Eleventh Annual
SMITH ENTREPRENEURSHIP RESEARCH CONFERENCE
Thu-Sat, May 7-9, 2015

Conference Co-Chairs:
Anil Gupta (agupta@rhsmith.umd.edu; cell: 301.537.6738)
David Kirsch (dkirsch@rhsmith.umd.edu; cell: 301.760.4185)

Advisory Board:
Howard Aldrich, U-North Carolina
Kathleen Eisenhardt, Stanford
Will Mitchell, Toronto
Toby Stuart, UC-Berkeley

Conference Location:
Room 1212, Tyser Auditorium, Van Munching Hall
Smith Business School
The University of Maryland
College Park, MD 20742

Guest Lodging:
Marriott Inn & Conference Center
3501 University Drive E
Hyattsville, MD 20783
(301) 985-7385

Supported by:
Department of Management & Organization, University of Maryland
Ewing Marion Kauffman Foundation
Dingman Center for Entrepreneurship, Robert H. Smith School of Business

KAUFFMAN
The Foundation of Entrepreneurship
11th Annual Smith Entrepreneurship Research Conference
Conference Program

Kauffmann Doctoral Consortium

Thu, May 7, 2015 – Room 2511, Van Munching Hall

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<td>12:00-1:00pm</td>
<td>Registration &amp; Lunch</td>
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<td>1:00-2:00pm</td>
<td><strong>THOUGHT LEADERSHIP TALK</strong></td>
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<tr>
<td></td>
<td>• Jon Eckhardt (Wisconsin): Fostering Entrepreneurship Research about</td>
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<td></td>
<td>Entrepreneurship: The Case for Translational Research in Business</td>
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<td>2:00-3:00pm</td>
<td><strong>ROUND TABLE DISCUSSIONS – PHD STUDENTS’ RESEARCH</strong></td>
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<td>• 4 Roundtables (4-5 students + 1-2 faculty per table)</td>
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<td>3:00-3:30pm</td>
<td>Break</td>
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<tr>
<td>3:30-4:30pm</td>
<td><strong>ROUND TABLE DISCUSSIONS – PHD STUDENTS’ RESEARCH</strong></td>
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<td>4 Roundtables (4-5 students + 1-2 faculty per table)</td>
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<td>4:30-5:30pm</td>
<td><strong>PANEL - COMPLETING THE DISSERTATION AND MANAGING THE JOB SEARCH PROCESS</strong></td>
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<td></td>
<td>• Bryan Stroube (Maryland; joining LBS)</td>
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<td>• Mahka Moeen (Maryland PhD; now at UNC/Kenan-Flagler)</td>
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<tr>
<td>5:45pm onwards</td>
<td><strong>COCKTAILS AND DINNER</strong></td>
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Research Conference

Fri, May 8, 2015 – Room 1212, Tyser Auditorium, Van Munching Hall

<table>
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<th>Time</th>
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<tr>
<td>8.00-8.30am</td>
<td>Registration &amp; Continental Breakfast</td>
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<tr>
<td>8:30-10:00am</td>
<td><strong>SESSION 1: ENTREPRENEURSHIP IN VIRTUAL ENVIRONMENTS</strong></td>
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<td></td>
<td>• Jason Greenberg (Stern/NYU): Leaning In or Leaning On? Gender,</td>
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<td>Homophily, and Activism in Crowdfunding – with Ethan Mollick (Wharton)</td>
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<td>• Comments (10 min): Waverly Ding (Maryland/Smith)</td>
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<td>• Magnus Torfason (Univ. of Iceland): Price is What You Pay: The origins of value for Bitcoin, a decentralized electronic currency – with Mikolaj Jan Piskorski (IMD) and Frank Nagle (HBS)</td>
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<td>• Comments (10 min): Rajshree Agarwal (Maryland/Smith)</td>
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<td>• Open Discussion (30 min)</td>
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<td>10:00-10:30am</td>
<td>Break</td>
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<tr>
<td>10:30am-12:00pm</td>
<td><strong>SESSION 2: THE EMERGENCE OF IDENTITIES</strong></td>
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<td>• Shon Hiatt (Marshall/USC): The Impact of Social Movement Activism on</td>
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<td>Nascent Collective Identities: Evidence from U.S. Wood Pellet Producers</td>
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<td>• Comments (10 min): David Kirsch (Maryland/Smith)</td>
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<td></td>
<td>• Natalya Vinokurova (Wharton/Penn): Negotiating Market Boundaries: Fitting New Products into Existing Categories</td>
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<td>• Comments (10 min): Wesley Sine (Cornell/Johnson)</td>
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<td>• Open Discussion (30 min)</td>
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<tr>
<td>12:00-1:30pm</td>
<td>Lunch – 3rd Floor Atrium, Van Munching Hall</td>
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<td>1:30-3:00pm</td>
<td><strong>SESSION 3: SEARCH FOR BUSINESS MODELS</strong></td>
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<td>• Rory McDonald (HBS): Competing in New Markets and the Search for a Viable Business Model – with Kathleen Eisenhardt (Stanford)</td>
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• Comments (10 min): Anne Marie Knott (Washington/Olin)
• Joel Gelman (Alberta): Category Promotion: How B Corporations Respond to the Competing Demands of Standing Out and Fitting In – with Matthew Grimes (Alberta)
• Comments (10 min): Christine Beckman (Maryland/Smith)
Open Discussion (30 min)

3:00-3.30pm Break

3:30-5:00pm SESSION 4: PANEL DISCUSSION – “HOW TO PROTECT THE CROWD IN CROWDFUNDING”
• Wayne Kimmel, Founder & Managing Director, Seventy-Six Capital
• David Lynn, Partner, Morrison & Foster (& Former Chief Counsel, Division of Corp Finance, US SEC)
• Ramana Nanda, Harvard Business School
• Brent Goldfarb, Univ of Maryland - Moderator

6:00pm Marriott Inn & Conference Center
9:00pm Dinner – Private Room
Keynote: Kathy Eisenhardt, Stanford

Sat, May 9, 2015 - Room 1335, Van Munching Hall
8.00-8.30am Continental Breakfast

8:30-10:00am SESSION 5: KNOWLEDGE DISTANCE AND COMPLEMENTARITIES
• Michaël Bikard (LBS): The Division of Innovative Labor between Academia and Industry and Pasteur’s Quadrant
• Comments (10 min): Emily Cox Pahnke (UW/Foster)
• Shweta Gaonkar (Carey/Johns Hopkins): Casting Shadows: Effect of Parent-Spinout Knowledge Distance on New Venture Alliances
• Comments (10 min): Tim Pollock (Penn State)
• Open Discussion (30 min)

10:00-10:30am Break

10:30am-12:00pm SESSION 6: IMPACT OF ECOSYSTEMS ON INNOVATION
• Kevin A. Bryan (Rotman/Toronto): The Impact of Open Access Mandates on Invention - with Yasin Ozcan (Kellogg/ Northwestern)
• Comments (10 min): David Waguespack (Maryland/Smith)
• Raj Choudhury (HBS): Ex Ante Information Provision and Innovation: Natural Experiment of Herbal Patent Prior Art Adoption at the USPTO and EPO – with Tarun Khanna (HBS)
• Comments (10 min): Anil Gupta (Maryland/Smith)
• Open Discussion (30 min)

12:00-1:00pm Lunch & Close
2015 - Smith Entrepreneurship Research Conference
Faculty Paper Abstracts (Alphabetically by First Author’s Last Name)

The Division of Innovative Labor between Academia and Industry and Pasteur’s Quadrant
Michaël Bikard (LBS)

A large literature has explained why it is efficient for universities to focus on basic science and firms to focus on applied science. Yet, in some fields, firms and universities get frequently involved in the same types of research. To understand this disconnect, this paper examines the type of work that firms and universities both undertake. Empirically, it focuses on the research of ninety teams that were involved in simultaneous discoveries straddling the academia-industry boundary. The results indicate that this phenomenon is driven in part by lines of research that belong to Pasteur’s Quadrant—i.e., that are important from both scientific and technological standpoints. The prevalence of such research lines provides a key mechanism explaining university engagement in applied research and firms’ involvement in basic science. The division of innovative labor for this type of work is furthered explored.

The Impact of Open Access Mandates on Invention
Kevin A. Bryan (Rotman/Toronto) and Yasin Ozcan (Kellogg/Northwestern)

In a novel dataset matching the universe of U.S. patent applications and the universe of medical research articles in 44 top journals since 2005, we show that open access increases the probability an article is cited by a patent application by 23 to 35 percent even though there is close to zero impact on citations within academia. We identify this effect using the 2008 NIH open access mandate, both in a cross-section difference-in-difference and in a panel data that takes advantage of quasi-random timing of the policy implementation across articles. A theoretical model shows that even when individual articles are relatively inexpensive, the welfare implications of gated access can be large. Through the lens of that model, we investigate welfare impacts via subgroup analysis of our patent sample and a qualitative survey of inventors.

Ex Ante Information Provision and Innovation: Natural Experiment of Herbal Patent Prior Art Adoption at the USPTO and EPO
Raj Choudhury (HBS) & Tarun Khanna (HBS)

We study how ex-ante information provision, in the form of codified prior art, affects innovation outcomes. Using a unique dataset of herbal patents filed on the United States Patent Office (USPTO) and European Patent Office (EPO) from 1977 to 2013, we exploit a natural experiment where the USPTO and EPO adopted a codified database of traditional herbal medicine prior art at different points in time. This database (the ‘Traditional Knowledge Depository Library’ or TKDL) was created by Indian state-owned R&D labs and provided the USPTO and EPO patent examiners with codified, searchable prior art on herbal formulations based on a translation of ancient Indian medicinal texts. We establish that the time lag of the USPTO adopting TKDL compared to the EPO was related to idiosyncratic differences in how the agreements were structured and negotiated, not differences in policy toward herbal patents at the USPTO and EPO. We find that the adoption of TKDL affects the level of herbal patent filing and grants. It also shifts the composition of patenting away from pure herbal formulations that are similar to prior art available in the ancient texts towards applications involving both herbs and synthetic compounds, which are more distant from the prior art and arguably less contestable. We also use unique data coded from patent image wrappers at the USPTO and provide ‘smoking gun evidence’ that prior art codification affects the search strategies of patent examiners.

Competing in New Markets and the Search for a Viable Business Model
Kathleen Eisenhardt (Stanford) & Rory McDonald (HBS)
Prior research examines how firms compete effectively in established markets. This study investigates new markets, and traces how entrepreneurial rivals in such a market search for a successful strategy. Through an in-depth, multiple-case study of firms in the nascent online-investing market, we induce a theoretical framework to explain how firms win the race to find a viable business model. As the new market emerged, high-performing firms enacted three strategies in sequence that helped them achieve their objective quickly and efficiently. First, their executives focused primarily on substitutes but copied from rivals. Next, they actively tested their assumptions and made major resource commitments to the business model they identified as the most lucrative. Finally, they deliberately maintained a loosely structured organizational activity system in order to continue to accommodate emergent sources of value. For these firms, competition resembled neither economic rivalry nor collective action but a logic of interaction akin to parallel play. The resultant middle-range theory has implications for research on entrepreneurial competition in new markets and on the organizational processes of developing a business model.

**Casting Shadows: Effect of Parent-Spinout Knowledge Distance on New Venture Alliances**  
*Shweta Gaonkar (Carey/Johns Hopkins)*

This paper examines how founders’ prior affiliations contribute to the formation of network ties for new ventures founded by employee entrepreneurs. Prior research on employee entrepreneurship attributes the success of new ventures founded by employees (called spinouts) to knowledge inheritance from founders’ previous employers (parents). However, studies on new venture alliances suggest that the success of new firms stems from establishing strategic alliances with other firms. I bridge the gap between these two literatures by examining how the knowledge accumulated by the spinout’s founder influences the new venture’s alliance partner choice, using a panel data of pharmaceutical and medical device firms from 1986 to 2012. The findings suggest that spinouts select alliance partners based on the knowledge they have relative to their parents. Spinouts avoid alliance ties to firms that are either direct or indirect partners of the parent if they are similar to their parent. Furthermore, these ties are more likely to be marketing, manufacturing, or funding relationships. Conversely, a spinout that is different from its parent is more likely to form commercialization ties with firms that have indirect ties to the parent. In sum, spinouts seek partners to fulfill its need for resources while reducing the risk of collaboration. The resource needs and the collaboration risk are shaped by the knowledge inducements within the spinout due to their founders prior affiliation resulting in the continued influence of the parent on the alliances forged by the spinout.

**Category Promotion: How B Corporations Respond to the Competing Demands of Standing Out and Fitting In**  
*Joel Gehman (Alberta) and Matthew Grimes (Alberta)*

This paper highlights a tension in our understanding of why organizations vary in the intensity with which they promote particular category affiliations. To unravel this tension, we propose the concept of category promotion, defined as the practices whereby an organization strategically signals its affiliation with a recognizable and shared symbol or device to potential audiences. We conceptualize organizations as members of multiple physical (e.g., geographic) and virtual (e.g., industrial) communities. We theorize how a focal organization’s category promotion intensity will be independently and interactively shaped by its relationships with members and nonmembers within these communities. To test our hypotheses, we developed a proprietary web-based software toolset we named CULTR. Using this toolset, we constructed a novel sample of Certified B Corporations. With one exception, we found strong support for our theory: geographic and industrial communities, and members and nonmembers influence the intensity of category promotion. We exploit the one surprising finding so as to further unravel the dynamics of category promotion intensity. Our research contributes to ongoing scholarship on the contingent currency of
categories, configurational approaches to category meaning, verbal and visual rhetoric in the digital age, and the role of categories in sustainable organizing.

Leaning In or Leaning On? Gender, Homophily, and Activism in Crowdfunding
Jason Greenberg (Stern/NYU) & Ethan Mollick (Wharton)

Female founders seek and receive less startup capital than male entrepreneurs. One reason for this disparity is a lack of female representation among funders of startups, and a potential solution is to increase the proportion of women in decision-making roles. Both the problem and the solution implicitly rely on homophily – that women will support other women given a chance. However, a lack of clarity over when and how homophily influences individual choices makes it uncertain when better representation is actually advantageous. Using data from crowdfunding, we empirically examine whether higher proportions of female funders lead to higher success rates in capital-raising for women. We find that women outperform men, and are more likely to succeed at a crowdfunding campaign, all other things being equal. Surprisingly, this effect primarily holds for female founders proposing technological projects, a category that is largely dominated by male founders and funders. This finding stands in stark contrast to expectations concerning homophily. A laboratory experiment helps explain how this pattern might emerge and allows us to theorize about the types of choice homophily driving results. We find that a small proportion of female backers disproportionately support women-led projects in areas where women are historically underrepresented. This suggests an activist variant of choice homophily, and implies that mere representation of female funders without activism may not always be enough to overcome the barriers faced by female founders.

The Impact of Social Movement Activism on Nascent Collective Identities: Evidence from U.S. Wood Pellet Producers
Shon Hiatt (Marshall/USC)

While the positive impact of activists on market creation has received recent attention, little research has explored how activists seeking to suppress new markets can affect their emergence and development. We address this issue by examining how opposition activism influences the establishment of entrepreneurial firms’ collective identity, a critical process for new market creation. Building upon organization theory and social movement research, we argue that opposition activism serves as an external threat that differentially influences verbal and nonverbal dimensions of collective-identity claims. Using the emergent U.S. wood pellet market as an empirical context, our study shows that activism led to increased coherence of what new ventures claimed to be (identity narratives) but decreased the coherence of what they actually do (identity-focused business practices). We discuss the implications of our study for organization theory and social-movement research.

Price is What You Pay: The origins of value for Bitcoin, a decentralized electronic currency
Magnus Torfason (Univ. of Iceland), Mikolaj Jan Piskorski (IMD) and Frank Nagle (HBS)

We examine the determinants of value for Bitcoin, a digital currency that is completely decentralized and not backed by any state or organization. Bitcoins have no intrinsic value or utility and their price is therefore set solely by supply and demand, based on their perceived usefulness as a currency unit and medium of exchange. Theoretical arguments about exchange networks suggest that they are subject to network effects (positive network externalities), because the value of participating in the network increases with the number of potential exchange partners. To examine this dynamic, we combine data on all transactions in the Bitcoin system (from its inception to September 2013) with data on Bitcoin market prices and activity in the online discussion forums. Because the Bitcoin network has an observable market value, we can estimate these effects at the system level, but the detailed transaction history that is available also allows us to observe the behavioral underpinnings of a network effect at the individual
level. We find support for classic network effects in the Bitcoin network, but we also find evidence that the value of Bitcoin derives in part from the actions of a cohesive and determined core of participants, who legitimize the idea of the currency as a valuable good through social interaction and discourse.

Negotiating Market Boundaries: Fitting New Products into Existing Categories

Natalya Vinokurova (Wharton/Penn)

This paper explores the process by which innovators negotiate membership in existing product categories for their innovations in a longitudinal historical case study of the entire lifecycle of creation, evolution, and diffusion of mortgage-backed securities (MBS) in the U.S. between 1960, when the need for the innovation first emerged, and 1987, when the MBS design accepted by the market participants was first issued. I find that innovators use a combination of rhetorical (labeling, education, and theorization), material (design), and political (recruiting category gatekeepers) strategies to claim membership in an existing product category. These claims are critically evaluated by the product category's audience, i.e. the potential buyers, with the rejection of claims triggering changes to the innovator's strategies and the innovation's design. The iterative process of membership claiming, the evaluation and rejection of the claims, and changes in innovator's strategies triggered by such rejections leads to changes in the category boundaries that permit the acceptance of the innovation.
Participants (PhD Institutions):

- Sofia Bapna (Minnesota/Carlson)
- Li-Wei Chen (Emory/Goizueta)
- Colleen Cunningham (Duke/Fuqua)
- David Clough (INSEAD)
- Erin Fahrenkopf (Carnegie Mellon)
- Anna Fung (UW/Foster)
- Ying Geng (Maryland/Smith)
- Youngbin Joo (Alberta)
- Leo Kluppel (WashU/StL)
- Celeste Liu (Penn State)
- Alex Murray (UW/Foster School)
- Abhishek Nagaraj (MIT/Sloan)
- Timothy Ott (Stanford/MS&E)
- Nevena Radoynovska (Northwestern/Kellogg)
- Joe Raffiee (Wisconsin)
- Matthew Regele (Yale)
- Sara Ryoo (Michigan/Ross)
- Sid Sharma (Maryland/Smith)
- Sruthi Thatchenkery (Stanford/MS&E)
- Yongzhi (Alex) Wang (USC/ Marshall)