Rebound to Venture Again
Source: Journal of Business Venturing (in press)
Authors: M. Hayward, W. Forster, S. Sarasvathy and B. Fredrickson
Date: 2009
Format: Research Paper Series

This article outlines why highly confident entrepreneurs of focal ventures are better positioned to start and succeed with another venture; and therefore why overconfidence in one's capabilities functionally persists and pervades amongst entrepreneurs. By combining cognitive perspectives on confidence in decision making with Fredrickson's [Fredrickson, B.L. 1998. What good are positive emotions?. Review of General Psychology, 2, 300-319.; Fredrickson, B.L. 2001. The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions. American Psychologist, 56, 218-226.; Fredrickson, B.L. 2003. The value of positive emotions. American Scientist, 91: 330-335] 'broaden-and-build' theory of positive emotions, this paper elaborates the manner in which such entrepreneurs can develop emotional, cognitive, social and financial resilience that can be marshaled and mobilized for a subsequent venture.

Title: Prediction and Control Under Uncertainty: Outcomes in Angel Investing
Source: Journal of Business Venturing (Vol. 24, Issue 2, Pages 116–133)
Authors: R. Wiltbank, S. Read, N. Dew and S. Sarasvathy
Date: 2009
Format: Research Paper Series

Venture investing plays an important role in entrepreneurship not only because financial resources are important to new ventures, but also because early investors help shape the ventures' managerial and strategic destiny. In this study of 121 angel investors who had made 1038 new venture investments, we empirically investigate angel investors' differential use of predictive versus non-predictive control strategies. We show how the use of these strategies affects the outcomes of angel investors. Results show that angels who emphasize prediction make significantly larger venture investments, while those who emphasize non-predictive control experience a reduction in investment failures without a reduction in their number of successes.

Title: Entrepreneurship in Emerging Regions Around the World: Theory, Evidence, and Implications
Authors: P. Phan, S. Venkataraman and S. Ramakrishna Velamuri (eds.)
Date: August 2008 (Edward Elgar, Batten Entrepreneurship Series)
Format: Books & Journals

Part of the Batten Entrepreneurship Series, this edited volume explores the theoretical implications of entrepreneurship cases from varied emerging market settings across the globe, from the Western Balkans to Brazil, from the border traders of Laos and Thailand to venture capital formation in Ireland, to family enterprises in Indonesia. Seen as evidence for developing a
theory of entrepreneurship for emerging markets, the region-specific cases are grouped
thematically into four main areas of inquiry: (1) institutional determinants of entrepreneurship in
emerging regions; (2) government and non-governmental organization influences on
entrepreneurship in emerging regions; (3) emergence of venture capital in entrepreneurial
economies in emerging regions; and (4) firm-level responses to entrepreneurial opportunities in
emerging regions.

**Title:** *So, You Want to Start a Business? 8 Steps to Take Before Making the Leap*
Authors: E. Hess and C. Goetz
Date: Various
Format: Books & Journals

"Most start-ups face the same challenges," finds Edward Hess, Batten Executive-in-Residence
and Professor of Business Administration at the Darden School of Business. In his latest book,
*So, You Want to Start a Business? 8 Steps to Take Before Making the Leap*, Professor Hess
offers highly practical advice that will apply to anyone considering starting their own business.
The book (in paperback) is co-authored with Charles Goetz, a serial entrepreneur who lectures in
entrepreneurship at Emory University. In *So, You Want to Start a Business?* the authors outline
helpful do's and don'ts of running a start-up; they give how-to advice for "penciling" a business
and for steering clear of the eight mistakes that most often cause new business owners to fail.

**Title:** *Effectuation: Elements of Entrepreneurial Expertise*
Authors: S. Sarasvathy
Date: March 2008 (Edward Elgar Publishing, New Horizons in Entrepreneurship)
Format: Books & Journals

In *Effectuation*, Saras Sarasvathy demonstrates how effectual logic [in contrast to causal
reasoning] can be found in stories of the founding of such businesses as CarMax and
RealNetworks. She also explores the implications of effectuation for current scholarship in
strategic management, how the philosophy of pragmatism relates to effectuation, methods for
teaching effectuation, and how other researchers are building on her work. Perhaps most
compelling, she writes of the potential for applying effectual logic to markets for social goods
and services, which could address human suffering. Entrepreneurs who create such "markets in
human hope" could eliminate the artificial divide between for-profit and nonprofit ventures and
unleash entrepreneurial creativity to help solve social problems.
Developing the "right" new products is critical to firm success and is often cited as a key competitive dimension. This paper explores new product development (NPD) portfolio strategy and the balance between incremental and radical innovation. We characterize innovative effort through a normative theoretical framework that addresses a popular practice in NPD portfolio management: the use of strategic buckets. Strategic buckets encourage the division of the overall NPD resource budget into smaller, more focused budgets that are defined by the type of innovative effort (incremental or radical). We show that time commitment determines the balance between incremental and radical innovation. When managers execute this balance, they are often confounded by: (i) environmental complexity, defined as the number of unknown interdependencies among technology and market parameters that determine product performance; and (ii) environmental instability, the probability of changes to the underlying performance functions. Although both of these factors confound managers, we find that they have completely opposite effects on the NPD portfolio balance. Environmental complexity shifts the balance toward radical innovation. Conversely, environmental instability shifts the balance toward incremental innovation. Risk considerations and implications for theory and practice are also discussed.

The first step in transforming strategy from a hopeful statement about the future to an operational reality is to allocate resources to innovation and new product development (NPD) programs. We explore how funding authority affects a manager's allocation of resources between multiple programs in a portfolio. Funding may be either fixed or variable depending on the extent to which the manager is free to use revenue derived from existing product sales to fund NPD efforts. Our results indicate that the allocation of resources between existing product improvement (relatively incremental projects) and new product development (more radical projects) depends critically on the funding authority. We find that the use of variable funding drives higher effort toward improving existing products and developing new products. However, variable funding induces the manager to focus on existing product improvement to a greater degree than new product development, and leads to an incremental balance in the NPD portfolio. In addition, we highlight a substitution effect between explicit incentives (compensation parameters) and implicit incentives (career concerns). Explicit incentives are reduced as career concerns become more salient.
In A Behavioral Theory of the Firm (BTF), Cyert and March [Cyert, R.M., March, J.G., 1963. A Behavioral Theory of the Firm. Prentice-Hall, Englewood Cliffs, NJ] present a clutch of ideas for explaining the behavior of established firms within an environment of well-defined markets, stakeholder relationships, technologies, and so on. In this paper, we outline a behavioral theory of the entrepreneurial firm that emphasizes transforming environments rather than acting within extant ones. In particular, we explicate three ideas that parallel key concepts in BTF: (1) accumulating stakeholder commitments under goal ambiguity (in line with a political conception of goals), (2) achieving control (as opposed to managing expectations) through non-predictive strategies, and (3) predominately exaptive (rather than adaptive) orientation.

This paper develops and estimates a model of potential to enter self-employment based on individual and community-level factors. Of particular interest is the influence of racial residential segregation processes and segregation's tendency to concentrate people with similar demographic profiles in geographical space. It has been argued that segregation processes can also concentrate poverty and its associated social dislocations. An analysis of a database of 8,917 households in four U.S. metropolitan areas revealed that two residential segregation processes (clustering and exposure) limit and enhance potential entry into self-employment for blacks, and provides a partial explanation for the long-standing gaps in white and black self-employment rates.

This paper estimates a model of potential to enter self-employment based on individual, household and community-level factors. This paper focuses on the impact of segregation on the likelihood of black and white working-age adults to be self-employed workers rather than wage or salary workers. A multilevel analysis combined answers of over 400,000 respondents to the
Title: Diffusing Management Practices within the Firm: The Role of Information Provision

Source: Harvard Business School Technology & Operations Mgt. Unit Research Paper No. 08-085
Authors: M. Lenox
Date: 2008
Format: Research Paper Series

A key role of corporate managers is to encourage subsidiaries to adopt innovative practices. This paper examines the conditions under which corporate managers use information provision to encourage subsidiaries' adoption of advanced management practices. Focusing on the distribution of expertise across subsidiaries, we propose that corporate managers elect an information provision strategy when (i) subsidiaries, on average, possess moderate levels of related expertise, (ii) subsidiaries exhibit significant heterogeneity in this expertise, and (iii) the subsidiaries are more diversified and less concentrated. We examine the efforts to diffuse pollution prevention practices exhibited by manufacturing firms in the information and communication technology sector in the United States, and find empirical support for the four hypotheses developed here. The research presented in this paper has implications for our understanding not only of who adopts advanced environmental management practices, but more broadly, of when firms adopt information provision strategies to encourage knowledge transfer within the organization.

Title: Does Component Sharing Help or Hurt Reliability? An Empirical Study in the Automotive Industry
Source: Management Science (Vol. 54, No. 5, Pages 922–938)
Authors: K. Ramdas and T. Randall
Date: 2008
Format: Research Paper Series

Component sharing — the use of a component on multiple products within a firm's product line — is widely practiced as a means of offering high variety at low cost. Although many researchers have examined tradeoffs involved in component sharing, little research has focused on the impact of component sharing on quality. In this paper, we examine how component
sharing impacts one dimension of quality — reliability — defined as mean time to failure. Design considerations suggest that a component designed uniquely for a product will result in higher reliability due to the better fit of the component within the architecture of the product. On the other hand, the learning curve literature suggests that greater experience with a component can improve conformance quality, and can increase reliability via learning from end-user feedback. The engineering literature suggests that improved conformance in turn increases reliability. Sharing a component across multiple products increases experience, and hence, should increase reliability. Using data from the automotive industry, we find support for the hypothesis that higher component reliability is associated with higher cumulative experience with a component. Further, we find support for the hypothesis that higher component reliability is associated with a component that has been designed uniquely for a product. This finding suggests that the popular design strategy of component sharing can in some cases compromise product quality, via reduced reliability.

Title: Designing Organizations that Design Environments: Lessons from Entrepreneurial Expertise
Source: Organization Studies (Vol. 29, No. 3, Pages 331–350)
Authors: S. Sarasvathy, N. Dew, S. Read and R. Wiltbank
Date: 2008
Format: Research Paper Series

Human artifacts lie on the interface between their inner environments and their outer environments. Organizations, therefore, are apt subjects to be studied through a science of the artificial. Furthermore, organizational design happens at two interfaces: first, at the interface between organizational founder(s) and the firms they design, and second, between the firms and the environments in which they operate. We use recent developments in the study of entrepreneurial expertise to show why an effectual logic of design is necessary at the first interface, and what its consequences are for designing at the second. In particular, we use the exemplar case of Starbucks to codify three key characteristics of the design problem at the first interface — namely, Knightian uncertainty, goal ambiguity and environmental isotropy. We then use an 'alternate histories' method to trace four strategic options — namely, planning, adaptation, vision and transformation — for designing at the second interface. In the final analysis, organizational design is important because effectuators using transformational approaches not only design organizations, but concurrently end up designing the environments we live in.
In their article on entrepreneurship, effectuation, and over-trust, Goel and Karri suggest relationships between effectuation, over-trust, and certain psychological characteristics of entrepreneurs. In this response we debate their article. Goel and Karri are correct in claiming that effectuation supposes over-trust. However, we argue that effectual logic works in a different way than they presented because it neither predicts nor assumes trust. Goel and Karri's article also draws attention to the behavioral assumptions underlying constructs such as over-(under) trust. Our suggestion is that effectuation is based on alternative behavioral assumptions that open up interesting avenues for future research in entrepreneurship.

In an excellent recent paper on Ludwig Lachmann's contributions to entrepreneurship, Chiles, Bluedorn and Gupta draw parallels between Lachmann's work and later contributions in the entrepreneurship literature, including Sarasvathy (2001), suggesting that, 'Sarasvathy's economic approach to entrepreneurship is decidedly Lachmannian' (Chiles et al. 2007: 487). Our purpose in responding to the Chiles et al. article is twofold. First, our interpretation about how effectuation works differs in certain ways from the interpretations placed on it by these authors; we therefore wish to clarify our views on these matters. Second, we view the relationship between effectuation and Lachmann's perspective on entrepreneurship somewhat differently than Chiles et al.; in this note we lay out this alternative view. The crux of our presentation is that, although Lachmann and Sarasvathy have much the same starting point (entrepreneurial action in the face of true uncertainty) and several overlaps in terms of the overall implications for dominant economic theories, there are crucial differences that draw upon recent developments in our understanding of how the human mind works and what knowledge is constituted of.

This book aimed at practitioners shares the stories of innovation portfolio directors and other industry leaders who have experienced the challenges and rewards of new product development. Along with practical examples from varied corporate settings, the authors present a set of key
principles that are integral to success when managing the new product portfolio. Case studies from Walt Disney to Mars, Inc., Whirlpool, UTC, and IBM help illustrate in practical ways what it takes to successful lead product development starting with idea generation and extending through process design and architecture all the way to the creation and management of innovative partnerships.

**Title:** Innovations, Stakeholders & Entrepreneurship  
**Source:** Journal of Business Ethics (Vol. 74, No. 3, Pages 267–283)  
**Authors:** N. Dew and S. Sarasvathy  
**Date:** 2007  
**Format:** Research Paper Series

In modern societies entrepreneurship and innovation are widely seen as key sources of economic growth and welfare increases. Yet entrepreneurial innovation has also meant losses and hardships for some members of society: it is destructive of some stakeholders' wellbeing even as it creates new wellbeing among other stakeholders. Both the positive benefits and negative externalities of innovation are problematic because entrepreneurs initiate new ventures before their private profitability and/or social costs can be fully recognized. In this paper we consider three analytical frameworks within which these issues might be examined: pre-commitments, contractarianism, and an entrepreneurial framework. We conclude that the intersection of stakeholder theory and entrepreneurial innovation is a potentially rich arena for research.

**Title:** The Challenges of Evolution: EDM Initiatives in Private Equity in Conception and Practice  
**Source:** Community Development Investment Review. San Francisco, CA: San Francisco Federal Reserve Board  
**Authors:** G. Fairchild  
**Date:** 2007  
**Format:** Research Paper Series

The term "emerging domestic markets" (EDM) has generated considerable practical and scholarly interest in economic opportunities in communities that have largely been overlooked by the investment community as a whole. The explicitly economic perspective offered by EDM and the positive associations with international emerging markets have contributed to growing investor interest in low-income and minority communities. However, the lack of clarity in definitions may have created unintended consequences for the investment professionals attempting to develop these markets. In this essay, I describe three examples of how loose
definitions have created dilemmas for private equity professionals managing what have been termed EDM-targeted funds. If we agree that language matters, then these cautionary tales call for a greater degree of clarity among opinion leaders when discussing these opportunities.

**Title:** Possibility Thinking: Lessons From Breakthrough Engineering

**Source:** Journal of Business Strategy (Vol. 28 Issue 4, Pages 30–37)
**Authors:** R. Friedel and J. Liedtka
**Date:** 2007
**Format:** Research Paper Series

The ability to see new possibilities is fundamental to creating innovative designs — but what do we know about state-of-the-art possibility thinking? The purpose of this paper is to look at this topic, which the strategy field has largely ignored in favor of analytics, by examining a selection of breakthrough engineering projects. Out of these, the paper aims to draw eight different ways of illuminating new possibilities — challenging, connecting, visualizing, collaborating, harmonizing, improvising, re-orienting, and playing — and discuss what each of these might look like if applied to business strategy. The paper explores eight different engineering projects that are regarded as especially innovative. It then explores the lessons of these for business strategists. The paper finds that innovative business strategy development has many parallels with engineering approaches.

**Title:** How Physicians Can Change the Future of Health Care

**Source:** Journal of the American Medical Association (Vol. 297, Pages 1103–1111)
**Authors:** M. Porter and E. Teisberg
**Date:** 2007
**Format:** Research Paper Series

Today's preoccupation with cost shifting and cost reduction undermines physicians and patients. Instead, health care reform must focus on improving health and health care value for patients. We propose a strategy for reform that is market based but physician led. Physician leadership is essential. Improving the value of health care is something only medical teams can do. The right kind of competition — competition to improve results — will drive dramatic improvement. With such positive-sum competition, patients will receive better care, physicians will be rewarded for excellence, and costs will be contained. Physicians can lead this change and return the practice of medicine to its appropriate focus: enabling health and effective care. Three principles should guide this change: (1) the goal is value for patients, (2) medical practice should be organized
around medical conditions and care cycles, and (3) results — risk-adjusted outcomes and costs — must be measured. Following these principles, professional satisfaction will increase and current pressures on physicians will decrease. If physicians fail to lead these changes, they will inevitably face ever-increasing administrative control of medicine. Improving health and health care value for patients is the only real solution. Value-based competition on results provides a path for reform that recognizes the role of health professionals at the heart of the system.

Title: Who do I Listen to? The Role of the Customer in Product Evolution

Authors: K. Ramdas, M. Meyer and T. Randall
Date: 2007
Format: Research Paper Series

Title: The Road to Organic Growth: How Great Companies Consistently Grow Marketshare from Within

Authors: E. Hess
Date: December 2006 (McGraw-Hill)
Format: Books & Journals

A rigorous two-year study of the top 800 value-creating public companies found that growth generated internally through a commitment to customer satisfaction, employee engagement, and profitability resulted in consistent employee retention, stock value improvements, and better returns on investment. In The Road to Organic Growth, Edward Hess shares the full results of his breakthrough study, providing fresh, and often-surprising perspectives on what it really takes to foster organic growth. Using instructive examples from leading companies such as SYSCO, Best Buy, Tiffany & Company, Outback Steakhouse, and Stryker Corporation, Hess reveals the strategies these trailblazers used to achieve long-term growth from within.

Title: The Search for Organic Growth

Authors: E. Hess and R. Kazanjian (eds.)
Date: October 2006 (Cambridge University Press)
Format: Books & Journals

To remain successful, companies must respond to the challenge of achieving continual internal or core growth. But how is this done, and why do some strategies work better than others? In
Search for Organic Growth, leading writers on business strategy and organization offer authoritative analysis and practical guidance on implementing a strategy for organic growth. All businesses go through life cycles, and momentum can be created in many ways from new products and market extensions, to add-ons and enhancements. The book also answers crucial questions such as how to keep customers happy during periods of change, how to foster an entrepreneurial environment and satisfy individual potentials, and how to turn the immense short-term revenue pressures of a push towards growth to your advantage. A lively resource for business school faculty, MBAs and executives, this book is ideal for any reader interested in connections between latest business thought and practice.

**Title: Leading with Values: Positivity, Virtue, and High Performance**

Authors: E. Hess and K. Cameron (eds.)  
Date: September 2006 (Cambridge University Press)  
Format: Books & Journals

Values-based leadership is based upon honesty, respect, trust and dignity, and it regards every employee within a company as a valued human being. This book describes the characteristics of leaders who focus on positivity and virtues to create and sustain highly successful organizations such as Synovus Financial Corporation, HomeBanc Mortgage Company, and the United States Marine Corps. It also addresses leader mistakes and forgiveness, and how difficulties and challenges can be overcome to achieve spectacular results. This inspiring book offers practical advice that can be applied to individual leadership styles and roles. As society tries to rebound from the recent scandals involving fraud, financial improprieties, and unethical behavior among its leadership, the fundamental message of Leading with Values is clear: acting ethically and virtuously, and treating all stakeholders with respect and dignity, can create extraordinary outcomes without sacrificing performance and profits.

**Title: Redefining Health Care: Creating Value-Based Competition on Results**

Authors: M. Porter and E. Teisberg  
Format: Books & Journals

The U.S. health care system is in crisis. At stake are the quality of care for millions of Americans and the financial well-being of individuals and employers squeezed by skyrocketing premiums — not to mention the stability of state and federal government budgets. In Redefining Health Care, internationally renowned strategy expert Michael Porter and innovation expert Elizabeth Teisberg reveal the underlying — and largely overlooked — causes of the problem, and provide a powerful prescription for change. The authors argue that participants in the health care system have competed to shift costs, accumulate bargaining power, and restrict services, rather than create value for patients. This zero-sum competition takes place at the wrong level — among health plans, networks, and hospitals — rather than where it matters most, in the diagnosis, treatment, and prevention of specific health conditions. Redefining Health Care lays
out a breakthrough framework for redefining health care competition based on patient value. With specific recommendations for hospitals, doctors, health plans, employers, and policy makers, this book shows how to move to a positive-sum competition that will unleash stunning improvements in quality and efficiency.

Title: When Does Corporate Venture Capital Create Firm Value?

Source: Journal of Business Venturing (Vol. 21, Issue 6, Pages 753-772)
Authors: G. Dushnitsky and M. Lenox
Date: 2006
Format: Research Paper Series

Over the past decade, billions of dollars have been invested by established companies in entrepreneurial ventures — what is often referred to as corporate venture capital. Yet, there is little systematic evidence that corporate venture capital investment creates value to investing firms. Scholars have suggested that established firms face underlying challenges when investing corporate venture capital. Namely, structural deficiencies inherent in corporate venture capital may inhibit financial gains. However, firm value may still be created as a result of other benefits from investing — primarily providing a window onto novel technology. In this paper, we propose that corporate venture capital investment will create greater firm value when firms explicitly pursue corporate venture capital to harness novel technology. Using a panel of CVC investments, we present evidence consistent with our proposition. The findings are robust to various specifications and remain unchanged even after controlling for unobserved heterogeneity in investing firms. Our results have important implications for corporate venture capital in particular, and technology strategy in general.

Title: The Piracy Paradox: Innovation and Intellectual Property in Fashion Design

Source: 92 Va. L. Rev. 1687
Authors: K. Raustiala and C. Sprigman
Date: 2006
Format: Research Paper Series

The orthodox justification for intellectual property is utilitarian. Advocates for strong IP rights argue that absent such rights copyists will free-ride on the efforts of creators and stifle innovation. This orthodox justification is logically straightforward and well reflected in the law. Yet a significant empirical anomaly exists: the global fashion industry, which produces a huge variety of creative goods without strong IP protection. Copying is rampant as the orthodox account would predict. Yet innovation and investment remain vibrant. Few commentators have considered the status of fashion design in IP law. Those who have almost uniformly criticize the current legal regime for failing to protect apparel designs. But the fashion industry itself is surprisingly quiescent about copying. Firms take steps to protect the value of trademarks, but
appear to accept appropriation of designs as a fact of life. This diffidence about copying stands in
striking contrast to the heated condemnation of piracy and associated legislative and litigation
campaigns in other creative industries.

**Title: Driving Improvement in Value for Patients**

Source: *The Cerner Quarterly* (Vol. 2, No. 3)
Authors: E. Teisberg
Date: 2006
Format: Research Paper Series

The purpose of any product or service is to create value for people. In the health sector, value is
created by enabling health or improving health care. Patients experience value when their
medical conditions are resolved safely, effectively and efficiently, as well as when disease or
disease progression is prevented. Improving value — the quality received per dollar spent —
should be the clear goal of health sector competition. Unfortunately, today, that is often not the
case.

**Title: Aspirations, Market Offerings and the Pursuit of Entrepreneurial Opportunities**

Source: *Journal of Business Venturing* (Vol. 21, Issue 1, Pages 107-123)
Authors: S. Venkataraman and J. Lee
Date: 2006
Format: Research Paper Series

In this paper we focus on two core questions: 1) Why do some people seek entrepreneurial
opportunities? 2) Under what conditions is the pursuit of entrepreneurial opportunity most
likely? We attempt to answer these questions by creating a theoretical framework that considers
the interaction between an individual's level of aspiration and their appraised value in the labor
market. We propose that when there is disequilibrium between the aspiration vector (AV) of an
individual and the perceived valuation of the market offering vector (P-MOV), an individual
tends to pursue entrepreneurial opportunities. In addition, when hiring officers, HR directors, or
other relevant parties involved in the hiring decision are biased or when existing organizations
have limitations in reflecting an individual's AV, prospective entrepreneurs begin searching for
new opportunities in society. Finally and in our view most crucially, we consider the interaction
between an individual's subjective consideration and his perceived assessment by the labor
market, a novel approach, which we hope takes into account the complexity and richness of
entrepreneurship. We offer seven specific propositions that derive from the disequilibrium
predicted by our framework.
Title: *Innovative Stakeholder Relations: When "Ethics" Pays (and When It Doesn't)"

Source: Business Ethics Quarterly (Vol. 16, Issue 1, Pages 43--68)
Authors: S. Venkataraman, T. Harting and S. Harmeling
Date: 2006
Format: Research Paper Series

Title: *Entrepreneurial Opportunity*

Source: Encyclopedic Dictionary of Entrepreneurship, Michael Hitt, and Duane Ireland (eds.). Blackwell Press. (Pages 100--103)
Authors: S. Venkataraman
Date: 2006
Format: Research Paper Series

Title: *What to do Next? The Case for Non-Predictive Strategy*

Source: Strategic Management Journal (Vol. 27, Issue 10, Pages 981-998)
Authors: R. Wiltbank, N. Dew, S. Read and S. Sarasvathy
Date: 2006
Format: Research Paper Series

Two prescriptions dominate the topic of what firms should do next in uncertain situations: planning approaches and adaptive approaches. These differ primarily on the appropriate role of prediction in the decision process. Prediction is a central issue in strategy making owing to the presumption that what can be predicted can be controlled. In this paper we argue for the independence of prediction and control. This implies that the pursuit of successful outcomes can occur through control-oriented approaches that may essentially be non-predictive. We further develop and highlight control-oriented approaches with particular emphasis on the question of what organizations should do next. We also explore how these approaches may impact the costs and risks of firm strategies as well as the firm's continual efforts to innovate.

Title: *The Successful Family Business: A Proactive Plan for Managing the Family and the Business*

Authors: E. Hess
Date: November 2005 (Greenwood Publishing Group)
Format: Books & Journals
Edward Hess, who has researched and served as a consultant to family businesses for over 20 years, argues that the business and the family are distinct overlapping living organisms, constantly changing and influencing each other. In order for both to thrive, each family business must establish a proactive process for defining roles, articulating goals, and communicating them constantly. Drawing from numerous in-depth examples (both positive and negative) and presenting templates and other practical resources, Hess offers a fascinating glimpse into the dynamics of family business management and specific strategies to promote the health of the enterprise--involving family business leaders and members, non-family employees, board members, and shareholders. Hess concludes with a series of operating rules that apply to every family business and a listing of practical references and resources. The result is a book that will help anyone involved in a family business to develop successful practices that both maximize the value of the business and enhance family relationships.

**Title:** Financing Under Extreme Uncertainty: Evidence from Private Investments in Public Equities

Source: Darden School Working Paper
Authors: S. Chaplinsky and D. Haushalter
Date: 2005
Format: Research Paper Series

We investigate the motivations and the returns to the firms and investors using Private Investments in Public Equities (PIPE) financing, an increasingly common form of equity-based financing. From 1995 to 2000, 1,466 firms raised more than $29 billion through 2,626 PIPE issues. We find that PIPE issuers are poorly performing firms, urgently in need of cash that, as a consequence, are without access to traditional forms of financing. The contract terms and embedded options in PIPEs allow investors to alter their exposure to post-issue movements in the value of the issuer's equity. As a result, the returns earned by investors substantially exceed those of shareholders. Hence PIPEs provide incentives for investors to make investments in firms with substantial operating uncertainties, enabling companies barred from traditional capital markets to obtain much needed financing.

**Title:** Smart Financial Management: The Essential Reference for the Successful Small Business

Authors: W. Sihler, R. Crawford and H. Davis
Date: 2004 (AMACOM)
Format: Books & Journals

**Title:** Investing in Emerging Markets
Investment flows into emerging markets are material: According to the World Bank, during 2000, portfolio and foreign direct investment flows into the approximately 30 markets classified as "emerging" topped $250 billion. This monograph, published by the Research Foundation of AIMR (CFA Institute), offers a concise explanation of characteristics of emerging markets; diversification, return, and volatility in these 30 or so markets; efficiency in emerging markets; market integration and country versus sector factors to consider; and valuation. The work concludes with appendices outlining a mechanism for measuring total risk attributed to the overall market movements, as well as a country-versus-industry regression model.

**Title: The Innovation Journey**

Authors: A. Van de Ven, D. Polley, R. Garud and S. Venkataraman
Date: 1999 (Oxford University Press)
Format: Books & Journals

The Innovation Journey presents the results of a major longitudinal study that examined the process of innovation from concept to implementation of new technologies, products, processes, and administrative arrangements. Its findings call into question most of the explanations of the innovation process that have been proposed in the past. The Minnesota Innovation Research Program, on which this book is based, involved over 30 researchers who undertook longitudinal studies that tracked the development of 14 diverse innovations in real time and in their natural field settings. Studying its results, the authors find that the innovation journey is neither sequential and orderly, nor is it a matter of random trial and error; rather it is best characterized as a nonlinear dynamic system.

**Title: When Do Firms Undertake R&D by Investing in New Ventures?**

Source: Strategic Management Journal (Vol. 26, Issue 10, Pages 947 <!-[endif]-->965)
Authors: G. Dushnitsky and M. Lenox
Date: 2005
Format: Research Paper Series

We explore the conditions under which firms are likely to pursue equity investment in new ventures as a way to source innovative ideas. We find that firms invest more in new ventures — commonly referred to as "corporate venture capital" — in industries with high technological ferment, weak intellectual property protection, and where complementary distribution capability is important. Furthermore, we find that the greater a firm's cash flow and history of innovation, the more likely it is to invest. Our results suggest that in Schumpeterian environments, incumbents may supplement their innovative efforts by tapping into the knowledge generated by new ventures.
Title: When Do Incumbents Learn from Entrepreneurial Ventures? Corporate Venture Capital and Incumbent Firm Innovation Rates

Source: Research Policy (Vol. 34, Issue 5, Pages 615-639)
Authors: G. Dushnitsky and M. Lenox
Date: 2005
Format: Research Paper Series

In this paper, we focus on the potential innovative benefits to corporate venture capital (CVC), i.e. equity investments in entrepreneurial ventures by incumbent firms. We propose that corporate venture capital programs may be instrumental in harvesting innovations from entrepreneurial ventures and thus an important part of a firm's overall innovation strategy. We hypothesize that these programs are especially effective in weak intellectual property (IP) regimes and when the firm has sufficient absorptive capacity. We analyze a large panel of public firms over a 20-year period and find that increases in corporate venture capital investments are associated with subsequent increases in firm patenting.

Title: What is the Emerging Domestic Market?

Authors: G. Fairchild
Date: 2005
Format: Research Paper Series

In the early 1980's, Antoine W. van Agtmael of the International Finance Corporation of the World Bank coined the term "emerging market" to describe nations with low-to-middle per capita incomes and that are instituting economic development and reform programs that allow them to "emerge" into the arena of global economic competitiveness. Since that time, the phrase has gained popularity and has been used to describe nations and even regions within and across nations. Scholarly and practical interest in understanding the factors that lead to rapid growth in these markets has proliferated, and investment activity has increased accordingly. One key element of nearly all usage is the notion of rapid economic transition and burgeoning investment opportunity in formerly overlooked areas.
Title: *Up or Out: New Product Positioning in an Evolving Technology Environment*

Source: *Production and Operations Management* (Vol. 14, No. 3)  
Authors: K. Ramdas and S. Jain  
Date: 2005  
Format: Research Paper Series

In many design environments, the technology around which a product is designed may evolve over the course of the product development cycle. In reaction, designers may modify the product's design to avail of new technology, resulting in cost overruns and delays. This effect can be mitigated if a firm proactively considers the revenue projections for alternate technology choices, the cost of these choices, and the anticipated path of technology evolution, in choosing the optimal product positioning policy. We develop an analytical model that navigates this tradeoff.

Title: *An Empirical Study of the Transition from Paid Work to Self-Employment*

Source: *Journal of Entrepreneurial Finance and Business Ventures* (Vol. 10, Issue 1, Pages 1-16)  
Authors: S. Venkataraman  
Date: 2005  
Format: Research Paper Series

We explore the relationship between the probability of a transition from paid work to self-employment and three explanatory variables: paid income, predicted income, and income for ability. We use panel data for heads of households from the PSID SRC sample for eight pairs of years. Our results show that the relationship between paid income and self-employment is not linear. We then break up paid income into two components: a) predicted income based on human capital, demographic, and locational variables, and b) income for ability. Again, we find nonlinear relationship between self-employment and either predicted income or income for ability. We then test for curvilinear relationships between these three variables (i.e., paid income, predicted income, and income for ability) and the transition to self-employment. We find that individuals with low incomes are more likely to take up self-employment. Further, income for ability is a stronger predictor of the transition to self-employment than predicted income. We show that the relationship between ability and self-employment is U shaped: very low ability and very high ability individuals are more likely to take up self-employment than medium ability individuals. We use prospect theory to explain this result.

Title: *Entrepreneurship and Ethics*

Source: *Dictionary of Ethics*. Edward R. Freeman, and Patricia Werhane (editors). Blackwell Press. (Pages 170-175)
Both history of science and creativity research have shown that reformulating the questions we ask can lead to breakthroughs more often than trying harder to search for more rigorous answers. In such a spirit of creative play, I suggest we throw away our obsession with dividing the world into entrepreneurs and nonentrepreneurs and focus instead on categories within entrepreneurs. In particular, (a) those who want to become entrepreneurs but do not suggest compelling research questions about barriers to entrepreneurship; while, (b) those who do become entrepreneurs need to develop expertise, impelling our research to focus on the rubric of design.
Current theories of the firm provide no explanation for entrepreneurial success except in terms of firm success. Even when the focus is on the entrepreneur, s/he is entirely cast as a bundle of traits/behaviors or heuristics/biases that serves to explain firm performance. In this article, I suggest putting the entrepreneur center stage, adopting an instrumental view of the firm. Drawing upon the work of Simon in symbolic cognition and Lakoff in semantic cognition, I explore how we can go beyond explanations based on economic forces and evolutionary adaptation to entrepreneurial effectuation; I end with specific research questions pertaining to firm design.

Title: *Redefining Competition in Health Care*

Source: *Harvard Business Review* (June, Pages 64-77)
Authors: M. Porter and E. Teisberg
Date: 2004
Format: Research Paper Series

The U.S. health care system is in bad shape. Medical services are restricted or rationed, many patients receive poor care, and high rates of preventable medical error persist. There are wide and inexplicable differences in costs and quality among providers and across geographic areas. In well-functioning, competitive markets, such outcomes would be inconceivable. In health care, these results are intolerable. Competition in health care needs to change, say the authors. It currently operates at the wrong level. Payers, health plans, providers, physicians, and others in the system wrangle over the wrong things, in the wrong locations, and at the wrong times. System participants divide value instead of creating it. (And in some instances, they destroy it.) They shift costs onto one another, restrict access to care, stifle innovation, and hoard information — all without truly benefiting patients. This form of zero-sum competition must be replaced by competition at the level of preventing, diagnosing, and treating individual conditions and diseases. Among the authors’ well-researched recommendations for reform: Standardized information about individual diseases and treatments should be collected and disseminated widely so patients can make informed choices about their care. Payers, providers, and health plans should establish transparent billing and pricing mechanisms to reduce cost shifting, confusion, pricing discrimination, and other inefficiencies in the system. And health care providers should be experts in certain conditions and treatments rather than try to be all things to all people. U.S. employers can also play a big role in reform by changing how they manage their health benefits.
Title: Dispersed Knowledge and an Entrepreneurial Theory of the Firm

Authors: S. Venkataraman, R. Velamuri and N. Dew
Date: 2004
Format: Research Paper Series

In this article, we propose an entrepreneurial theory of the firm that is based on dispersed knowledge. We argue that the dispersion of knowledge over people and places and over time leads to uncertainty. This uncertainty, combined with heterogeneous expectations and the nexus of an individual and opportunity, explains the emergence of new firms. We then suggest that the theory of the firm proposed by us answers questions that have been overlooked by alternative theories. The specific question we discuss in this article is when and why an entrepreneurial opportunity will be taken to market through an existing firm, and when and why a new firm will be chosen as a vehicle for taking a new idea to market, i.e., whether the residual will be concentrated in an existing or in a new firm.

Title: Entrepreneurial Opportunities

Authors: S. Venkataraman
Date: 2004
Format: Research Paper Series

In this article, we propose an entrepreneurial theory of the firm that is based on dispersed knowledge. We argue that the dispersion of knowledge over people and places and over time leads to uncertainty. This uncertainty, combined with heterogeneous expectations and the nexus of an individual and opportunity, explains the emergence of new firms. We then suggest that the theory of the firm proposed by us answers questions that have been overlooked by alternative theories. The specific question we discuss in this article is when and why an entrepreneurial opportunity will be taken to market through an existing firm, and when and why a new firm will be chosen as a vehicle for taking a new idea to market, i.e., whether the residual will be concentrated in an existing or in a new firm.

Title: Regional Transformation Through Entrepreneurship

Source: *Journal of Business Venturing* (Vol. 19, Issue 1, Pages 153-167)
Authors: S. Venkataraman
Date: 2004
Format: Research Paper Series

What does it take for a region to foster technological entrepreneurship? Recently, there has been significant interest in this topic. Most writers on this topic emphasize the tangible infrastructure
such as sound legal systems, transparent capital markets, advanced telecommunications and transportation systems, etc. Sound legal systems, capital markets, and other structural features are necessary prerequisites for technopreneurship; however, what I am calling the intangibles of entrepreneurship are the sufficient conditions that allow, specifically, for Schumpeterian entrepreneurship to thrive in a locality. Often, governments attempt to promote technopreneurship by injecting risk capital. They distribute these funds through small business development centers, and several regions and countries have even attempted "public" venture capital funds. However, my hypothesis is that if only risk capital is injected, it flows straight to low-quality entrepreneurship. Focusing on only risk capital, the investing government assumes that the risk capital itself will create all other prerequisites for growth. This is a major supposition. If risk capital is expected to produce extraordinary wealth, it must be accompanied by seven other intangibles, including, access to novel ideas, role models, informal forums, region-specific opportunities, safety nets, access to large markets, and executive leadership.

**Title: Economic Implications of Exaptation**

Source: *Journal of Evolutionary Economics* (Vol. 14, Issue 1, Pages 69-85)
Authors: N. Dew, S. Sarasvathy and S. Venkataraman
Date: 2004
Format: Research Paper Series

Accounts of economic change recognize that markets create selective pressures for the adaptation of technologies in the direction of customer needs and production efficiencies. However, non-adaptational bases for technological change are rarely highlighted, despite their pervasiveness in the history of technical and economic change. In this paper the concept of exaptation — a feature co-opted for its present role from some other origin — is proposed as a characteristic element of technological change, and an important mechanism by which new markets for products and services are created by entrepreneurs. Exaptation is shown to be a missing but central concept linking the evolution of technology with the entrepreneurial creation of new markets and the concept of Knightian uncertainty.

**Title: Managing Variety for Assembled Products: Modeling Component Systems Sharing**

Source: *Manufacturing and Service Operations Management* (Vol. 5, No. 2, Pages 142-156)
Authors: K. Ramdas, M. Fisher and K. Ulrich
Date: 2003
Format: Research Paper Series

Component sharing — using the same version of a component across multiple products — is an approach adopted by many assembled product manufacturers to achieve high final product variety with lower component variety and cost. This paper presents a methodology for determining which versions of a set of related components should be offered to optimally support a defined finished product portfolio. We develop optimization models that determine which versions of each component should be introduced and which of these versions each product
should use so as to minimize design and production costs. This approach is appropriate for components with a relatively low impact on consumers' perceptions about product differentiation, which can be shared across a set of products if they meet the most stringent performance requirements in the set. We illustrate our procedure on automotive braking systems, but also discuss it applicability to other components and industries. Finally, we consider organizational issues and identify three conceptually different approaches to component sharing: a coordinated projects approach that requires higher-level organizational echelons above the individual project, a project-by-project approach that does not, and a hybrid partially coordinated approach. We use our model to show that the gain from the coordinated projects approach relative to the project-by-project approach is increasing in the number of component versions in consideration and warrantee and complexity costs, but does not vary systematically with product demand variability. Further, we use our model to highlight the risk of using simplistic heuristics to determine design sequence within a component system in a partially coordinated approach. We find that this approach is not always superior to the project-by-project approach, despite requiring greater coordination.

**Title:** Managing Product Variety: An Integrative Review and Research Directions

Source: *Production and Operations Management* (Vol. 12, No. 1, Pages 79-101)  
Authors: **K. Ramdas**  
Date: 2003  
Format: Research Paper Series

Variety management has emerged as a crucial dimension of successful business practice. In this paper, I first provide a framework for managerial decisions about variety. Variety-creation decisions determine the amount, type, and timing of end-product variety, while variety-implementation decisions focus on the design and operation of internal processes and a supply chain to support a firm's variety-creation strategy. I organize variety-related decisions into four key decision themes in variety creation: 1) dimensions of variety, 2) product architecture, 3) degree of customization, and 4) timing; and three key decision themes in variety implementation: 1) process capabilities, 2) points of variegation, and 3) day-to-day decisions. I describe each theme and review the relevant literature on each theme, with a focus on research that provides insight to problems faced in practice. Finally, I identify untapped avenues for future research that would be of value to the practicing manager, paying special attention to interdependencies among decision themes.

**Title:** Components Sharing in the Management of Product Variety: A Study of Automotive Braking Systems

Source: *Management Science* (Vol. 45, No. 5)  
Authors: **K. Ramdas**, M. Fisher and K. Ulrich
Product variety in many industries has increased steadily throughout this century. Component sharing — using the same version of a component across multiple products — is increasingly viewed by companies as a way to offer high variety in the marketplace while retaining low variety in their operations. Yet, despite the popularity of component sharing in industry, little is known about how to design an effective component-sharing strategy or about the factors that influence the success of such a strategy. In this paper we critically examine component sharing using automotive front brakes as an example. We consider three basic questions: (1) What are the key drivers and tradeoffs of component-sharing decisions? (2) How much variation exists in actual component-sharing practice? and (3) How can this variation be explained? To answer these questions, we develop an analytic model of component sharing and show through empirical testing that this model explains much of the variation in sharing practice for automotive braking systems. We find that the optimal number of brake rotors is a function of the range of vehicle weights, sales volume, fixed component design and tooling costs, variable costs, and the variation in production volume across the models of the product line. We conclude with a discussion of the general managerial implications of our findings.

Title: *Entrepreneurship as a Science of the Artificial*

Authors: S. Sarasvathy
Date: 2003
Format: Research Paper Series

This essay connects four key ideas from Herbert Simon's "Sciences of the Artificial" to recent research on entrepreneurial expertise: (1) natural laws constrain but do not dictate our designs; (2) we should seize every opportunity to avoid the use of prediction in design; (3) locality and contingency govern the sciences of the artificial; and, (4) near-decomposability is an essential feature of enduring designs. The essay is based on a series of conversations and emails with Simon about the empirical findings of my doctoral dissertation that involved a protocol analysis study of expert founder-entrepreneurs.

Title: *Doctoral Education in the Field of Entrepreneurship*

Source: *Journal of Management* (Vol. 29, Issue 3, Pages 309-331)
Authors: S. Venkataraman and C. Brush
Date: 2003
Format: Research Paper Series
Current perceptions and practices in doctoral education in the field of entrepreneurship are explored. The paper developed from efforts of a Task Force formed by the Entrepreneurship Division of the Academy of Management in response to several important observations: growing demand for faculty in entrepreneurship, growing membership in the division, more participants in doctoral and junior faculty consortia, increasing attention to entrepreneurship education at all academic levels, and the implementation of more doctoral seminars and programs in the field. Using a process outlined in Summer et al. [J. Manage. 16 (1990) 361], the Task Force addressed the following questions: (1) What is the current state of doctoral education in entrepreneurship? (2) How should doctoral education in Entrepreneurship be designed? Recommendations are presented.

Title: *Three Views of Entrepreneurial Opportunity*

Authors S. Venkataraman, S. Sarasvathy, N. Dew and R. Velamuri
Date: 2003
Format: Research Paper Series

For almost 50 years now, following the trail of issues raised by economists such as Hayek, Schumpeter, Kirzner and Arrow, researchers have studied the economics of technological change and the problem of allocation of resources for invention (invention being the production of information). The bulk of this literature simply assumes that new technical information will either be traded as a commodity or become embodied in products and services (hereafter called 'economic goods'), without addressing any specific mechanisms or processes for the transformation of new information into new economic goods or new economic entities (such as new firms and new markets). It is inside this gap that we begin our quest for the concept of an "entrepreneurial opportunity."

Title: *Stakeholder Value Equilibration and the Entrepreneurial Process*

Source: Special Issue of the *Society for Business Ethics*. The Ruffin Series No. 3
Authors: S. Venkataraman
Date: 2002
Format: Research Paper Series

In this lecture I wish to explore the possibility of a useful dialogue between the fields of entrepreneurship and business ethics for mutual benefit. Although these two fields have much to offer each other, they have developed largely independent of each other. I wish to argue that
entrepreneurship has a role to play in stakeholder theory and, relatedly, that stakeholder theory enriches our understanding of the entrepreneurial process.

**Title: Invisible Men and Women: Inner City Entrepreneurs and the Strategies They Employ to Survive and Grow**

Source: 2001 Business School Inner-City Leadership Conference Best Paper Award
Authors: G. Fairchild
Date: 2001
Format: Research Paper Series

Variety management has emerged as a crucial dimension of successful business practice. In this paper, I first provide a framework for managerial decisions about variety. Variety-creation decisions determine the amount, type, and timing of end-product variety, while variety-implementation decisions focus on the design and operation of internal processes and a supply chain to support a firm's variety-creation strategy. I organize variety-related decisions into four key decision themes in variety creation: 1) dimensions of variety, 2) product architecture, 3) degree of customization, and 4) timing; and three key decision themes in variety implementation: 1) process capabilities, 2) points of variegation, and 3) day-to-day decisions. I describe each theme and review the relevant literature on each theme, with a focus on research that provides insight to problems faced in practice. Finally, I identify untapped avenues for future research that would be of value to the practicing manager, paying special attention to interdependencies among decision themes.

**Title: Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency**

Authors: S. Sarasvathy
Date: 2001
Format: Research Paper Series
In economics and management theories, scholars have traditionally assumed the existence of artifacts such as firms/organizations and markets. I argue that an explanation for the creation of such artifacts requires the notion of effectuation. Causation rests on a logic of prediction, effectuation on the logic of control. I illustrate effectuation through business examples and realistic thought experiments, examine its connections with existing theories and empirical evidence, and offer a list of testable propositions for future empirical work.

Title: Strategy and Entrepreneurship: Outlines of an Untold Story

Source: In Handbook of Strategic Management, Michael Hitt, R. Edward Freeman, and Jeffrey Harrison, (Editors), MA: Blackwell Publishers. (Pages 650-668)
Authors: S. Venkataraman and S. Sarasvathy
Date: 2001
Format: Research Paper Series

In his book "Invention," Professor Norbert Wiener (1993), commenting on the relative importance accorded to individuals and institutions in historical narratives of science and inventions, asks us to imagine Shakespeare's "Romeo and Juliet" without either Romeo or the balcony. The story is just not the same. He likens much of the study of the economic history of science and accounts of inventions as "all balcony and no Romeo." The balcony for Norbert Wiener captures the context in which the story unfolds — the culture, the institutions, the constraints and the catalysts that move the plot forward and thicken it. Romeos, for Wiener, play the leading parts in the story, because there is a strong fortuitous element to inventions and there is no inevitability that a possible discovery will be made at a given time and space. Take away either one, Romeo or the balcony, and the whole story falls apart. In a similar vein, we would liken studies of strategic management to "all balcony and no Romeo." But if we accuse strategic management of being "all balcony and no Romeo," strategic management scholars could legitimately accuse entrepreneurship of being "all Romeo and no balcony."

Title: Report on the Seminar on Research Perspectives in Entrepreneurship

Source: Journal of Business Venturing (Vol. 15, Issue 1, Pages 1-58) (Participating authors: Kenneth Arrow, Morton Kamien, Mancur Olson, Donald Sexton, Herbert Simon, and S. Venkataraman)
Authors: S. Sarasvathy
Date: 2000
Format: Research Paper Series

November 14, 1997, Graduate School of Industrial Administration, Carnegie Mellon University, Pittsburgh, Pennsylvania Herbert Simon, the chairman of the panel, opened the proceedings by laying out the ground rules and objectives. He explained that the seminar was meant to be primarily a conversation among the participants with some inputs from the audience — a conversation, not to settle on a theory of entrepreneurship, but to determine some important
research questions in trying to understand entrepreneurship, which he defined as the origins of new economic activity.

**Title: The Promise of Entrepreneurship as a Field of Research**

Authors: S. Venkataraman and S. Shane
Date: 2000
Format: Research Paper Series

To date, the phenomenon of entrepreneurship has lacked a conceptual framework. In this note we draw upon previous research conducted in the different social science disciplines and applied fields of business to create a conceptual framework for the field. With this framework we explain a set of empirical phenomena and predict a set of outcomes not explained or predicted by conceptual frameworks already in existence in other fields.

**Title: Network effects and technology adoption in US telecommunications**

Authors: Venkataraman, S. and S. Majumdar
Date: 1998
Format: Research Paper Series

This paper examines variations in the adoption of new technology by firms operating in a network-based industry: telecommunications. These variations are explained as a function of three network effects: the first is the conversion effect, driven by operations-related increasing returns to scale; the second is the consumption effect, driven by demand-side increasing returns to scale; the third is an imitative effect. We expect the conversion effect to be felt more strongly during earlier phases of a technology's evolution, while a strong consumption effect is felt throughout. The imitative effect is also expected to be felt throughout. These hypotheses are examined with respect to electronic switching adoption in the local operating sector of the U.S. telecommunications industry. An analysis of the variations in adoption levels of the 40 largest firms over a period lasting from 1973 to 1987 supports our expectations, except for the imitative effect.

**Title: Hostile environmental jolts, transaction set and new business development**

Authors: Venkataraman, S. and A. H. Van de Ven
Date: 1998
Format: Research Paper Series
In this exploratory study, we examine empirically the effects of environmental jolts on the evolution of the set of relationships that entrepreneurs have with their customers and suppliers (which we call the transaction set). We believe that understanding how turbulence in the environment affects the ability of entrepreneurs to hold on to their existing relationships or to add new relationships is fundamental to understanding the evolution and growth of an organization from a start-up to a stable, wealth-creating enterprise in the long-run.

Using longitudinal data spanning 7 to 10 years from five start-up firms, we investigate three questions on the connection between environmental jolts and changes in the transaction set of the firm. First, do environmental jolts during the early life of the firm induce significant reductions in the set of relationships of a new, small firm? Second, are entrepreneurs able to add new relationships in greater numbers than the exit of old relationships following a jolt? And, third, do start-ups enjoy a "honeymoon" period when environmental jolts do not induce significant reductions in the set of relationships after a jolt?

Our study yielded several findings that may be of interest to entrepreneurs, academics, and incubator managers. First, environmental jolts have a significant impact on the exits of relationships from the transaction set of a new, small firm, but not necessarily on the entry of new relationships into the set. Thus, although liabilities of newness and small size seem to affect the ability of entrepreneurs to hold on to their existing relationships during environmental jolts, these jolts do not seem to affect the entrepreneur's ability to add ties, at least in the very early life of the firm. Second, the level of reduction after environmental jolts seems to be less severe during the early life and greatest during the adolescent period. Further, entries of new relationships decrease with each succeeding jolt.

**Title: The distinctive domain of entrepreneurship research**

Authors: Venkataraman, S.
Date: 1997
Format: Research Paper Series

**Title: Anticipating Reactions: Factors That Shape Competitor Responses**

Authors: Venkataraman, S., Ming-Jer Chen, and Ian C. MacMillan
Date: 1997
Format: Research Paper Series
Title: *Choice of Organizational Mode in New Business Development: Theory and Propositions*

Authors: Venkataraman, S. and Ian C. MacMillan
Date: 1997
Format: Research Paper Series

Title: *Innovation, Competitive Advantage and Rent: A Model and Test*

Authors: McGrath, R., Venkataraman, S., M. Tsai, and I. C. MacMillan
Date: 1996
Format: Research Paper Series

Four antecedents, it is argued, are necessary precursors for a firm to capture rents from innovation. The antecedents are causal understanding; innovation team proficiency; emergence and mobilization of new competences; and creation of competitive advantages, each of which are conceptually distinct and precisely defined in the paper. These constructs are linked together in a stage model and subsequently operationalized and tested using LISREL. Substantial support is found for the central thesis, that achieving each of the four antecedent processes increases the predicted rents from an innovation project.

Title: *Extraordinary feats of entrepreneurial enterprise: Strategies of sustained rapid growth*

Authors: Venkataraman, S. and T. Kraemer
Date: 1996
Format: Research Paper Series

Four antecedents, it is argued, are necessary precursors for a firm to capture rents from innovation. The antecedents are causal understanding; innovation team proficiency; emergence and mobilization of new competences; and creation of competitive advantages, each of which are conceptually distinct and precisely defined in the paper. These constructs are linked together in a stage model and subsequently operationalized and tested using LISREL. Substantial support is found for the central thesis, that achieving each of the four antecedent processes increases the predicted rents from an innovation project.
**Title: Cultural differences in innovation championing strategies**

Source: Journal of Management, Vol. 21 (5).
Authors: Venkataraman, S., S. Shane, and I. C. MacMillan
Date: 1995
Format: Research Paper Series

This study examines the relationship between national culture and national preferences for innovation championing strategies for a sample of 1,228 individuals in 30 countries. The study finds that the more uncertainty avoiding a society is the more people prefer champions to work through organizational norms, rules and procedures to promote innovation. The more power distant a society is the more people prefer champions to focus on gaining the support of those in authority before other actions are taken on an innovation rather than on building a broad base of support among organization members for new ideas. The more collectivist a society is the more people prefer champions to seek cross-functional support for the innovation effort.

**Title: Developing an entrepreneurship game for teaching and research**

Source: Simulation and Gaming, Vol., 25 (3), 386-404
Authors: Venkataraman, S., M. Low, and V. Srivatsan
Date: 1994
Format: Research Paper Series

An entrepreneurship game that is based on solid theory has significant potential to inform entrepreneurship research and enhance classroom experiences. However, developing a game that succeeds at both teaching and research is a difficult task. This article describes one such attempt, which has achieved initial indications of success on both counts. The article describes the game and its theoretical underpinnings. It discusses the value of the game for teaching and provides an example of its research potential. Lessons learned while developing the game are discussed.

**Title: The effects of liabilities of age and size on autonomous sub-units of established firms in the steel distribution industry**

Source: Journal of Business Venturing, Vol. 9 (3): 189-204
Authors: Venkataraman, S. and M. Low
Date: 1994
Format: Research Paper Series

**Title: The effects of cultural differences in new technology championing behavior within firms**

Authors: Venkataraman, S., S. Shane, and I. C. MacMillan
Date: 1994  
Format: Research Paper Series

**Title:** The advantage chain: Antecedents to rents from internal corporate ventures  

Source: Journal of Business Venturing, Vol. 9 (5), 350-369  
Authors: Venkataraman, S., R. McGrath, and I.C. MacMillan  
Date: 1994  
Format: Research Paper Series

**Title:** New technology adoption in US telecommunications: The role of competitive pressures and firm-level inducements  

Source: Research Policy, Vol. 22, 521-536  
Authors: Venkataraman, S. and S. Majumdar  
Date: 1993  
Format: Research Paper Series

**Title:** The design of information technology planning systems for varying organizational contexts  

Authors: Venkataraman, S., V. Sambamurthy, and G. DeSanctis  
Date: 1993  
Format: Research Paper Series

The conduct of IT planning processes has been a dominant managerial concern in organizations. Yet, current IT planning research offers little guidance on the types of planning actions and behaviour that are appropriate to organizational contexts. The motivation of this paper is to extend the existing literature by addressing the following major question: How should organizations design IT planning systems to manage the conduct of their IT planning processes? The paper seeks to address this question by (i) identifying key organizational forces that affect the IT planning processes, (ii) articulating some of the key dimensions of IT planning systems and (iii) elaborating upon propositions for linking designs of IT planning systems with organizational context. The concepts and the propositions are expected to provide significant guidance for further research and practice.

**Title:** Renegade and rational innovation championing strategies in global corporations  

Source: Academy of Management, Best Paper Proceedings, August, 85-89  
Authors: Venkataraman, S. and S. Shane  
Date: 1993  
Format: Research Paper Series
This study examines how national cultural values influence the preferences of managers in 28 countries for resolving the tension of whether to promote innovation inside (rational championing) or outside (renegade championing) organizational norms, rules and procedures. The study finds that managers in individualistic, high power-distant and uncertainty accepting societies prefer renegade strategies, while managers in collectivist, low power-distant and uncertainty avoiding societies prefer rational championing.

**Title: Some central tensions in the management of corporate venturing**

Source: In S. Birley and I. MacMillan (eds.), Proceedings of the second global conference on entrepreneurship, 177-199  
Authors: Venkataraman, S., S. Shane, R. McGrath, and I. C. MacMillan  
Date: 1993  
Format: Research Paper Series

**Title: The outcomes of corporate venturing and corporate renewal: An assessment framework**

Source: PDMA Proceedings, 13-21  
Authors: Venkataraman, S., R. McGrath, and I. C. MacMillan  
Date: 1993  
Format: Research Paper Series

**Title: Championing behavior: A study of large Japanese organizations**

Source: Frontiers of Entrepreneurship Research, 427-436  
Authors: Venkataraman, S., T. Ohe, S. Sano, S. Honjo, S. Shane, and I. C. MacMillan  
Date: 1993  
Format: Research Paper Series

**Title: Progress in research on corporate venturing**

Authors: Venkataraman, S., I. C. MacMillan, and R. McGrath  
Date: 1992  
Format: Research Paper Series
This paper proposes a process model on how new and small organizations may fail. Based on prior research, the paper builds a foundation for a process model, and then elaborates it inductively by explaining how and why significant reversals and shifts occurred between 1983 and 1985 in the entrepreneurial, organizational, and ecological conditions of ten new educational software companies. The process model states that all organizations engage in transactions with others in the normal conduct of business, and it is inevitable that a certain proportion of these transactions fail. The probability of transaction failures is a product of the failure rate at the level of the organizational population, as well as the kinds of transactions in which individual firms engage. New and small firms in a turbulent environment represent a subset of the organizational population particularly vulnerable to the chance occurrence of a failed transaction.

Because of liabilities of newness and small size, these firms lack legitimacy. Furthermore, in many industries there is an absence of tangible physical assets that entrepreneurs can use as collateral to attract valuable resources and customers. In such situations, entrepreneurs often use transactions with key external constituencies as a surrogate to attract other resource constituents, thus giving rise to a leveraged set of transactions. This leveraging strategy, however, makes the set of transactions of the firm tightly coupled. And when any one transaction in a tightly coupled set fails, the set often collapses. Hence, a small business firm in this situation fails when a transaction in which it is highly dependent or leveraged happens to fail. The very strategies that contributed to overcoming the problems of liabilities of newness and small size turn out to be the
root causes of failure. The experiences of the courseware companies are generalized to a process model of failure of new small businesses in turbulent environments.

**Title:** *Process of new business creations in different organizational settings*

Authors: Venkataraman, S., A. H. Van de Ven, D. Polley, and R. Garud
Date: 1989
Format: Research Paper Series

**Title:** *United States Patent and Trademark Office: Closing the Gap on Pendency in Class 705 Business Methods (OM-1358)*

Type: Technical Note
Authors: Chao, Raul
Format: Cases and Multimedia