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Track 6: Organizational Behavior
Track 7: Strategic Management
Track 8: Innovative Teaching/Management Education
Track 9: PDI/Symposia/Local Engagement Sessions

TUESDAY, OCTOBER 24

1. SMA Registration & Solutions Desk
   Tuesday, 5:00 to 8:00 PM
   Banyan Breezeway
   Session Coordinator:
   Don Kluemper, University of Illinois-Chicago

2. SMA Consortia and Pre-Conference Reception
   Tuesday, 7:00 to 8:00 PM
   Garden Courtyard
   Session Coordinator:
   Joy Karriker, East Carolina University
   Sponsor: Georgia Southern University

WEDNESDAY, OCTOBER 25

3. Consortia Registration
   Wednesday, 8:00 to 8:30 AM
   Banyan Breezeway
   Session Coordinator:
   Don Kluemper, University of Illinois-Chicago

4. All Consortia Continental Breakfast
   Wednesday, 8:00 to 8:30 AM
   Jacaranda Foyer
   Session Coordinator:
   Joy Karriker, East Carolina University

   By invitation only

5. SMA Pre-Doctoral Student Consortium
   Wednesday, 8:30 AM to 4:30 PM
   Palm & Sabal
   Session Coordinators:
   Frankie Weinberg, Loyola University-New Orleans and Kulraj Singh, Mississippi State University
   Panels:
   Jim Combs, University of Central Florida
   T. Russell Crook, University of Tennessee-Knoxville
   Karen Ford-Eickhoff, University of North Carolina-Charlotte
   William Gardner, Texas Tech University
   Mark Gavin, West Virginia University
   Joyce Heames, Berry College
   Karen Landay, University of Alabama-Tuscaloosa
   By invitation only

6. SMA Early Stage Doctoral Consortium
   Wednesday, 8:30 AM to 4:30 PM
   Banyan & Citrus
   Session Coordinators:
   Robyn Brouer, Canisius College and Melissa Carsten, Winthrop University
   Panels:
   Neal Ashkanasy, University of Queensland
   Andrew Bennett, Old Dominion University
   Brian Boyd, City University of Hong Kong
   William Gardner, Texas Tech University
   Mark Gavin, West Virginia University
   Jodi Goodman, West Virginia University
   Paul Harvey, University of New Hampshire
   Amy Henley, Kennesaw State University
   Micki Kacmar, Texas State University
   Jim Lemoine, SUNY - University at Buffalo
   Sean Lux
   Mark Martinko, Florida A&M University
   Tony Wheeler, West Chester University
   David Woehr, University of North Carolina-Charlotte
   By invitation only

   6. SMA Late Stage Doctoral Consortium
      Wednesday, 8:30 AM to 4:30 PM
      Glades & Jasmine
      Session Coordinators:
      Laura Little, University of Georgia and Matt Rutherford, Oklahoma State University
      Panels:
      Garry Adams, Auburn University
      LaKami Baker, Auburn University
      W. Matthew Bowler, Oklahoma State University
      Brian Boyd, City University of Hong Kong
      Jon Carr, North Carolina State University
      Jason Colquitt, University of Georgia
      Brian Connelly, Auburn University
      Bart Debrick, Towson University
      Lance Frazier, Creighton University
      Mark Gavin, West Virginia University
      Brad Harris, Texas Christian University
      Don Kluemper, University of Illinois-Chicago
      Marie Mitchell, University of Georgia
      Jeff Pollack, North Carolina State University

   By invitation only

SOUTHERN MANAGEMENT ASSOCIATION (SMA) 2017 MEETING • 19
Jennifer Sexton, West Virginia University  
H. Jack Walker, Auburn University

By invitation only

7. SMA Executive Board Meeting  
Wednesday, 9:00 to 11:00 AM  
Horizons West

Session Coordinator:  
Micki Kacmar, Texas State University

By invitation only

8. New Board Member Orientation  
Wednesday, 11:15 to 11:45 AM  
Horizons West

Session Coordinator:  
Kevin Lowe, University of Auckland & University of Sydney

By invitation only

9. SMA Doctoral Consortia and Board Member Luncheon  
Wednesday, 11:50 AM to 1:15 PM  
Pavilion

Session Coordinator:  
Joy Karriker, East Carolina University

By invitation only

11. SMA Registration & Solutions Desk  
Wednesday, 12:00 to 8:00 PM  
Banyan Breezeway

Session Coordinator:  
Don Kluemper, University of Illinois-Chicago

12. PDI: Special Topics in SEM: Parcels, Method Variance and Model Fit  
Wednesday, 1:00 to 5:00 PM  
Bird Key

Session Coordinators:  
Larry Williams and Andrew Hanna, University of Nebraska-Lincoln

This session is being offered as part of the alliance between SMA and CARMA (Consortium for the Advancement of Research Methods and Analysis). Conducted by Larry Williams and Andrew Hanna, this session is designed for both beginning and advanced Structural Equation Modeling (SEM) users.

Pre-Registration required

13. SMA Career Paths Symposium  
Wednesday, 1:30 to 4:30 PM  
Indian Key

Session Coordinators:  
Aaron Hill, Oklahoma State University and Patricia Lanier, University of Louisiana-Lafayette

Panelists:  
David Allen, Texas Christian University  
W. Matthew Bowler, Oklahoma State University  
Jon Carr, North Carolina State University  
Jim Combs, University of Central Florida  
Bryan Fuller, Louisiana Tech University  
Scott Graffin, University of Georgia  
Joyce Heames, Berry College

Terry Scandura, University of Miami

The Career Paths Symposium is a 3-hour long program designed to offer insights to post-tenure career options. The Symposium will be designed with various Round Tables allowing a scholar interested in a particular aspect of a career (such as whether to move into administration or to switch jobs or even focus of their job, say from research-focused to more balanced schools or vice versa) to attend the Round Tables most targeted to personal interests. A Question and Answer session with presenters who have navigated these issues will also be offered.

Pre-Registration required

Sponsor: University of Louisiana-Lafayette

14. SMA Outgoing Board Meeting  
Wednesday, 1:30 to 4:30 PM  
Horizons West

Session Coordinator:  
Micki Kacmar, Texas State University

By invitation only

15. SMA Exhibits  
Wednesday, 3:00 to 6:15 PM  
Banyan Breezeway

Session Coordinator:  
Joy Karriker, East Carolina University

16. SMA “Shell-a-bration”/Awards Ceremony  
Wednesday, 5:15 to 6:15 PM  
Long & Sawyer Keys/Tarpon

Join us for our annual SMA “Shell-a-bration”/Awards Ceremony!!! All of the SMA award recipients will receive their plaques and acknowledgements during this meeting. Come cheer for old friends and make new ones!!!

Session Coordinator:  
Garry Adams, Auburn University

17. SMA Welcome Reception  
Wednesday, 6:30 to 7:30 PM  
Breck Deck

Can’t get enough of SMA? Join us on the South Beach to have s’mores as we watch the sun set over the Gulf!!!

Session Coordinator:  
Joy Karriker, East Carolina University

Sponsor: Texas Christian University

THURSDAY, OCTOBER 26

18. Cafe SMA Coffee Bar  
Thursday, 8:00 to 8:30 AM  
Banyan Breezeway

Session Coordinator:  
Joy Karriker, East Carolina University

Enjoy a cup of coffee as you head to your morning session!!!
19. SMA Exhibits  
Thursday, 8:00 AM to 4:45 PM  
Banyan Breezeway

Session Coordinator:  
Joy Karriker, East Carolina University

20. SMA Registration & Solutions Desk  
Thursday, 8:00 AM to 5:30 PM  
Banyan Breezeway

Session Coordinator:  
Don Klumpp, University of Illinois-Chicago

21. PDI: Individual and Structural Factors in Coping with Occupational Stress  
Thursday, 8:30 to 10:00 AM  
Indian Key

Session Coordinator:  
Paul Spector, University of South Florida

Panelists:  
Paul Spector, University of South Florida  
Pamela Perrewé, Florida State University  
Maryana Arvan, University of South Florida  
Benjamin Baran, Cleveland State University  
Kevin Cruz, University of Richmond  
Vickie Gallagher, Cleveland State University  
Steve Jex, Bowling Green State University  
Stacey Kessler, Montclair State University  
Alexandra Krajcevska, University of South Florida  
James Meurs, University of Calgary  
Shani Pindek, University of Haifa  
Tracy Porter, Cleveland State University  
Ana Maria Rossi, Clinica De Stress E Biofeedback  
Pamela Smith, University of South Florida  
Sorin Valcea, Cleveland State University

It is well established that the experience of stressful working conditions can lead to adverse strain reactions in employees. What is important to understand are the factors, both in the environment and individual, which can help people cope with those conditions and thereby reduce negative consequences. This symposium includes five papers that each concern how various coping resources and tactics can ameliorate the negative effects of workplace stress. These papers deal with a variety of individual resources (adaptability, self-efficacy, political skill, resilience), environmental resources (embeddedness, job control) and structural resources (income) that can play an important role. These studies were all conducted in the field and use a variety of approaches with one being an archival study, one a field experiment, two employee surveys, and one taking a multimodal approach (interviews and surveys). Together they provide new insights into how people can best cope with workplace stressors.

22. PDI: A Brief Introduction to Multilevel Modeling  
Thursday, 8:30 to 10:00 AM  
Bird Key

Session Coordinator:  
Mark Gavin, West Virginia University

This workshop will begin with making a case, both theoretically and statistically, for the necessity of multilevel models. In doing so, the focus will be on the interplay between lower-level and higher-level variables in driving outcomes of interest in management and organizational research. Consideration will be given to various conceptual, methodological and analytical challenges faced when conducting multilevel research. There will not be an emphasis on any one particular software program but instead on the more general underlying analytical model.

23. PDI: JOM Editorial Team Coffee Talk  
Thursday, 8:30 to 10:00 AM  
Sabal

Session Coordinator:  
David Allen, Texas Christian University

Join David Allen, the new JOM Editor, and key members of his JOM Editorial Team for coffee and interactive conversation focused on three primary themes: Research Integrity: hear from the new JOM Research Task Force on some of the key issues facing authors, reviewers, and editors involving conducting, evaluating, and publishing credible research. Impact: hear insights from a media/press specialist for how to identify, emphasize, and distribute the press-worthy implications of your (hopefully, JOM!) research to reach a broader audience and have a different kind of impact. Editor Q&A: get answers to your own questions and hear the questions of others regarding navigating the editorial process at JOM.

Sponsor: Texas Christian University

24. Track 2: Health Care Services, Outcomes and Human Factors  
Thursday, 8:30 to 10:00 AM  
Glades

Session Facilitator:  
Kim Davey, Sanford University

*Best Paper in Track*  
Nurse Relationships during a Time of Transition: LMX and Turnover Intent  
Michelle Ruiz, University of Houston-Victoria  
Lori Peterson, Missouri State University

Prior to, and particularly since the passage of the Affordable Care Act in 2010 in the United States, healthcare organizations have been in a state of transition. As healthcare organizations seek to provide high quality care for patients while facing increasing costs and reimbursement pressures, health care professionals find themselves caught in the middle. This paper looks at a nurse’s intention to leave their organization through the lens of Leader Member Exchange (LMX). By using the nurse-physician team, LMX was used to predict intention to turnover. This relationship was strengthened when trust in the physician was applied as a mediator and job embeddedness as a moderator. The results found support for the hypothesized relationships, which can be used by managers and practitioners to deepen the understanding of what influences nurses to stay in their position in the face of potential turmoil.

Impact of Freestanding Emergency Department on Ambulatory Care Sensitive Condition Discharges  
Nitish Patidar, Quinnipiac University  
Shivani Gupta, Saint Louis University  
Robert Weech-Maldonado, University of Alabama-Birmingham

Freestanding emergency departments (FSED) are entities that are not located in the hospital campuses and have wait time substantially lower than hospital emergency departments. Ambulatory care sensitive conditions (ACSC) are a group of conditions for which hospitalization can be avoided if a patient receives proper outpatient care. Currently, in the US, there is a severe shortage of primary care providers and after-hour outpatient care. The emergency departments and FSEDs may provide timely care to decrease the hospitalization for ACSCs. In this study, we evaluated the association between presence of FSEDs in a county and Medicare ACSC discharges using Donabedian’s Structure- Process-Outcomes framework. We collected the data on all FSEDs in the US and used the secondary data sets such as Dartmouth...
Magnetic Work Environments: Patient Experiences & Outcomes
In Magnet® Vs. Non-Magnet Hospitals
Deirdre McCaughhey, University of Calgary
Gwen McGahan, University of Calgary
Cheryl Rathert, Virginia Commonwealth University
Jessica Hillman Williams, University of Alabama -Birmingham
Kristine Ria Heurd, University of Alabama-Birmingham

The term Magnet® Hospital is an official designation ascribed by the American Nurses Credentialing Center for hospitals that meet specific criteria indicating they have a “magnetic work environment” for nurses. The objective of the Magnet® designation is to encourage hospitals to design work in such a way as to attract and retain high quality nurses and thus improve the quality of patient care. Empirical research has demonstrated that hospitals who earn a Magnet® designation do indeed appear to have nurses who are more satisfied and committed. While research on whether patients are more satisfied with their care in these hospitals is still in its infancy, preliminary studies suggest that patients receiving care at Magnet® designated hospitals report more positive care experiences. The present study used a large secondary survey data set to explore the extent to which inpatient perceptions differed between Magnet® and non-magnet hospitals. Multinomial logistic regression analyses indicated that patients who had been treated at a Magnet® hospital and patients who rated nurses’ communication highly were significantly more satisfied, and more likely to say they would recommend the hospital.

25. Track 8: Best Practices in Management Education
Thursday, 8:30 to 10:00 AM
Citrus

Session Facilitator:
Shelley Davis, Troy University

EXPO Day: Utilizing Poster-Presentation Formats with Service-Learning Team Projects
Bryan Schaffer, Florida Gulf Coast University
Jennifer Manegold, Florida Gulf Coast University

This paper describes a team-based service learning project. Specifically, we highlight EXPO Day, where student teams showcase the result of their efforts in an interactive and educational poster-presentation forum. We describe the course project, discuss relevant supporting theory, and conclude with future pedagogical recommendations.

Understanding Resistance to Change: An Experiential Exercise
Virajanand Varma, Nichols State University

Implementing organizational change is a frequent activity that managers have to be involved in. Most management students, however, have limited exposure to issues concerning organizational change. And organizational change remains one of the challenging concepts for students in our leadership and organizational behavior classes. This exercise offers a first-hand experience of change at a personal level. The assignment involves students choosing to experience a personal change for three weeks, maintaining a log of daily experiences, and writing a summary of the takeaways from the experience. Most of the students typically fail to complete the task, which prepares the debriefing session for a lively follow-up discussion on successfully leading change, and gives the students an opportunity to understand various challenges related to change management such as resistance to change, motivation, communication, change appropriateness, employee involvement, and so on. This exercise can be used with a range of graduate courses in management curricula as well as in other leadership development programs.

An Exploratory Investigation of Authenticity in Student Teams
Michele Medina, Middle Tennessee State University
Kathryn Ostermeier, University of North Texas
Julie Hancock, University of North Texas
Danielle Cooper, University of North Texas
S. Michael Sexton, University of North Texas
Victor Chen, University of North Texas

In order to prepare students for their future careers, more instructors are adopting team projects. While students are gaining valuable, transferable skills through these teams, students may or may not be authentic in their relationships with their teammates. The purpose of this study is three-fold. First, we adopt a measure for relational authenticity (being genuine and not fake in relationships with peers). Second, we draw from goal setting theory to examine how relational authenticity influences perceptions of team cohesion among teammates and explore the moderating role of task interdependence on this relationship. Third, we seek to better understand how relational authenticity, along with cohesion and task interdependence, affects citizenship behaviors (helping and conscientiousness), as well as pro-social rule breaking behavior. Using a sample of 20 teams (85 individuals), we examined a moderated-mediation model, thus furthering our understanding of authenticity in a team context. Future research directions and implications are discussed.

26. Track 7: Advancing Corporate Social Responsibility Theory
Thursday, 8:30 to 10:00 AM
Long Key

Session Facilitator:
Jacob Waddingham, Auburn University

Toward a Mid-Range Theory of CSR: A Process Model
Elise Perrault, College of Charleston
Kelly G. Shaver, College of Charleston

Although there is an extensive body of research that empirically examines the relationship between corporate social performance (CSP) and firm financial performance (FP), there has been much less theory regarding the relationship between these important constructs. In this paper, we adopt a sociocognitive perspective and argue that the strategic fit between evaluators’ attributions for CSP and the firm’s reputation largely explains the effect of CSP on FP. Relying on a process philosophical approach, we develop a mid-range theory of corporate social responsibility by extending insights from previous studies into a multilevel social psychological framework grounded in attribution theory. Specifically, we explicate how individual evaluators’ attributions regarding firms’ social performance in relation to the firm’s reputation become subjectively agreed-upon in perceptions of social approval at the societal level. We suggest that attributions for CSP can lead to reaffirming, reinforcing, reducing or repositioning of the firm’s reputation. In turn, we argue that these four fit scenarios spur managers to engage in processes that better match or align evaluators’ perceptions with their firms, and that these fit scenarios mediate firms’ ability to reap financial returns from their social performance. We conclude with the implications of our framework for future research and managers.

Corporate Social Responsibility at the Interface: A Relational Approach
Erin Bass, University of Nebraska Omaha
Ivana Milosevic, College of Charleston
Shovna Tripathy, University of Memphis

In our longitudinal multiple case, multiple stage study of corporate social responsibility (CSR) in a high-hazard context, we take a relational approach to examine how individuals in eight firms and prominent stakeholders of those firms understand and practice CSR. Contrary to established understanding, we discover that firms engage in...
Family Ownership and the Link between CSR Activities and Firm Performance
Peter Jaskiewicz, University of Ottawa
Rahul Ravi, Concordia University
James Combs, University of Central Florida
Rajshree Prakash, Concordia University

The relationship between CSR activities and firm performance remains unclear. We develop theory suggesting that family ownership moderates the relationship, but that the nature of the moderation depends on the type of CSR activities. Specifically, we argue that family owners’ long-term orientation helps them leverage adaptive CSR activities to enhance long-term performance, and that their close stakeholder relationships help them leverage responsive CSR to enhance short-term performance. Using panel regression analyses spanning KLD data for S&P 500 firms from 1994 to 2008, we find support for our theory that family owners strengthen the relationship between adaptive CSR and firm performance in the long-term and between responsive CSR and firm performance in the short-term. Our findings highlight the need to account for both owner type and temporal effects when studying the relationship between CSR activities and firm performance.

27. Track 5: Employment Factors
Thursday, 8:30 to 10:00 AM
Sawgrass

Session Facilitator:
Laura Madden, East Carolina University

Binding Ties: How Community Embeddedness and Age Affect Unemployment Duration among the Chronically Unemployed
Timothy Munyon, University of Tennessee-Knoxville
Laura Madden, East Carolina University
Timothy Madden, East Carolina University

Chronically unemployed workers are individuals who have been unemployed continuously for six or more months. Evidence shows that this form of unemployment is particularly onerous and growing, necessitating inquiry into factors that influence the duration of unemployment for these workers. Embeddedness theory sheds light on this question by predicting that community attachments exert a powerful influence on the choices and mobility of employees, raising the possibility that the attachments embedding employees in jobs also limit the choices and mobility of unemployed workers. At the same time, socioemotional selectivity and job search theories propose that age extends unemployment duration through relational preferences, vocational preferences, and networks. When integrated, these theories propose that age and attachments will influence the job search process and duration of unemployment for the chronically unemployed, and our focal purpose in this paper is to test the interaction of community embeddedness and age on unemployment duration for this class of workers. We also contextualize this effect within the job search process to explore how community links and age influence the relationships between interviews, offers declined, and unemployment length. Finally, we explore attributions for re-employment success and how the experience of chronic unemployment affects workers. Our findings shed new light on drivers of chronic unemployment length and the organizational implications of chronic unemployment. We discuss the theoretical and practical implications of this investigation.

*Best Paper in Track*
Employees’ Reactions to Police Use of Force
Enrica N. Ruggs, University of North Carolina-Charlotte
Christopher K. Marshburn, University of North Carolina-Charlotte
Kelcie Grenier, University of North Carolina-Charlotte

The current study sought to examine how news of police use of force against Black civilians affects people in the workplace. Acting as an employee in an organization, 367 participants read an article about police shooting an unarmed civilian (vs. control article) sent by a coworker who supported, condemned, or remained neutral regarding the police action. Subsequently, participants completed a recall task, reported feelings of positive and negative emotions, and gave evaluations of their coworker. Results revealed that reading an article about police use of force was unrelated to recall performance. However, participants made more errors relative to other conditions when a coworker sent an article about a Black man being shot and gave a neutral position. Furthermore, participants reading an article about police use of force experienced more negative and less positive emotions. Also consistent with hypotheses, participants offered more negative evaluations of a coworker who sent a distressing article and especially when the coworker supported police action.

Criminal Record: An Ineffective Predictor of Customer Service Representative (CSR) Job Performance
Jakari Griffith, Bridgewater State University
Todd Harris, Bridgewater State University

Between 70 Million and 100 Million Americans – or as many as one in three – have some type of criminal record (Vallas & Dietrich, 2014). Communities of color; lesbian, gay, bisexual, and transgender individuals, and people with histories of substance abuse or mental illness are disproportionately impacted. Having even a minor criminal record often functions as a significant impediment to gainful employment and resultant economic security. This is especially problematic given that: (a) many companies now incorporate background checks within their hiring process, (b) little empirical research exists about the relationship between criminal record and job performance, and (c) these trends have significant negative consequences for families, communities and the economy as a whole. In an attempt to help fill this gap, the current study examined the relationship between criminal record and five objective measures of job performance, as well as tenure and turnover, in a large sample (N = 1,066) of Customer Service Representatives (CSR’ s) drawn from a Fortune 500 media company. The results indicated that criminal record was not a robust predictor of job performance, on average accounting for less than 1% of the variance in criterion measures. Implications for organizations and policy makers are discussed.

28. Track 6: Reactions to Abusive Supervision
Thursday, 8:30 to 10:00 AM
Palm

Session Facilitator:
Jack Carson, Auburn University

Goal-Focused Abusive Leaders: The Role of Conscientiousness in Subordinates’ Production Deviance
Min-Kyu Joo, University of Houston
Jia Yu, University of Houston
Alan Witt, University of Houston

When an abusive supervisor exhibits goal-focused leadership, does goal-focused leadership in fact buffer or deteriorate the impact of...
abusive supervision on subordinates? We explored this question with 280 subordinates. We investigated the three-way interaction among abusive supervision, goal-focused leadership, and conscientiousness on production deviance. Our findings indicate that subordinates exposed to more goal-focused abusive supervision were significantly more likely to conduct production deviance. In addition, we found the three-way interaction such that the relationship between abusive supervision and subordinates’ production deviance is the strongest among subordinates who have low conscientiousness when leaders exhibit a high level of goal-focused leadership.

Worse-off than Others? A Relative Deprivation Perspective of Abusive Supervision’s Effects in Teams
Chen Zhao, Beijing University of Posts and Telecommunications
Zhonghua Gao, Capital University of Economics and Business
Yonghong Liu, University of North Carolina-Greensboro

We develop and test a multilevel model concerning how and when relative abusive supervision (i.e., absolute deviation of abusive supervision around team median) influences team member’s job attitudes. Drawing on relative deprivation theory, we propose a multilevel moderated mediation model wherein relative abusive supervision and team-level abusive supervision jointly influence individual team member’s relative leader-member exchange (LMX) quality, which in turn affects team member’s job attitudes such as job satisfaction, team commitment, and turnover intention. Moreover, team-level abusive supervision transmits its effect to individual team member’s job attitudes through team-level LMX. Results from a sample of 1479 employees in 145 sales teams show that the indirect effect of relative abusive supervision on job satisfaction, team commitment, and turnover intention are stronger when team-level abusive supervision is low rather than high. Additionally, team-level LMX mediates the cross-level effect of team-level abusive supervision on individual job attitudes. These findings suggest that in team settings, being a selected target of abusive supervision informs one’s out-group standing, which has further negative consequences on employee job attitudes.

Abusive Supervision as “Tough Love”? The Effect of Abusive Supervision on Employee Creativity
Yuanmei Qu, University of Miami
Marie Dashborough, University of Miami
Gergana Todorova, University of Miami
Chester Schriesheim, University of Miami

This research sheds light on abusive supervision and employee creativity by investigating when and how team abusive supervision has an effect on individual creativity. Our analyses of multilevel, multisource, and multiphase data show that leaders’ and followers’ state positive affect interactively determine the extent to which team abusive supervision leads to employee creativity. Followers’ attribution of performance promotion motives to abusive supervision mediates the combined effect of team abusive supervision, leaders’ and followers’ state positive affect on followers’ creativity. Our findings thereby advance our understanding of the influence of abusive supervision on individual creativity.

Development of a Short, Generalizable Reflective Measure of Workplace Deviance (RWD)
Rebecca Bennett, University of Central Florida
Sandra Robinson, University of British Columbia
Lauren Locklear, University of Central Florida
Bailey Bigelow, University of Central Florida
Clay Posey, University of Central Florida

This study develops new and improved measures of workplace deviance. Following a seven stage approach of scale development using a variety of samples, we developed measures of interpersonal deviance and organizational deviance. Of particular note, these scales are reflective in nature, rather than formative, and therefore should be more generalizable- across time, cultures, work contexts and occupations- than prior measures of workplace deviance.

The purpose of this study was to examine the outcomes of state suspicion in the workplace, specifically, employee suspicion of managers. Data were obtained from a cross-sectional survey of 251 working adults (Study 1) and a vignette experiment of 219 working adults (Study 2). Findings indicate that employees who are suspicious of their managers are more likely to engage in counterproductive work behavior (CWB) and less likely to engage in organizational citizenship behavior (OCB). In addition, negative affect strengthens the relationship between suspicion and CWB. Understanding the behavioral consequences of suspecting one’s manager helps to advance the nomological network of the state suspicion construct. This research demonstrates the negative behavioral outcomes of suspicion in the workplace. These findings may help to focus practitioners’ attention on reducing workplace suspicion through open communication. Further, state suspicion is a relatively new organizational construct. The two studies contribute to the criterion-related validity of the construct. Additionally, this research integrates the stress-emotion model and the model of attributional suspicion to explain the relationships between suspicion, CWB, and OCB. Finally, the moderating effect of negative affect suggests that individual differences impact the degree to which state suspicion contributes to behavioral outcomes.
30. Track 6: Entitlement and Mistreatment at Work  
Thursday, 8:30 to 10:00 AM  
Jasmine

Session Facilitator:  
Samantha Paustian-Underdahl, Florida International University

A Moderated Mediation Model of Perceived Co-Worker Entitlement  
Katarina Brant, Florida Atlantic University  
Stephanie Castro, Florida Atlantic University

In this paper, we present a moderated mediation model of perceived co-worker entitlement comprised of psychological distress, individual differences, and individual outcomes. Specifically, we use equity theory and referent cognitions theory to propose the mediating role of psychological distress in the relationships among perceived co-worker entitlement and in-role behavior, organizational citizenship behavior, counterproductive work behavior, pay satisfaction, and turnover intentions. We also propose the moderating role of individual difference variables including core self-evaluations, positive and negative affect, and equity sensitivity in the relationship between perceived co-worker entitlement and psychological distress. Finally, we propose a combined moderated mediation effect. We hope that the model and propositions presented here will help build a foundation for additional work.

Perceived Co-Worker Entitlement and Organizational Justice  
Katarina Brant, Florida Atlantic University  
Stephanie Castro, Florida Atlantic University

We explore the relationships among perceived co-worker entitlement and negative attitudinal, behavioral, and well-being consequences to the perceiver including job satisfaction, organizational citizenship behavior, and emotional exhaustion. Furthermore, we investigate the moderating role of organizational justice in these relationships utilizing Colquitt’s (2001) four factor model of organizational justice comprised of distributive justice, procedural justice, interpersonal justice, and informational justice. Using fairness theory as a theoretical framework, we propose that perceived co-worker entitlement is negatively related to the perceiver’s job satisfaction and organizational citizenship behavior and positively related to the perceiver’s emotional exhaustion. Furthermore, we theorize that organizational justice is one way that organizations and managers can help mitigate these negative consequences of entitlement in the workplace. The purpose of this paper is to provide an empirically testable model to help advance entitlement research.

Lawyers’ Coping with Mistreatment: Not “either or,” not “it depends,” but “it does not matter”  
Rebecca Michalak, PsychSafe Consulting  
Neal Ashkanasy, University of Queensland  
Sandra Kiffin-Petersen, University of Western Australia

Interpersonal mistreatment is an all too frequent stressor that employees have to cope with in modern workplaces. In this regard, coping is generally categorized as: (1) emotion-focused (EFC) or (2) problem-focused (PFC), with PFC traditionally considered more effective adaptation-wise. We test a dual theory, process-and-variance model of coping with interpersonal mistreatment in a field study of lawyers (n = 540/356 at Time 1 and Time 2 respectively). We found primary appraisal of mistreatment events (as a threat to well-being) lead to negative affective responses that, underpinned by secondary appraisal processes, affect EFC and PFC choices differentially. Our results suggest the answer to the ongoing debate surrounding the effectiveness of PFC versus EFC is not “either or,” or “it depends,” but rather, “it does not matter.” We found that neither coping category mediated relationships between negative affective responses to mistreatment and psychological and psychosomatic well-being. In fact, damage to well-being appears to occur as a result of primary appraisal. We discuss the contributions and practical implications of our findings, and suggest that risk management strategies premised on individuals possessing effective coping abilities may be flawed.

31. Track 1: Antecedents of Entrepreneurial Behavior  
Thursday, 8:30 to 10:00 AM  
Banyan

Session Facilitator:  
Indu Ramachandran, Texas State University

CEO Proactive Personality, Organizational Ambidexterity, and Firm Performance  
Andreea Kiss, Iowa State University  
Felipe Cortes, Iowa State University  
Pol Herrmann, Iowa State University

Why do some firms successfully combine exploratory and exploitative innovation activities, and achieve organizational ambidexterity, while others fail in this endeavor? We suggest that the answer lies at the top level in the organizations and posit that firms with CEOs that exhibit higher levels of proactive personality are better able to pursue organizational ambidexterity, and enjoy higher levels of performance. We test our ideas on sample of 201 small and medium-sized firms competing in high technology sectors in India and find that CEO proactive personality is positively related to organizational ambidexterity and exerts an indirect, mediated effect on firm performance. We extend previous research on organizational ambidexterity by providing an individual, CEO-centered explanation for the successful, simultaneous pursuit of seemingly conflicting innovation strategies.

Fear and Optimism: The Yin and Yang of Entrepreneurial Orientation  
Jing Liu, Baruch College  
Rajeev Sawant, Baruch College  
Bijuan Zhong, Baruch College

We propose organizational optimism as the psychological underpinning connecting proactiveness and risk-taking attitudinal dimensions of entrepreneurial orientation (EO). We explore the antecedents of EO consisting of organizational innovation and optimism in the context of China, a major emerging market. We propose that fear motivates firms to engage in innovative activities in the first place. Increasing market competitiveness and poor performance increase innovativeness. Firms with greater number of employees increase the effect of market competitiveness and poor performance on innovativeness. Product and market knowledge fosters organizational optimism which facilitates entrepreneurial engagement. We test our model in an emerging market context with salient entrepreneurial characteristics. Our sample of 58,285 firm-year observations largely support our hypotheses.

Examining Antecedents of Opportunity Exploration in Copreneurial Firms: An Extension of Olson’s Circumplex Model  
Dustin Odom, Mississippi State University  
Josh Daspit, Mississippi State University

Copreneurial ventures are a prominent type of family business, yet despite prominence, few studies examine this type of organization. For copreneurial family firms, like many organizations, the capability to explore opportunities is essential to growth and survival; however, how family-related dynamics influence firm opportunity exploration remains to be understood. To this end, the circumplex model of family science is used to conceptualize how the marital system of copreneurs influences firm opportunity exploration. Further, the circumplex framework is extended to account for the influence of communication and shared mental models. The aim of the conceptualized model is to offer family business researchers and practitioners further understanding of how internal family factors affect opportunity exploration of copreneurial firms.
32. PDI: Using Neuro-Cognitive and Biosensory Measurement Techniques for Management Research  
**Thursday, 10:15 to 11:45 AM**  
**Indian Key**

Session Coordinator:  
**David McLain, SUNY-Oswego**

Presenters:  
**David McLain, SUNY-Oswego**  
**Jinpei Wu, SUNY-Oswego**  
**Efstatios Kefallonitis, SUNY-Oswego**

This Professional Development Instructional session is in a workshop format that will provide attendees with an introduction to neuro-cognitive and biosensory research techniques. These techniques enable measurement of an individual’s cognition, attitudes, emotions, or attention and have broad potential for research in management. Attention will be focused on two popular and widely used measurement techniques: remote eye-tracking and skin conductance. The session will describe the use of each biosensor, the type of data gathered, measurement benefits and limitations, and how use of these techniques extends, validates, or replaces traditional techniques tools like the multi-item survey.

33. PDI: Bridging the Academic/Practitioner Gap: Building Strong Community Relationships to Build Stronger Research and Teaching  
**Thursday, 10:15 to 11:45 AM**  
**Glades**

Session Coordinator:  
**Michelle Harrolle, University of South Florida**

Presenters:  
**Michelle Harrolle, University of South Florida**  
**Janelle Wells, University of South Florida**  
**Doreen MacAulay, University of South Florida**  
**Ryan Cook, Tampa Bay Lightning**  
**Keith Harris, Tampa Bay Lightning**

Both academic and industry professionals acknowledge the need for partnerships to help bridge the gap between theory and application. This professional development session on local engagement will highlight the commitments, benefits and challenges in creating such a successful partnership. As an exemplar, this session will discuss the current working relationship between University of South Florida (USF) and Tampa Bay Lightning (TBL) including a panel discussion comprised of two USF faculty and two TBL executives along with a Saturday tour of the TBL corporate offices. Members from both organizations will share their experience and advice in developing and maintaining strong local engagement.

34. PDI: Conceptual and Design Considerations in Multilevel Studies  
**Thursday, 10:15 to 11:45 AM**  
**Bird Key**

Session Coordinator:  
**Nikolaos Dimitriou, Georgia State University**

The purpose of this workshop is to discuss conceptual, methodological, and practical issues associated with conducting multilevel studies. We will discuss the basic questions in need of multilevel data approaches, as well as how multilevel data can help answer more general questions. We then discuss important study design issues, and steps to take in ensuring the utility of the data for research. The discussion will also include practical advice on conducting multilevel studies, including ways to maximize the value of convenience sample and publically available data. An overview of required analytical approaches will also be presented.

35. Track 4: HR Systems and Practices: Implications for Employees and Organizations  
**Thursday, 10:15 to 11:45 AM**  
**Sabal**

Session Facilitator:  
**Ivan Muslin, Marshall University**

**How Human Resource Systems Affect Employee Outcomes: An Integrative Perspective**  
**Wei Ning, Texas A&M International**

Although much scholarly attention has been paid to understand how human resource (HR) systems influence employee outcomes, this line of research is largely fragmented. In this qualitative study we develop an integrative model highlighting how HR systems affect employee outcomes simultaneously through work engagement and organizational embeddedness. We suggest that engagement and embeddedness serve as two mediators that parsimoniously explain the HR systems-employee outcome linkage. Our model also highlights the differential effects of HR system components on engagement and embeddedness, implying that HR practices influence different employee outcomes in a heterogeneous way. Implications and limitations of this study are discussed.

**Transparency and HR Competence as Signals to Build Trust and Commitment**  
**Malayka Klimchak, Winthrop University**  
**AK Ward, Virginia Tech**  
**William J. MacKenzie, University of Alabama in Huntsville**

Signaling theory has been used extensively to explore how both potential future employee and employers communicate unobservable characteristics of quality. The current study seeks to extend the signaling research into the post-hire employment environment by investigating potential signals of trustworthiness. Using data from a sample of 391 matched dyads at a Fortune 500 company, we examined transparency and HR competence as signals of trustworthiness. We found that disclosure of relevant information, information quality and competence of HR professionals acted as signals of trustworthiness for employees and supervisors alike. These signals of trustworthiness were related to affective commitment through a mediated relationship with organizational trust. Furthermore, we found that supervisor organizational trust provided an additional signaling mechanism for employee commitment.

**Flexibility-Oriented HRM Practices and Business Model Innovation: Fostering Strategic Agility**  
**Ravi Bala, University of Texas Rio Grande Valley**  
**C Lakshman, University of Texas Rio Grande Valley**

Drawing on dynamic capabilities, and using it as an underlying framework, we develop the theoretical relationship between flexibility-oriented HRM practices and strategic agility, which has been proposed as an accelerator of Business Model Innovation (BMI). We contribute by introducing the human element into the BMI literature, which is in an embryonic stage of development. We propose a theoretical model that links flexible HRM practices to business model innovation through two constructs representing strategic agility: organization learning capabilities and workforce flexibility. By introducing both workforce flexibility and organizational learning capabilities, we show a missing link that could explain why some organizations are unable to pursue BMI. Addressing critical gaps in the ‘BMI as an organizational change process’ stream of research, we illuminate the processes of fostering agility. We highlight contributions to knowledge, discuss limitations of our theoretical model, and conclude the paper with both academic and practical implications followed by future research directions.
HR management practices have transitioned from viewing employees as passive job performers to encouraging more individualization in designing their own jobs based on personal needs, priorities, and abilities. This paper focuses on two specific bottom-up job redesign activities, job crafting and Idiosyncratic-deals, where research has shown that individual differences play a role in determining the success that employees achieve in altering their job content and negotiating work arrangements. However, empirical studies of individual differences in work redesign are limited to personality characteristics like the Big Five and personal initiative. Cognitive and physical abilities of employees are consistently researched in HR literature to enhance scholarly understanding of employee outcomes. In the same light, abilities that involve social astuteness and negotiation skills must also be given consideration as they play important roles in shaping employee attitudes and behaviors. This study extends current research by including an individual ability (political skill) along with a personality characteristic (proactive personality) to examine their combined role in increasing work engagement occurring through successful job crafting and Idiosyncratic-deals negotiation. Using a sample of 300 employees, I test the proposed mediation model using the Preacher and Hayes approach. Results reveal that possessing both proactive personality and political skill can help improve work engagement through self-initiated job crafting and Idiosyncratic-deals. I discuss the implications and limitations of the paper and suggest future research directions for studying individual differences in job redesign.

**36. Track 8: Enhancing Student Interactions in the Classroom**

**Thursday, 10:15 to 11:45 AM**

**Citrus**

**Session Facilitator:**

**Laura Madden, East Carolina University**

*Best Doctoral Paper in Track*

**Teamwork in the Classroom: Effects of Class Modality on Team Performance**

**Leah Katell, Virginia Commonwealth University**

**Andra Serban, Virginia Commonwealth University**

**Laura Madden, East Carolina University**

**Joy Karriker, East Carolina University**

Despite a dramatic increase in their use, the extent to which hybrid and fully online modalities and supporting technologies in management education impact team-based student learning is still unclear. Based in the motivation - opportunity – ability model of work performance, we propose a first-stage moderated mediation model of team performance in which the mode of communication of the class moderates the relationships between skills, enthusiasm, and team cooperation. We test our model in a classroom setting, using data from 292 student teams engaged in a semester-long team project as a major part of their course grade and find support for the proposed moderated, but not mediated, relationships. Our research suggests that the classroom modality has an impact on team functioning, which has a variety of practical and theoretical implications.

*Best Paper in Track*

**Student Impression Management in the Classroom**

**Julia Haber, Fordham University**

**Robert Tesoriero, Fordham University**

With the growing shift from lecture-style teaching methods to interactive and experiential group exercises, instructors need to know more about their students, such as their desired impressions, to adequately engage and support students’ social interactions. This study addresses this need by providing an overall understanding of the types of images that are important for students to project when interacting with others in a classroom. After a concise review of impression management literature and grounding our reasoning in the cybernetic theory (Bozeman & Kacmar, 1997) this study offers a glimpse of the positive impressions students desire to project in front of their peers and professors and the negative impressions students aim to avoid. With a two-part survey based on 269 responses, we measured students’ ranking of specific images and the effort level they exerted towards achieving or avoiding them. We offer suggestions of how these findings can be integrated into teaching for improved student learning and experiences.

**An Exercise: Creating a System that Inspires Creativity**

**Carrie Blair, College of Charleston**

**Kelly G. Shaver, College of Charleston**

In any sort of creative organization, tensions can arise between the leaders of the organization and the individuals throughout the organization whose dedication and engagement result in the necessary creative work that drives the business. For example, in research universities trying to encourage more technology commercialization activities, tensions can arise between the inventor of the technology and those whose assistance is needed to accomplish successful commercialization. In our teaching, we have found this tension difficult for students to comprehend. The example provided in this scenario is specific to biomedical commercialization, but its principles can be generalized to any sort of creative activity that requires significant capital investment. The scenario places participants in one of two roles – either the originator of the technology or an administrator in the organization that is to provide the assistance for commercialization (e.g., legal assistance, contract review, etc). The scenario can be used to sensitize students to the impact that one’s organizational role can play in determining behavior. The scenario and questionnaire can also be used to highlight that when leaders make decisions and policies based on their perspective without considering the followers’ perspectives and motives, the resulting policies may actually deter the behavior that the leaders hoped to encourage. The scenario can be used to highlight factors that encourage and discourage employee creativity or the impact of human resource policies on employee behavior.
Role of "CEO luck" in this matter. All You Need Is "CEO"—How Capabilities, Experience, and Optimism of CEOs shape the Cash-Performance Relationship. This paper examines how Chief Executive Officers (CEOs) influence the value-creation potential of corporate cash holdings. The management of these holdings is a challenging task, as it comprises vital decisions by CEOs. Building on the resource-based view and upper echelons theory, we argue that skill and experience of managers enable firms to create more value from cash holdings as a versatile resource. Further, we propose that it is the CEO's optimism that helps to overcome cash hoarding through strategic investments boosting the value-creation potential of cash holdings. Our results show that the CEOs' capabilities, experience, and optimism positively moderate the cash-performance relationship which stresses the importance of such observable and psychological characteristics with respect to the effective management of corporate resources. We contribute to the literature on strategic management by disentangling the moderating effects of observable and psychological CEO characteristics and their influence on the resource-performance relationship. Further, we contribute to the ongoing debate on the CEO effect by examining the role of "CEO luck" in this matter.

38. Track 3: Multilevel Perspectives on Entrepreneurial Activity
Thursday, 10:15 to 11:45 AM
Palm

Session Facilitator:
Leon Faifman, Florida Atlantic University

William C. Coup: The Man Who Moved the “Greatest Show on Earth”
Keenan Yoho, Rollins College
Robert C. Ford, Rollins College

The days of waiting at a rail crossing for a circus train to pass are quickly fading. However, there was a time when trains with more than 75 railcars carrying 100 or more circus wagons full of animals, performers, and laborers would stretch nearly a mile in length. An early and significant innovator who helped create and define what became known as the great American circus was William Cameron Coup. In 1872, Coup teamed up with P.T. Barnum to launch the “Greatest Show on Earth” that would deliver three live performances per day on every day Sunday for 186 consecutive days in 138 different towns covering more than 6,215 miles. In this paper, we discuss the many innovations contributed by William C. Coup to the circus as well as the impact he had on the rail transportation system, and logistics in general, that survive today.

Macro Policy and Countrywide Entrepreneurial Activity
Shelby Solomon, Roger Williams University
Joshua Bendickson, University of Louisiana-Lafayette
Matt Marvel, Ball State University

Understanding how national policy can spur entrepreneurship is central to economic development. Drawing from a sample of 21 countries spanning 2004-2011, we investigate the direct and joint effects of market freedom and social spending national policies. We find that neither market freedom nor social spending alone positively impacts entrepreneurial activity; however, an interaction exists, as entrepreneurial activity is bolstered when market freedom is complemented with social spending. Findings suggest mixed national policies that combine market freedom and social spending are best positioned to spur entrepreneurship. Our findings have implications for both entrepreneurship and economic development literature.

The Resilience of New Foreign Subsidiaries: Evidence from the 2007-2009 Global Financial Crisis
Mark Mallon, Elon University
William Judge, Old Dominion University
Stav Fainshmidt, Florida International University
Steve Lanivich, Old Dominion University
Edward Markowski, Old Dominion University

The establishment of foreign subsidiaries is a form of international corporate entrepreneurship that has many benefits to the parent multinational enterprise (MNE), yet is very risky. Despite the ubiquity of launching new foreign subsidiaries as a form of corporate entrepreneurship, studies of the early-stage success of this form of new venture are largely absent. Taking advantage of the natural experiment of the 2007-2009 global financial crisis, we use institutional theory to compare the entrepreneurial resilience of new foreign subsidiaries emanating from developed- and emerging- economy MNEs, using data on approximately 200 subsidiaries from a wide range of home countries. Our findings reveal that whereas new foreign subsidiaries of developed-economy MNEs enjoyed superior performance immediately before the crisis, subsidiaries of emerging-economy MNEs generally performed better during and after the crisis, suggesting greater resilience on their part. These findings have important theoretical implications for both entrepreneurship and institutional theory scholarship.

39. Track 5: CSR and Leader Behavior
Thursday, 10:15 to 11:45 AM
Sawgrass

Session Facilitator:
Salar Mesdaghinia, Eastern Michigan University

The Role of Sub-National Institutions on the Corporate Social Responsibility and Corporate Reputation Relationship
Cynthia Halliday, Florida International University
Ajay Ponnapalli, Florida International University
Chen Wang, Florida International University
Kwooon Kim, Florida International University
William Newburry, Florida International University

Corporate Social Responsibility (CSR) and Corporate Reputation (CR) are highly dependent on the context. While there has been much research examining the relationship between CSR and CR, and the country-level institutional factors that impact CSR, not much has examined the impact of institutional factors that impact CR, and even less has examined the sub-national institutions. In this paper, we investigate the role of the sub-national institutions from both the political and the socioeconomic perspectives on the relationship between CSR and CR. We gathered data on a sample of 255 firms from Fortune America’s Most Admired Companies list from 2009 to 2014, and found evidence that a company’s headquarters state political environment and socioeconomic status impact the relationship between CSR and CR. Results and implications are discussed.

CEO Characteristics and Corporate Philanthropy in Times of Organizational Crisis
Wonsuk Cha, Southern Connecticut State University

While corporate philanthropy has been considered a firm’s reputation management activity, less research has focused on the relationship between CEOs as the ultimate decision maker and corporate philanthropy, particularly when organizational crises occur. To fill this research gap, this study examines CEO characteristics (such as founder status and CEO network) and two causes of philanthropy (such as business related philanthropy and cause related philanthropy). This study suggests that there will be a positive relationship between these...
characteristics of CEOs and causes of corporate philanthropy, and organizational crises will moderate that relationship. This study contributes to a new conceptual framework to explore the relationship between CEO characteristics and different corporate philanthropic causes following organizational crises. This study discusses the scholarly suggestions of our conceptual framework and concludes with implications for future research.

**How Do Investors Value Corporate Social Responsibility?**
**Downside Risk Minimization and Upside Potential Maximization**

_Hao Lu, University of Calgary_
_Won-Yong Oh, University of Calgary_
_Anne Kleffner, University of Calgary_

Over the past decades, there has been an ongoing debate regarding whether corporate social responsibility (CSR) is beneficial to investors. In this paper, we introduce new explanations for why and when investors assess CSR positively. We argue that investors value a firm’s CSR when they believe that it provides downside risk minimization (i.e., insurance-like protection) or upside potential maximization (i.e., profit generation). Using a panel data from U.S. firms from 2002 to 2011, we provide considerable support for our hypotheses. We show that a firm’s market value increases with CSR when the firm faces a high level of risks and shows a high level of growth potential. Our research suggest that since investors do not always value CSR investments, managers need to consider the risk context and growth potential of their firms before making investment decisions on CSR.

**Why Moral Followers Quit? Examining the Role of Leader Bottom-Line Mentality and Unethical Pro-Leader Behavior**

_Salar Mesdaghinia, Eastern Michigan University_
_Anushri Rawat, Eastern Michigan University_
_Shiva Nadavulakere, Saginaw Valley State University_

Organizational researchers have repeatedly warned against consequences of bottom-line mentality of business leaders such as objectifying job performance and career success, creating a win-lose mentality, breeding adversarial relationships among employees, and incentivizing unethical behaviors. Our study extends these findings by studying unethical pro-leader behaviors and turnover intention among employees with high moral identity as consequences of leader bottom-line mentality. Data was collected using an online survey from 154 employees from various organizations. The results supported our hypotheses. In particular, leader bottom-line mentality was positively related to followers’ unethical pro-leader behavior. Further, for employees with a stronger (rather than weaker) moral identity: 1) unethical pro-leader behavior was positively related to turnover intention; and 2) leader bottom-line mentality was related to turnover intention through unethical pro-leader behavior.

**40. Track 6: Managing Emotions Thursday, 10:15 to 11:45 AM**
**Jasmine**

_Session Facilitator:_
_Yuanmei Qu, University of Miami_

**The Music Moves Me: Towards a Process Theory of Music’s Effects in the Workplace**

_Karen Landay, University of Alabama-Tuscaloosa_
_Maura J. Mills, University of Alabama-Tuscaloosa_
_Peter D. Harms, University of Alabama-Tuscaloosa_

Since ancient times, music has played an important role in work and workplace behavior. However, research and theory have failed to keep pace with practice, and thus current understanding of music in the workplace can appear to be contradictory and without theoretical grounding. In the present paper, we use the tenets of affective events theory (AET) to construct a model of the within-person process that takes place upon an individual hearing music in the work environment. Specifically, we build on AET’s proposition that changeable affective events, rather than stable environmental features, cause affective reactions at work. Furthermore, we incorporate individual differences and job demands as important considerations for task performance, organizational citizenship behavior, and counterproductive work behavior outcomes. Our proposed model thus offers a much-needed theoretical basis for existing work on the effects of music in the workplace.

**When All You Feel is Guilt: How Working Mothers’ Parental Guilt Leads to More Productivity**

_Yingli Deng, Oklahoma State University_
_Rebecca Greenbaum, Oklahoma State University_
_Alexis Washington, Oklahoma State University_

Working parents may experience parental guilt due to work demands; yet, surprisingly little research has examined when working parents experience parental guilt and how this guilt affects their productivity in the workplace. Drawing on role identity and compensatory theories, we propose that working mothers are more likely to experience parental guilt than working fathers, especially when parental identity threat exists. This parental guilt, in turn, will serve as a vehicle for improving productivity, especially when family motivation is high. The theoretical and practical implications of our research are discussed.

**The Impact of Peer Support and Formal Training in Managing Emotions in Emergency Settings**

_Nicole Bérubé, Royal Military College of Canada_

This study, based on research in emotional labor, investigates whether performance in the emergency work context is improved by providing peer support and training in emotion management. It examines how the use of various emotion management strategies, including surface acting, deep acting and authentic expression of emotions are related to perceived performance during emergency events. Survey data were collected from 163 emergency workers, including firefighters, police officers and paramedics. Results showed that negative emotions related to performance negatively, whereas positive emotions were positively related to performance. Expressing authentic emotions and peer support were positive correlates of perceptions of better performance during the emergency event. Formal training in emotion management was not significantly related to self-rated performance, but rather, promoted deep acting on the part of respondents.

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**41. Track 6: Individual Differences in the Workplace**
**Thursday, 10:15 to 11:45 AM**

_Session Facilitator:_
_Rebecca Badawy, Youngstown State University_

**How Leader Emotional Intelligence Influences Subordinate Task Performance and Organizational Citizenship Behavior: A Meta-Analysis**

_Chao Miao, Wilkes University_
_Ronald Humphrey, Lancaster University_
_Shanshuan Qian, Towson University_

This meta-analysis demonstrates that leaders’ emotional intelligence (EI) positively relates to subordinates’ task performance (ρ = .48) and organizational citizenship behavior (OCB) (ρ = .39). Both leader self-report EI and mixed EI contribute incremental validity and relative importance in predicting subordinates’ task performance after the Big Five and cognitive ability are controlled (self-report EI: ΔR² = .17, RW% = 42.4%; mixed EI: ΔR² = .34, RW% = 47.6%). All three streams of EI demonstrate incremental validity and relative importance in predicting subordinates’ OCB in the presence of the Big Five and cognitive ability (ability EI: ΔR² = .02, RW% = 29.3%; self-report EI: ΔR² = .12, RW% = 61.3%; mixed EI: ΔR² = .09, RW% = 48.3%). The relationship between leaders’ EI and subordinates’ task performance is stronger in collectivist, feministic, and high uncertainty avoidance cultures. The relationship between leaders’ EI and subordinates’ OCB is stronger in high power distance, collectivistic, feministic, high uncertainty avoidance, long-term oriented, and restrained cultures.
This study examines whether and how different work arrangements (standard versus nonstandard employment) affect employees’ voice behaviors (promotive and prohibitive voice). Using a two-wave panel design, we collect data from a sample of 355 employees from 66 teams in four Chinese organizations. Our results show that, nonstandard employees engage in fewer promotive voice behaviors than standard employees, but in terms of prohibitive voice, the difference between standard and nonstandard employees is not significant. Besides, self-efficacy is the mediator between the employment status and voice behaviors. Further, political savvy acts as a moderator—for nonstandard employees high in political savvy, the negative relationships between nonstandard employment and promotive and prohibitive voice would be attenuated.

Behavioral and Psychological Responses to Workplace Incivility: Does Employee Personality Matter?
Jennifer Welbourne, University of Texas-Rio Grande Valley
Gerardo Miranda, University of Texas-Rio Grande Valley
Ashwini Gangadhavan, Kutztown University

Workplace incivility refers to low-intensity negative behaviors that violate workplace norms of respect. Incivility is known to be a type of stressor in the workplace, yet little is known about how it affects people based on their individual differences. Drawing from a stressor-strain theoretical framework, we examined the moderating effects of agreeableness, conscientiousness, and neuroticism on the relationship between individuals’ experienced incivility and two outcomes: perpetrated incivility and burnout (physical fatigue, cognitive weariness, and emotional exhaustion). Results from a 2-wave survey of 250 working adults indicate that experienced incivility predicted physical fatigue, cognitive weariness, emotional exhaustion, and incivility instigated toward others. Employees high in agreeableness were more likely to experience all three dimensions of burnout in response to incivility. Employees low in neuroticism were also more likely to respond to incivility with increased physical fatigue. In contrast, highly conscientious employees were less likely to report emotional exhaustion in response to incivility. Individuals high in agreeableness were more likely to instigate incivility in response to incivility, while those high in conscientiousness were less likely to do so. Implications for research and practice are discussed.

The Role of Confidence in the New Venturing Process
Justin Weinhardt, University of Calgary
Olga Petricevic, University of Calgary
Justin Davis, University of West Florida

Confidence plays a significant role in entrepreneurial decision-making processes and behaviors. However, the role confidence plays across the new venturing process is not well understood. In this paper, we take a multi-disciplinary and multi-theoretical approach that offers a new framework to understand the role of confidence in the new venturing process. We do this by integrating theoretical insights from psychology, strategic management, and entrepreneurship. We propose that there are four different stages in the new venturing process that align with four phases of motivation proposed by the psychological literature. This approach gives us the ability to examine when confidence has a positive or negative effect on key entrepreneurial processes during their new venturing process. We offer a set of specific propositions for the effect of confidence across different stages of the new venturing process accounting for the multi-faceted nature of confidence and its context dependent role in the entrepreneurial pursuits.

The Moderating Role of Drive on the Relationship between Political Skill and Venture Performance
Nick Mmbaga, University of Tennessee-Knoxville
Michael Lerman, University of Tennessee-Knoxville
Timothy Munyon, University of Tennessee-Knoxville
Justin Yan, University of Tennessee-Knoxville

Our research seeks to extend our understanding of why some entrepreneurs are more successful than others. Specifically, we explore how two important individual differences, drive and political skill, interact to predict entrepreneur’s performance. Based on a sample of 286 U.S. based entrepreneurs, our study indicates that entrepreneurs’ inner “drive” has a significant positive moderating effect on the relationship between entrepreneurs’ political skill and venture performance. Our study accentuates the interplay of entrepreneurs’ drive and political skill to provide a more comprehensive view of micro factors that influence entrepreneur’s performance.

42. Track 1: Confidence, Drive, and Addiction

Thursday, 10:15 to 11:45 AM
Banyan

Session Facilitator:
Michael Lerman, University of Tennessee-Knoxville

Entrepreneurship Addiction: Highlighting Diversity in Work Behavior Patterns
April Spivack, Coastal Carolina University
Alexander McKelvie, Syracuse University

We examine the notion of entrepreneurship addiction, the compulsive engagement in entrepreneurial activities. We address what is unique about this type of behavioral addiction compared to related work pattern concepts of workaholism, entrepreneurial passion, and work engagement. We identify new and promising areas to expand understanding of what factors lead to entrepreneurship addiction, what entrepreneurship addiction leads to, how to effectively study entrepreneurship addiction, and other applications where entrepreneurship addiction might be relevant to study. These help to set a research agenda that more fully addresses a potential "dark side" psychological factor among some entrepreneurs.
Classroom: How to Claim the Higher Ground; Getting Students to Volunteer for Learning; Developing Effective Leaders: Leveraging Strengths to Engage the Millennial Student, and The Live Case: Hope is Not a Strategy. The workshop facilitators will share handouts and materials so participants can easily implement the experiential exercises when they return their home institution.

45. PDI: Data Issues as an Impediment to Publishing Macro Studies
Thursday, 1:15 to 2:45 PM
Bird Key

Session Coordinator:
Brian Boyd, City University of Hong Kong

This workshop will examine data-related issues that are often encountered in the review process, such as data types, sample characteristics, power, and construct measurement. We will explore both preventive and remedial tactics to address these issues. The goal of this session is to help early stage faculty better prepare their papers for journal submission. The facilitator has served for two decades on the board of SMJ, and multiple terms at AMJ, JOM, JMS, and other journals, plus nine stints as an associate or guest editor.

46. Track 3: Change Management
Thursday, 1:15 to 2:45 PM
Palm

Session Facilitator:
Shelby Solomon, Roger Williams University

Reassessing Elton Mayo and the Importance of Temporal Context
Jeffrey Muldoon, Emporia State University
Antonia Bauman, Emporia State University
Joshua Bendickson, University of Louisiana-Lafayette
Eric Liguori, Rowan University

Elton Mayo’s research played an important role in the development of managerial thought. His discussion of results of Hawthorne Studies continues to inform management theory and practice. But since Mayo was such a paradox, his impact on the field of management is considered to be controversial. He was in a research field, but not a researcher; in academia, but not a true academic; a capitalist, but not a devotee to Adam Smith; an insider, but someone whose own background was more of an outsider. One way to resolve this paradox is to place Mayo’s ideas and accomplishments in the context of the time.

The Tree of Organizational Change
Cai Unger, University of South Alabama
Donald Mosley, University of South Alabama
William Gillis, University of South Alabama

Organizational Change remains one of the greatest challenges for organizations and leaders today, yet its ubiquitous presence and usage, including an abundance of pop literature with easy-to-implement guidelines, blur the view on its theoretical and empirical foundations, its constraints and its opportunities. What is actually Organizational Change and how can its richness be classified? Therefore, the purpose of this article is to provide a historical overview and a framework of the field in form of a tree of Organizational Change.

A Brief History of Change Management
Dina Denney, New Mexico State University
Terry Adler, New Mexico State University

The formal examination of change management has a rich history that spans over a century. From a global ethnographic study of primitive rituals in the early 1900s to today's modern theories of the dialectical temporality of the organization, change management has experienced many transformations. It is the purpose of this paper to review the history of change management from its nascent micro-foundations to its current investigation and use of complexity theory in attempting to bring order to what may otherwise seem to be chaos. Historical change management is replete with ethnographic research, ground-breaking studies, and theory formation that had withstood the test of time for over a decade only to be seriously challenged in the past thirty years. Change management is a fascinating and exciting field of study and should be entered into with a great sense of adventure.

47. Track 4: Selection Decisions: Bayesian Validation, Social Interaction Simulations, and Tattoos
Thursday, 1:15 to 2:45 PM
Sabal

Session Facilitator:
Stacey Kessler, Montclair State University

The Power of Bayesian Validation in Personnel Selection
Isaac Thompson, Shaker
Joshua Siever, North Carolina State University
Joan Michael, North Carolina State University

This study compares Bayesian and frequentist methodologies in obtaining criterion-related validity evidence across three common predictors of employee performance (cognitive ability, structured interviews, and conscientiousness). Through simulating 100,000 local studies randomly pulled from populations of one million, the first half of the research investigates what local sample size is needed to establish Bayesian criterion-related validity evidence. The second half of the research examines sample sizes needed to disprove wrongly applied informed priors. Results include the local sample sizes required to validate common predictors of job performance and disconfirm wrongly applied priors. On a general level, this study demonstrates the fundamental patterns of Bayesian methods, illustrating common scenarios for incorporating Bayesian methods into data-driven employee selection methods. Specifically, this study offers guidance on the strengths, weaknesses, and opportunities of Bayesian methods to ameliorate the situation in personnel selection where small sample sizes or weak effect sizes have traditionally marred empirical endeavors.

Constructing Social Interaction Simulations: The Value of Incident Isomorphic Cloning for Developing Alternate Forms
Kelly Hall, Stetson University
Randall Croom, Stetson University

The use of virtual social interaction simulations for assessment and development purposes has grown in recent years due to technological advancements. However, the literature lacks an empirical investigation into how alternate test forms can be developed for such simulations. This study addresses this gap and responds to calls to examine the usefulness of the incident isomorphic cloning procedure for various types of assessment center exercises. Simulation results from two samples (N=58; N= 50) showed there was no significant difference between the overall simulation scores across alternate forms. We provide a step-by-step guide for designing, developing, and validating alternate form social interaction simulations.

Tattoos are Forever: Potential Selection Effects of Job Applicant Tattoos
Michael Howe, Iowa State University
Tattoos are becoming an increasing part of the cultural landscape. Yet, little is known about what effect, if any, the decision to get a tattoo will have on the employment opportunities afforded to individuals. This gap is further exacerbated by conflicting theoretical perspectives that speak to differentially weighted outcomes. To begin to disambiguate this important organizational phenomenon, we employ an experimental paradigm to investigate the role that tattoo presence has on selection decisions. Specifically, we manipulate tattoo presence as well as job applicant gender and objective qualifications and evaluate their combined impact on perceptions of applicant quality and equitable compensation levels. Though empirical support for our hypotheses is mixed, we do find some evidence that indicates that the effect of having a tattoo on selection outcomes is dependent on other applicant attributes. Theoretical and practical implications, along with directions for future research are discussed.

48. Track 8: Manuscript Development Incubator: ‘Meet the Editors’ Session for Management Education Works-in-Progress
Thursday, 1:15 to 2:45 PM
Citrus

Session Coordinator:
Jeanie Forray, Western New England University

Panelists:
Jeanie Forray, Western New England University
Christine Quinn Trank, Vanderbilt University

As external stakeholders demand evidence of student learning and accreditors require institutions to show evidence of impact, management education scholarship has gained increased prominence within the academy. This session is designed as both a ‘Meet the Editors’ informational opportunity as well as a developmental incubator for works-in-progress within the management education/innovative teaching domain. The editors of two management education journals, Academy of Management Education & Learning (AMLE) and Journal of Management Education (JME), will share insights on authoring for management education publications and provide participants with developmental feedback on poster presentations of works-in-progress. Participation in poster presentation feedback requires advance submission of an abstract describing a research project in process.

By invitation only

49. Track 7: Managerial Capabilities in Dynamic Environments
Thursday, 1:15 to 2:45 PM
Long Key

Session Facilitator:
Manjot Bhussar, Auburn University

Data-Driven Decision Making and Managerial Attention in Dynamic Environments: Using Major League Baseball (MLB) Teams
Jaemin Kim, Stockton University
Ellen Kraft, Stockton University

Drawing on the integrative model of resource-based view and attention-based view, we propose that organizational performance will decrease when data-driven decisions are interacted with analytic-based HR management. To test our hypothesized model, we observed 30 major league baseball (MLB) teams from 2013 to 2015. Our results found that the impact of a team’s commitment to baseball analytics on a team’s winning percentage decreased when the batters whose ability highly fitted into an analytical model had more opportunities to play games in the MLB. Our findings indicate that a firm’s high reliance on statistical findings in managing HR resources can undermine the positive impacts of data-driven decisions on organizational performance due to the decreased spectrum of available strategies (i.e., social simplicity) and too simplified logic of value creation (i.e., causal clarity).

Dangerous Politics: A Multi-Level Investigation of Organizational Politics, Safety Motivation, Safety Climate, and Workplace Accidents
Timothy Munyon, University of Tennessee-Knoxville
Andrew Carnes, Western Carolina University
David Dawley, West Virginia University
Mark Griffin, The University of Western Australia

In spite of significant advances in safety management, workplace accidents remain a pervasive threat for many workers, suggesting a need for new theories that illuminate potential obstacles to safety promotion. Consequently, in this paper, we extend safety theory by proposing a political influence perspective on safety management.
Specifically, incorporating multi-level structural equation modeling, we test the direct effects of perceptions of organizational politics on workplace accidents, and the intervening effects of safety climate and safety motivation in this relationship. Drawing on a predictive study of industrial workers, our results show that perceptions of organizational politics are positively related to workplace accidents one year later, and that individual safety climate perceptions intervene within this relationship. We discuss these findings, limitations, and future research directions.

Mitigating Influence of Transcendence on Politics Perceptions’ Negative Effects

Diane Lawong, Florida State University
Charin McAllister, Northeastern University
Wayne Hochwarter, Florida State University
Gerald Ferris, Florida State University

Scholars and practitioners alike have confirmed that work politics are an inexplicable feature of virtually all work contexts capable of affecting a myriad of employee and organizational outcomes. Despite ever-increasing research, only a limited number of studies have focused on the cognitive processes capable of influencing perceived politics (POPs) – work outcome relationships. In this multi-sample investigation, we examine the manner in which transcendence, defined as a cognitive process in which employees adopt a broader and future-oriented view of existing phenomenon, moderates the relationship between employees’ POPs and several work outcomes (i.e., job satisfaction, job tension, emotional exhaustion, work effort, and frustration). Specifically, we argue that high levels of transcendence will attenuate the adverse effects associated with heightened politics perceptions. Results from two samples (rSample 1 = 191, rSample 2 = 158) supported our hypotheses affirming the neutralizing potential of transcendence on POPs – work outcome relationships. Contributions, strengths/limitations, and research avenues warranting consideration are discussed.

Leader Political Skill and Work Relationship Favorability: An Examination of Mediating Characteristics and Follower Outcomes

John Harris, Georgia Southern University
Gerald Ferris, Florida State University

The purpose of this study was to extend the research surrounding the impact of leaders’ political skill on the valuable outcomes experienced by their followers at work through the high-quality relationships developed between politically skilled leaders and their followers. Further, this research was intended to establish possible characteristics or behaviors exhibited by politically skilled leaders, and perceived by their subordinates, through which leaders influence the quality of relationships with their followers. This was accomplished through examining a model of relationships at work in which leaders’ political skill positively influences the quality of the relationships that leaders have with their followers through the mediating mechanisms of displayed leader humility, displayed leader empathy, and the leader’s personal perceptions of control over the relationship with the follower. Leader follower relationship quality, in turn, positively influences followers’ perceptions of organizational justice, their own well-being, their engagement in organizational-citizenship behaviors, and leaders’ ratings of their followers’ performance. Using a sample of 145 leader-follower dyads, it was found that leader political skill does impact leader-follower relationship quality through the mediating mechanisms of leader humility, leader empathy, and perception of control, and leader-follower relationship quality was significantly related to followers’ perceptions of justice, well-being, and organizational citizenship behaviors, and leader-rated performance. This research continues to expand the knowledge and understanding of how leaders, particularly those with political skill, are able to impact their relationships with their followers and the value that those relationships can produce. Strengths, limitations, and implications for theory are discussed.

51. Track 5: The Workplace and Stigma
Thursday, 1:15 to 2:45 PM
Sawgrass

Session Facilitator:
Darryl Rice, Miami University (Ohio)

Covering Stigmatized Identities in Organizations: The Role of Ego Depletion and Inauthenticity
Shanna Daniels, Florida State University
Kaylee Hackney, Baylor University
Liam Maher, Florida State University
Pamela Perrewé, Florida State University

Research related to stigmatized identities in organizations has received increased attention, yet many questions remain regarding the role of covering or downplaying these stigmatized identities. We move the conversation beyond whether to reveal or conceal stigmatized identities by examining covering as a part of the identity management process. We develop a theory of covering depletion, which encompasses self-regulation, ego depletion, and a lack of perceived authenticity. We argue that covering depletion is the mechanism by which employees experience poorer well-being, job attitudes, and performance when trying to cover their stigmatized identities. We conclude by integrating the concepts from diversity and inclusion, identity, and covering demands to propose promising new directions for research and practice in cases of inclusion, identity, and covering.

Ex-Offenders and Employment: A Comprehensive Literature Review

Chen Wang, Florida International University
Hock-Peng Sin, Florida International University
Ajay Ponnapalli, Florida International University

Ex-offenders make up a substantial portion of the United States’ labor market. Members of this population face significant barriers to entering the workforce, including public policy, stigmatized attitudes, and fear. Further, misconceptions about this group – that they are unskilled, uneducated, and unqualified for today’s workforce – greatly impacts their employability. While researchers from various disciplines have emphasized the importance of employment in ex-offenders’ successful reentry into society, this issue has yet to receive significant attention from management scholars. We seek to fill this gap through a comprehensive review of the literature as it relates to ex-offenders’ experience with employment. In total, we identified 513 articles from 27 academic disciplines. We then distilled these articles into 8 broad domains of related disciplines, highlighting exemplary studies within each. Finally, we aligned the findings from these studies with major HR functions and identified dominant themes within each. As an important first step, our research not only examines the coverage of extant literature, but also highlights the richness of this topic as grounds for academic research. Major takeaways and directions for future research are briefly discussed.

Don’t Ask, Don’t Receive: The Relationships among Identity Strain, Invisible Disability, and Climate for Inclusion on Veteran Workplace Accommodation Requests
Katerina Gonzalez, Baruch College, CUNY
C. Justice Tillman, Baruch College, CUNY
Jeanne J. Holmes, North Carolina A&T State University

The adjustment and stress brought on by occupational transition can be difficult for many veterans. However, it is especially challenging for veterans entering the civilian workforce with a disability. The Americans with Disabilities Act requires most employers to provide reasonable accommodation, yet there is reason to believe that veterans with disabilities are often hesitant to make such requests. This study examines the individual (i.e., identity strain, visibility of disability) and organizational (i.e., perceptions of climate for inclusion) factors that influence accommodation requests among disabled veterans through experiencing psychological safety. The authors 1) develop a short 5-item scale for invisible disability and 2) find that among a sample of
theoretical and practical implications are discussed. Higher (rather than lower) leader-member exchange. Our findings’ prohibitive voice relationship was stronger when there was also a symbolization; and the positive moral identity internalization—leader-member exchange quality, and coworkers’ moral identity. Based on the premise that prohibitive voice is a challenging act that nearly all of these involve comparisons of the self to other individuals. Although prior work in the area has involved sociological theories (especially reference group theory), the psychological theories common in the mainstream entrepreneurship literature are largely absent in studies of academic scientists. A full understanding of what drives academic scientists to commercialize their research findings will require examination of individual differences that go far beyond the demographic characteristics of sex and age typically included. We conclude that future work in academic entrepreneurship should use company founding to define an entrepreneur, make comparisons across demographic groups, and include variables derived from psychological theory.

Prohibitive Voice as a Moral Act: The Role of Moral Identity, Coworkers, and Leaders
Salar Mesdaghinia, Eastern Michigan University
Debra Shapiro, University of Maryland
Robert Eisenberger, University of Houston

Speaking up against harmful (e.g., unsafe, unproductive) practices in organizations, prohibitive voice, can be considered a moral act as it helps and protects the organization and its stakeholders (e.g., employees, customers, and the public). Yet, prohibitive voice is challenging and risky for employees because it involves criticizing others. Based on the premise that prohibitive voice is a challenging moral act, this study looked at employees’ moral identity internalization, leader-member exchange, and coworkers’ moral identity symbolization as potential factors that motivate and facilitate employees’ use of prohibitive voice. Field data collected from hospital employees and their supervisors and coworkers supported nearly all hypotheses. Specifically, employees’ use of prohibitive voice was positively associated with their moral identity internalization, their leader-member exchange quality, and coworkers’ moral identity symbolization; and the positive moral identity internalization—prohibitive voice relationship was stronger when there was also a higher (rather than lower) leader-member exchange. Our findings’ theoretical and practical implications are discussed.

Haley Wozny, Longwood University
George Banks, University of North Carolina-Charlotte
Alexandra Dunn, University of Mary Washington
Gregory Berka, Queens University of Charlotte
David Woehr, University of North Carolina-Charlotte

Cognitive complexity represents the extent to which individuals are able to structure and process their environment in a multidimensional manner. Once one of the most widely studied cognitive variables, research on cognitive complexity has stagnated in recent years. The decline in research on cognitive complexity is likely due, in part, to conceptual and measurement issues that exist in the literature. The purpose of the current study is to provide a comprehensive summary of the cognitive complexity literature. That is, we examine the nomological network of cognitive complexity and the incremental validity and relative weight of cognitive complexity over traditional predictors of important job outcomes like performance and satisfaction. We propose a set of research questions regarding the relationship between cognitive complexity and demographic/contextual variables, psychology variables, job attitudes, and work outcomes. We answer the proposed research questions by performing a meta-analytic review of the literature area (k = 76, n = 17,314). Drawing from the results of the study, we also propose a set of propositions and a user-friendly format of a popular measure of cognitive complexity to advance the literature and encourage future research on cognitive complexity.

We review research on the activities of scientists employed in entrepreneurial universities. Definitions of behavior in the mainstream entrepreneurship literature argue against the inclusion of patenting as “entrepreneurship,” and suggest that future research should require company founding as a critical element of what constitutes entrepreneurial action. We then review the few studies that have addressed the personal characteristics of individual scientists and note that nearly all of these involve comparisons of the self to other individuals. Although prior work in the area has involved sociological theories (especially reference group theory), the psychological theories common in the mainstream entrepreneurship literature are largely absent in studies of academic scientists. A full understanding of what drives academic scientists to commercialize their research findings will require examination of individual differences that go far beyond the demographic characteristics of sex and age typically included. We conclude that future work in academic entrepreneurship should use company founding to define an entrepreneur, make comparisons across demographic groups, and include variables derived from psychological theory.

Back to the Future: The Influence of Expected Future Well-Being on Nascent Entrepreneurship
Andrew Bennett, Old Dominion University
Steve Lanivich, Old Dominion University
M. Mahdi Moenini Gharaqozloo, Old Dominion University
Yusuf Akhulat, Old Dominion University

In this study, we explore how stress appraisals of starting a future business and expectations of future well-being influence nascent entrepreneurial activities. To do this, we draw upon the stress appraisal literature and integrate how individuals can have both positive and negative appraisals within entrepreneurship (e.g., challenge and hindrance stressors). In addition, we build upon ideas that future perceptions of well-being can influence present-day behaviors potentially more than current well-being. Within a sample of 355 university studies, we test five hypotheses and find support for the proposition that challenge stress appraisals and expected future life satisfaction positively influence nascent entrepreneurship. Our overall finding that future perceptions of well-being explain 22% of the variance of nascent entrepreneurship activities highlight the continued need to explore well-being within an entrepreneurial population.

Entrepreneurial Experience, Entrepreneurial Motivation, and Choice of Exit Strategies
Leon Faifman, Florida Atlantic University
Kevin Cox, Florida Atlantic University
We apply institutional theory to provide a comprehensive explanation about how previous entrepreneurial experience influences entrepreneurial motivation and exit strategies. The main research question addressed is: How does motivation and entrepreneurial experience influence the choice of exit strategies? This research question is timely and important to the landscape of existing entrepreneurship literature as it aids in explaining why different entrepreneur pursue and prefer disparate exit strategies. For example, among studies that separately consider antecedents and consequences of different entrepreneurial motivations and entrepreneurial exits most receive consistent support. Conversely, among studies that examine how entrepreneurial motivation influences entrepreneurial exit the results are generally unclear and inconsistent leading to a gap in our current understanding of these phenomena. Our study intends to fill this gap by arguing that experienced entrepreneurs have different types of motivation, and will have different views on venturing and entrepreneurial exit. Specifically, we propose the entrepreneurs are motivated by different goals and objectives, and these goals and objectives are instrumental in determining their preferred exit strategy. In addition, we suggest that the relationships between motivation and preferred exit are moderated by entrepreneurial experience. Thus, we will identify the basis of setting up a project and be off and coding in a matter of minutes. We will identify several processes using CAQDAS to signal the careful steps to evaluate your coding. This session is for both the researcher who is new to inductive coding of textual materials as well more advanced qualitative researchers who are looking for tips and tricks to speed coding and build confidence in the coding. You can code along with us if you download the free QDA Miner lite -- https://provalisresearch.com/products/qualitative-data-analysis-software/freeware/.

54. SMA Networking Break
Thursday, 2:45 to 3:15 PM
Banyan Breezeway

Session Coordinator:
Joy Karriker, East Carolina University

Sponsors: Old Dominion University, University of Central Florida, and University of Memphis

55. PDI: Advancing the Assessment of Proactivity: Construct Clarity, the Emerging Developmental View, CMV, and Cultural Generalizability
Thursday, 3:15 to 4:45 PM
Indian Key

Session Coordinator:
Laura Marler, Mississippi State University

Panelists:
Laura Marler, Mississippi State University
Bryan Fuller, Louisiana Tech University
Saleh Bajaba, King Abdulaziz University
Matt Lovett, University of Louisiana at Monroe
Marcia Simmering, Louisiana Tech University

In this interactive panel symposium, we identify and discuss four measurement issues related to proactivity. First, the lack of clarity regarding the polar opposite of proactive personality is problematic. Second, emerging developmental views of proactivity suggest that what has been conceptualized as a stable trait is more malleable than initially thought. Third, previous research indicates the importance of common methods variance (CMV) considerations when assessing proactivity. Fourth, proactive behavior differs across cultural contexts, yet existing measures lack generalizability. We will discuss these four issues and lead an interactive discussion to advance the measurement and study of proactivity.

56. PDI: Zero to Coding in 30 Minutes: Analyzing Text with Computer Aided Qualitative Data Analysis Software
Thursday, 3:15 to 4:45 PM
Bird Key

Session Facilitator:
Kaylee Hackney, Baylor University

The Angry Implications of Work-Family Conflict: Examining...
Effects of Leadership on an Emotion-based Model of Deviance
Drawing upon Affective Events Theory (AET), we propose a model of work interfering with family (WIF, a form of work-family conflict), work-family resentment, and organizational deviance with consideration of the leader’s role on the emotional response as a moderator. We explore both transformational and transactional leadership behaviors as moderators to better understand how a leader’s actions may affect the reactions of an employee experiencing WIF. Interview data and employee survey data were collected from 221 employees at 55 small businesses in a large southern U.S. metropolitan area. Multi-level modeling results revealed that work-family resentment fully mediated the relation between WIF and deviance, and the positive WIF-resentment and WIF-deviance linkages were strongest when leaders were low in transformational leadership and high in transactional leadership. These results suggest that employees who experience higher levels of transactional leadership in combination with lower levels of transformational leadership are more likely to experience the emotion of resentment and to also retaliate by committing acts of deviance directed toward their organization. We discuss the theoretical and managerial implications of the empirical linkage between WIF and deviance through resentment, and the ways leaders might mitigate detrimental effects.

Well-Being at Work: The Important Role of Social Courage, PsyCap and Ethical Climate
Joshua Cogswell, University of South Alabama
Matt C. Howard, University of South Alabama

In this study, we investigate the relationship of social courage and important outcomes, showing that the construct influences flourishing, engagement and burnout. We also show that Psychological Capital (PsyCap) has a significant mediating effect between these relationships, which adds to our understanding of the process by which social courage impacts outcomes. Also, we identify a potential boundary condition for the social courage-PsyCap relationship, finding that ethical climate is a moderator. We discuss the implications of these findings, noting that this study extends knowledge of two important and emerging areas of research.

Organizational Sensemaking Invades the Home: The Relationship of Crisis Media Coverage and Work-Family Conflict
John Arnold, Florida State University

The current study evaluated the effects of crisis media coverage on employee stress off the job. Particularly, I examined the possibility that media coverage of an organizational crisis would increase work-family conflict related to the situation. I hypothesized that officers’ perceptions of negative media coverage would be positively related to crisis-induced work-family conflict. I also hypothesized that supervisor communication would moderate the relationship between perceptions of negative media coverage and crisis-induced work-family conflict. Using a sample of police officers who responded to a survey two weeks after a crisis event, results supported the hypotheses. This study contributes to the current literature by extending understanding of where and why organizational crises result in employee stress as well as offering an agenda for future research to further knowledge of media, work-family conflict, and sensemaking during crisis.

A Typology of Attributes within Organizations: The Dynamic Process of Stigma
Phoebe Pahng, Iowa State University
Sebastian Cortes Mejia, Iowa State University
Michael Howe, Iowa State University
Sam DeMaria, Iowa State University

Stigma as a process can potentially affect a large percentage of the population due to its diverse and context-driven nature (Goffman, 1963). Consequently, in any particular situation, any individual person could be a victim of stigma and, as a result, could be denied the organizational opportunities available to non-stigmatized individuals via the labeling, stereotyping, separation, and discrimination components of stigmatization (Link & Phelan, 2001). In order to understand differences in the stigmatization process, a typology of attributes found in organizations is developed. This typology is grounded in stigmatization theory, building upon the dimensions of controllability and visibility of the attribute. In addition, we bring together theories and empirics originating in both the I/O psychology and human resource domains to advance our understanding of stigma and its effects by introducing a dimension related to legal protections. Therefore, the purpose of this paper is to develop a multi-dimensional taxonomy of stigmatizing attributes and discuss nuanced discrimination effects related to the attributes. In addition, we propose a research agenda designed to further our understanding of stigma and its effects in organizations.

59. Track 4: Understanding Organizational Members: Attorneys, Managers, Entitled as Well as Experienced Employees
Session Facilitator: Brad Harris, Texas Christian University

Comparing Thriving and Engagement among Attorneys: Two Sides of the Same Coin
John Roach, University of South Alabama
William Gillis, University of South Alabama
Treena Finney, University of South Alabama

Thriving and engagement in the workplace are each state-like, motivational constructs within the field of positive organizational behavior (POB) that share significant associations with many of the same antecedents and outcomes. Yet, given their similarities, questions remain about the differences between the two constructs and their incremental impact on behaviors in the workplace. This study addresses these research questions through a series of three methods of confirmatory factor analyses (CFAs) and subsequent analysis using structural equation modeling (SEM). The results show that thriving and engagement are so strongly correlated that there appears to be no significant difference between the two. Further, results demonstrate that employee engagement, like thriving, has a stronger correlation with self-development than with performance improvement – thus, countering prior conceptual distinctions between the two constructs based on an individual’s growth orientation. The implications of these findings in regards to the measurement of thriving and engagement are discussed, and suggested directions for further research are presented.

There Are Two Sides to Every Story: The Veteran’s Perceptive on Socialization
Alexandra Dunn, University of Mary Washington
Linda Shanock, University of North Carolina-Charlotte
Eric Heggestad, University of North Carolina-Charlotte
Cliff Scott, University of North Carolina-Charlotte

Socialization is defined as a two-way interactive process where organizational outsiders become insiders and insiders adjust to working with outsiders. Much existing socialization research has focused on the former part of this definition: how newcomers become insiders. Veterans’ (coworkers who socialization newcomers) perceptions of the process have largely been ignored. Using data collected from 115 matched veteran-newcomer pairs, this study examined relationships between veterans’ perceptions of resources, newcomer adjustment, and veteran well-being and job attitudes. Veteran’s assessment knowledge self-efficacy was related to newcomer adjustment and veteran’s well-being and job attitudes during socialization. An interesting non-significant finding was that most veterans (72%) did not perceive socialization as an added socialization-related job demand. These results provide evidence to organizations that while paying attention to newcomers is important, doing so without also focusing on the veterans helping newcomers could be potentially detrimental to veteran’s own perceptions.
Uncovering Rater Goals in the Performance Appraisal Process: An Integrative LMX and Network Theory Perspective
Holly Loncarich, University of Arkansas

Performance appraisals are one of the most commonly used instruments in Human Resource system despite empirical findings that indicate that there is a very weak relationship between job performance and ratings of job performance (Murphy, 2008). Managers conducting performance appraisals tend to heavily inflate performance ratings and may pursue different goals (Murphy et al., 2004; Spence & Keeping, 2013). In order to better understand the dynamics as to why raters may rate two different employees differently, I integrate Network and Leader-Member Exchange (LMX) theory. I explore the parallels between tie strength and the lifecycle stages of LMX. I investigate how the three different lifecycle stages of LMX relationship development interact with the ratee’s network position to influence the rater’s goals and motivation when rating employees. I identify three different general goals the supervisor may employ when rating their ratees and determine how the network position of the ratee is likely to influence the rater’s perception of that employee. I introduce a model that outlines how network structural position of the ratee and the type of relationship shared influences rater goals. By integrating network theory into the performance appraisal literature in the context of leader-member exchange, I hope to: (a) lay the groundwork for future empirical investigations, (b) contribute to the performance appraisal literature by recognizing the influence of relationships within an organization rather than just individual attributes of the employees, and (c) enhance our understanding of what performance appraisals do tell us.

Managing Psychological Entitlement Through Accountability
Paul Harvey, University of New Hampshire
Mary Dana Laird, University of Tulsa

We present three studies that investigate the seemingly counter-intuitive notion that psychologically entitled individuals react positively to high levels of accountability. The beneficial impact of accountability on entitled employees’ effort and performance levels was observed across a profession-specific sample (Study 1), a student sample (Study 2), and an inter-organizational sample (Study 3). Given the difficulty organizational scholars have faced in identifying effective tactics for managing psychologically entitled employees, we suggest that these findings may have important implications for the study and management of workplace entitlement.

60. Track 7: Stakeholder Dynamics
Thursday, 3:15 to 4:45 PM
Long Key

Session Facilitator:
Miles Zachary, Auburn University

*Best Overall Doctoral Paper and Doctoral Paper in Track*
The Behavioral Theory of the (Community-Oriented) Firm: Community Orientation and Bank’s Response to Attainment Discrepancy
Stephen Smulowitz, IESE Business School
Horacio Rousseau, Florida State University

Building on the behavioral theory of the firm (BTOF), we show how organizational orientation moderates the effect of attainment discrepancy on firm outcomes. Organizations have differing orientations, including methods and non-economic goals, that can buffer them from the risk-inducing effects of falling below financial expectations (i.e., negative attainment discrepancy), and cause them to pursue non-economic goals when they exceed financial expectations (i.e., positive attainment discrepancy). We argue that a community orientation, exemplified by community banks, will attenuate the risk-inducing effect of negative attainment discrepancy, and positive attainment discrepancy will accentuate the positive effect of being a community bank on community investment, measured as small business lending. Using samples drawn from U.S. banks from 2007-2013, we provide robust empirical support for our hypotheses.

Cognitive Rivalry: Toward a Theory of Atypical Competitive Dynamics between Activists and Firms
Theodore Waldron, Texas Tech University
Olivia Aronson, Texas Tech University
Chad Navis, Clemson University
Jeff York, University of Colorado
Desiree Pacheco, Portland State University

This paper draws from research on organizational identity, collective-action frames, and entrepreneurship to explain cognitive rivalry between activists and firms. We contend that cognitive rivalry occurs when activists and firms battle over the composition of the firms’ identities, with activists aiming to change, and firms aiming to preserve, the latter’s belief systems and defining qualities. We propose that cognitive rivalry involves four archetypical interactions between activists and firms, each characterized by a unique firm reaction to an activist frame, modified by firm entrepreneurial orientation, and triggered by distinct situational signals. Our theoretical framework expands traditional conceptualizations of rivalry by enriching the explanatory breadth and depth of research at the intersection of competitive dynamics and social activism. More fundamentally, it offers an alternative to the idea that only firms can engage in rivalry and indicates that rivalry depends more on the forms of control that organizations seek than the types of contexts they inhabit.

How Stakeholder Identification Might Put Handcuffs on a Firm: A Qualitative Analysis of Anheuser-Busch
Sarah Burrows, Concordia University
Peter Jaskiewicz, University of Ottawa
David Deephouse, University of Alberta

Management research suggests that stakeholder-firm identification confers a competitive advantage upon firms because stakeholders that identify with a firm are more willing to engage with that firm and less sensitive to financial terms than other, more transactionally oriented stakeholders. Although psychology and social identity research indicate that such identification can also have a dark side, it remains unknown how this applies to the context of large corporations. To fill this research gap, we conducted a historic media analysis on Anheuser-Busch (AB), an iconic U.S. firm that has been known for its favorable reputation, indicating that many stakeholders identify with the firm. We identified and coded a total of 626 media articles on AB published in major U.S. newspapers from 1946 to 2009. Consistent with previous research on social identity theory, we found that AB fulfilled stakeholders’ esteem needs to bolster its reputation, improve stakeholder-firm identification, and contribute to firm performance. However, we also found a dark side of stakeholder-firm identification, which we label the organizational identification handcuff. Stakeholders resisted many changes to AB’s identity. This occurred not only in the case of scandals but even by entrepreneurial behaviours that might improve firm competitiveness.
We also develop new theory for why institutional conditions moderate the relationship between asset specificity and entry mode selection. We test and find evidence consistent with our predictions on a representative sample of foreign-owned firms collected by the World Bank. This research contributes to the literature on foreign entry mode strategy by demonstrating more specifically how and why asset specificity and institutional factors influence the choice of entry mode.

Revisiting the Evaluation of Equity Investments in Foreign Firms: Strategic Motivations and Investment Dynamics
Tong Hyoun Kang, University of Memphis
Frances Fabian, University of Memphis
Rama Reddy, Indiana University-South Bend

This paper offers a theoretical foundation for incorporating equity investment dynamics in order to improve our understanding of cross-border investments. The strategic objective for making an international equity investment will affect factors such as the probability of profitability or failure, and whether the level of such an investment is likely to remain stable or change over time. Yet, many studies have subsumed the wide variance in objectives for equity stakes in investigations; for instance, in regard to relative performance as an entry mode compared to wholly owned subsidiaries. Here we consider the seven strategic objectives of information asymmetry, resource control, resource alignment, resource synergy, learning/ knowledge, flexibility, oligopolistic reaction and institutional constraints to propose implications for equity dynamics. Continuing to blur the wide uses for equity in international markets helps spread misunderstandings about globalization threats.

Boards’ Relevant Experience and Cross-Border M&A Performance: The Good, the Bad, and the Ugly?
Whitney Douglas Fernandez, San Diego State University
Chamu Sundaramurthy, San Diego State University

Recent board scholarship has emphasized the importance of leveraging the relevant human and social capital of boards in the process of formulating and implementing strategy. Among studies taking this perspective of the board, the underlying assumption has been that when it comes to relevant board expertise, more is generally better. However, what remains largely missing from this discussion has been a full consideration of the limits that may exist to the value of directors’ relevant experience. This study explores contingencies that may stretch relevant board experience beyond the limits of its usefulness. In particular, we identify two conditions that can limit the effectiveness of boards’ relevant experience: (1) a tendency for boards to over-engage in (i.e., dominate) the decision-making process, and (2) a tendency for firms’ to over-rely on boards’ relevant expertise to the exclusion of other sources of knowledge. Exploring this issue in the context of cross-border M&As, we find evidence that when boards have more relevant experience vis-à-vis CEOs, this can lead to board over-engagement and firm overreliance on boards, and thus attenuate the positive effect of relevant board expertise on cross-border M&A performance. We further find that increased institutional distance between the home and target countries also negatively moderates this relationship. Overall, our findings suggest the need to exercise caution in viewing relevant board expertise as a “panacea” of board effectiveness.

62. Track 5: Women and the Workplace
Thursday, 3:15 to 4:45 PM
Sawgrass

Session Facilitator:
Carliss Miller, Sam Houston State University

Female Emotional Labor: Examining through the Lens of Support and Reciprocity
Arjun Mitra, University of Illinois-Chicago

While past research has lamented the sex stereotypes related to emotional expression of female employees in the workplace, little is known how environmental support can reassure female employees to engage in less emotional labor and express their authentic selves. Using the job demands-resources (JD-R) model, I theorize that perceived organizational support and team psychological safety leads to less female emotional labor. Further, climate for inclusion moderates the negative relationship between perceived organizational support and female emotional labor. I also theorize that servant leadership moderates the negative relationship between team psychological safety and female emotional labor. Using norms of reciprocity, I argue that female employees reciprocate the support received from the organization and the team through increased prosocial commitment towards their organizations and increased prosocial behaviors towards their teams.

What Comes Next? A Case Study of Women, Work, and a Criminal History
Nicole Young, Franklin & Marshall College

Criminal history is one of the most detrimental stigmas in the employment context. However, much of our research on employment of this population considers the organizational or male ex-offender perspective. In this case analysis, I observed and interviewed currently incarcerated females who were participants in an employment preparation program to gain an in-depth understanding of their experience as they prepare for to enter or re-enter the workforce. Despite their current incarceration status, all were preparing for release within the next nine months. The main factors that influenced their perspective as related to the entry or re-entry into the labor market upon release were their starting point as related to their job search, career self-efficacy, self-perception of the prison identity, and their social support network. The findings from this study may have highlighted that the stigma and stereotypes attached to this characteristic of criminal history may be imposed by others, but not necessarily self-interpreted. Future research directions and practical implications for organizations are provided.

Do Women Always Support Other Women? A Study of the Upper Echelon
Arjun Mitra, University of Illinois-Chicago
Steve Sauerwald, University of Illinois-Chicago

While much research has examined the sex-based pay gap in top management teams, little is known whether the sex composition of corporate boards influence the compensation received by female executives. Although researchers have argued in the past that females will favor other females due to similarity in ascribed status, this may not necessarily hold true under contexts when there is a threat to their achieved status. We argue that female directors who serve on the compensation committee are less likely to support female executives when they experience an achieved status threat due to a negative evaluation of their competence. Further, female directors may also fall prey to “think leader, think male” stereotypes when they encounter an achieved status threat due to a decline in firm performance. Based on a sample of 882 publicly-traded U.S. firms, we find support for our arguments.

63. Track 6: Understanding Team Structure and Leader Emergence
Thursday, 3:15 to 4:45 PM
Sawgrass

Session Facilitator:
Liam Maher, Florida State University

Revisiting the Strategic Core Theory of Teams: Theory and Evidence for Boundary Conditions
B. Parker Ellen, Northeastern University
Thomas Mattson, University of Richmond
Trey Sutton, University of Richmond

The strategic core theory of teams argues that certain roles are more central to team tasks, and therefore are more strongly related to team
performance than are other roles. However, we argue that team task interdependence serves as a boundary condition of the strategic core theory of teams. Specifically, for teams with reciprocal task interdependence (i.e., where subgroups are reliant upon each other’s outputs as inputs), we predict there will be no statistical difference in the effects of non-core and core role holder career experience, team experience, job skill, and resource allocation on team performance. Further, we argue somewhat counterintuitively that a divergence between core and non-core compensation and skill can impair team performance for teams with reciprocal task interdependence. Results from a multilevel model of National Basketball Association teams over the course of 25 seasons provide empirical support for our predictions.

Peer Control: Outcomes and Measure Equivalence in Work-Units Versus Teams
Andrew Loignon, NEOMA Business School
Misty L. Loughry, Rollins College
David Wocha, University of North Carolina-Charlotte
Matthew Ohland, Purdue University

Informal peer control, or attempts to influence people at the same organizational level in the absence of hierarchical authority, is a common feature of contemporary organizations. Despite the relevance of this topic, there remains a great deal of ambiguity concerning the conceptualization and operationalization of peer control. For instance, scholars disagree about whether peer control is a unitary or multidimensional construct or if peer control can be summarized using higher-order factors. In order to improve the conceptual clarity of peer control, we test competing models in two distinct organizational contexts: larger work-units and smaller work teams. Based on data from 67 work-units at a theme park and over 1,000 student teams, we found clear support for seven distinct factors of peer monitoring (i.e., notice, praise, correct, report, discuss, gossip, and avoid) that are, on average, moderately related to one another and exhibit unique effects for key outcomes (e.g., work-unit performance). Our findings help clarify the underlying dimensions of informal peer monitoring and offer researchers the means of examining more nuanced effects and questions pertaining to this important topic.

How Does Leadership Structure Emerge in Teams? The Effects of Team Transactive Memory System and Power Distance Climate
Ning Xu, SUNY - University at Buffalo
Hamed Ghehrman, SUNY - University at Buffalo
G. James Lemoine, SUNY - University at Buffalo
Paul Tesluk, SUNY - University at Buffalo

Adaptive leadership theory suggests that shared leadership networks grow in a complex manner over time, but little is known about this process, why it begins, and how different aspects of these networks interact with one another. In this paper, we investigate how power distance climate and transactive memory systems foster the emergence of leadership structure in team settings, and how that structure develops over time. We position leadership network decentralization and density as separate facets of the shared leadership network, with decentralized networks precipitating more dense team leadership. Through a study of 450 students in 90 simulated expedited teams, we find support for most of our model: transactive memory systems contribute to decentralized leadership structures, which in turn precipitate more dense leadership networks. This density of team leadership eventually contributes to team performance. The theoretical and practical implications of these results are discussed.

64. Track 6: Moderators of Employee Behavior
Thursday, 3:15 to 4:45 PM
Jasmine

Session Facilitator:
Charn McAllister, Northeastern University

Implicit, Explicit, and Observer-Reported Core Self-Evaluations and Work Outcomes: The Moderating Role of Task Significance
Erik Diel, Hohenheim University
James Meurs, University of Calgary

Core self-evaluations (CSE) represents the fundamental appraisals individuals make about their self-worth and capabilities. Although scholars characterized CSE as subconscious evaluations, the implicit aspect of CSE has not yet been examined. Drawing on models of dual information processing, we investigate how explicit, implicit and acquaintance-rated CSE relate to task performance, organizational citizenship behaviors (OCB), and income. We argue that implicit CSE incrementally predicts these three outcomes beyond explicit CSE. Further, we hypothesized that task significance strengthens the positive relationships that explicit and implicit CSE have with these criteria. We found that (1) implicit CSE incrementally predicted OCB and income, and (2) the interaction between implicit CSE and task significance predicted task performance and OCB. However, the interaction between explicit CSE and task significance did not predict outcomes. Our effects for implicit CSE held even when controlling for acquaintance ratings of CSE. Also, acquaintance ratings revealed some incremental validity for predicting income. We discuss implications for CSE measurement and research, and the practical implications of our findings.

A Moderated-Mediation Model of Resilience, Mistake Tolerance, Work Engagement, and Helping Behaviors
Laurence Weinzimmer, Bradley University
Eric Michel, University of Illinois-Chicago
Anezka Blahusova, Bradley University

Based on a recent call for better integration of employee resilience research, this study seeks to understand the role that organization context plays in the relationship between trait resilience and positive outcomes. Drawing on trait activation theory, which purports personality traits impact intrinsic motivation and ultimately, work behavior, we position work engagement as a mediator between trait resilience and helping behavior. We also hypothesize that organizational context, in the form of perceptions of mistake tolerance, will strengthen the positive association between trait resilience and work engagement. In a sample of 209 working managers and executives, moderated mediation analyses reveal that organizational context strengthens the association between trait resilience and work engagement and thus positively impacts helping behavior. Our results move beyond a direct association between resilience and organizational outcomes and suggest a more nuanced view that takes into consideration the interaction of personality traits and situation on work behavior.

Role of Customer Variability and Supervisory Support Climate in Determining Employee Performance: A Cross-Level Moderated Mediation Analysis
Sanjib Chowdhury, Eastern Michigan University

Employee performance under stress has been a significant topic of interest for research and practice. The current study utilized survey data to investigate employee role performance under stress. Findings show that individual-level customer variability (as a parameter of job demands) has a mediated influence on role performance through job strain, and the path between customer variability and job strain is moderated by unit-level supervisory support climate. The findings do not support role overload’s relationship with either strain or with performance. Accordingly, a higher level of customer variability may be more critical than job overload for its detrimental influence on employee role performance in an intimate service environment such as nursing. Additionally, supervisory support climate may alleviate this influence by buffering the link between customer variability and job strain.

65. Track 1: Storytelling, Routines, and Networks
Thursday, 3:15 to 4:45 PM
Banyan
Organizational stories have long been understood by management scholars to play a critical role in furthering the understanding of organizational culture, implementation of firm strategies, and creation of new venture legitimacy. Yet, almost no scholarly efforts have examined relationships between classical story elements and entrepreneurial fundraising success. Drawing from narrative theory and research on organizational persuasion, we examine how the inclusion of key elements associated with storytelling impact funding outcomes for entrepreneurs raising capital through crowdfunding. Specifically, we explore how aspiring entrepreneurs utilize various elements of a story in their appeals for funding across 1,000 crowdfunding campaigns drawn from the Kickstarter platform. Results suggest that crowdfunding campaigns that introduce a protagonist, use temporal-spatial language, craft an appeal from multiple perspectives, create conflict, and utilize more visuals are more likely to be associated with successful crowdfunding performance.

**Referrals as Routines: An Investigation into the Transfer of Clients between Professionals**

*Deborah Searcy, Florida Atlantic University*

Professionals are frequently presented with opportunities that they cannot or will not complete; due to finite resources, these individuals must give away paying clients, through a professional referral, to another professional. This research focuses on the transfer of client relationships, finding that professionals engage in referral routines, where the espoused schema differs widely from the enacted routine. In the espoused schema, professionals refer work that is outside their skill level or specialty, and through a deliberate matching process, select a recipient that is the absolute best. The enacted routine shows that professionals also assess clients based on interpersonal conflict and morality, and by default, choose the person to whom they have sent in the past and who need only surpass a threshold of competence. By engaging directly with individuals and using a grounded theory methodology, I explored the dynamic process between entrepreneurial professionals in sending and receiving professional referrals. The key finding is rather than objective assessments of specific competences or thoughtful analysis of clients’ needs, professionals often use rudimentary perceptions in making their assessments and rely on past referrals, not deliberative matching.

**The Role of Industry Stakeholders in Value Creation**

*Subrata Chakrabarty, University of Texas at El Paso*

In this paper, a conceptual framework on the role of industry stakeholders in value creation is presented. The framework contributes to the literature by theorizing on the types of roles that industry stakeholders can play in a firm's value creation. For instance, in a positive business environment, relying on stakeholders that maximize knowledge spillover can help value creation. Overall, the framework identifies various moderating effects that link the role of industry stakeholders to value creation.

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**SMA Business Meeting**

*Thursday, 5:30 to 6:30 PM*

*Long & Sawyer Keys/Tarpon*

Session Coordinator:

*Micki Kacmar, Texas State University*

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**67. Presidential and Hunt/SOSA Award Reception**

*Thursday, 6:30 to 7:30 PM*

*Pavilion*

Join us as we honor SMA President Micki Kacmar and Hunt/SOSA award winner William Gardner!!!

Session Coordinator:

*Joy Karriker, East Carolina University*

**Sponsors:** North Carolina State University Entrepreneurship Clinic and Texas Tech University

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**Friday, October 27**

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**68. Café SMA Coffee**

*Bar Friday, 8:00 to 8:30 AM Banyan Breezeway*

Enjoy a nice cup of coffee as you head to your first session of the day!!!

Session Coordinator:

*Joy Karriker, East Carolina University*

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**69. SMA Exhibits**

*Friday, 8:00 AM to 3:00 PM Banyan Breezeway*

Session Coordinator:

*Joy Karriker, East Carolina University*

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**70. SMA Registration & Solutions Desk**

*Friday, 8:00 AM to 4:45 PM Banyan Breezeway*

Session Coordinator:

*Don Kluemper, University of Illinois–Chicago*

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**71. PDI: Management Teaching: Idea Sharing and Q&A**

*Friday, 8:30 to 10:00 AM Indian Key*

Session Coordinator:

*Aaron Hill, Oklahoma State University*

Presenters:

*Aaron Hill, Oklahoma State University*

*Patricia Lanier, University of Louisiana-Lafayette*

SMA’s mission statement includes a desire to create value through professional development, high-impact scholarship and teaching, and engaging programs within a community that nurtures members, builds collaborations, enhances friendships, and makes a difference. An area of the mission identified by SMA’s leadership as needing further attention is teaching. We propose a symposium attempting to answer that call while remaining consistent with SMA’s nurturing, collaborative, and friendly culture. Specifically, we propose to organize a one-hour and 15-minute session so as to better fit SMA’s program. The “big picture idea” is to both share tips for enhancing teaching effectiveness across domains (e.g., online; flipped; engagement that apply to any area of teaching) and specific to various domains (e.g., Entrepreneurship, OB, HR, and Strategy) as well as to facilitate discussion on various tools for doing so. We foresee the proposed symposium potentially developing similar to SMA’s Doctoral Consortia over time with Round Table formats in which presenters with expertise in a specific area will be at a Table and participants able to rotate through various tables with a goal of targeting interests and facilitating both more targeted Q&A as well as relationship development. At the present time, we propose this symposium as a first step.
very little research has been done on training within domestic compliance. Despite the importance of corporate compliance training, employees throughout the organization need to be trained about compliance activities. Board members, top managers (Luo, 2005), and standards [2010] and best practices (Kepes, McDaniel, Brannick, & Michael McDaniel, Virginia Commonwealth University) demonstrate how to conduct a meta-analysis that adheres to results. Furthermore, the combined effect of these phenomena never calling into question the trustworthiness of published meta-analytic cultures and other environments in which the MNCs operate greatly compliance training, and monitoring. The industries, markets, local cultures and other environments in which the MNCs operate greatly influence the regulations and mechanisms which govern the compliance activities. Board members, top managers (Luo, 2005), and employees throughout the organization need to be trained about compliance. Despite the importance of corporate compliance training, very little research has been done on training within domestic corporations, and even less within MNCs. The few empirical studies are largely limited to ethics (Watson & Weaver, 2003), supplier compliance (e.g., Egels-Zandén, 2014), and CSR (e.g., Baumann-Pauly, Wickert, Spence, & Scherer, 2013). By examining compliance more broadly, this paper makes a significant contribution to the literature on compliance as it presents the research based on primary interviews with 28 compliance officers in 26 MNC regarding their compliance training. The findings show that in the sample, MNC which had been previously sanctioned were more likely to offer other programs in addition to ethics training than those which had not. Overall, the models which best depicted the training at the subsidiaries of sanctioned Fortune 500 MNCs included senior management involvement. One implication of this paper is that Fortune 500 MNCs which continue to do less for compliance training than what previously sanctioned MNCs do may be at-risk for being investigated by the most stringent regulatory agencies.

Dependence Threat Activation and Corporate Political Contributions
Trey Sutton, University of Richmond
Bruce Lamont, Florida State University
R. Michael Holmes, Florida State University

This paper extends resource dependence theory by developing the concept of dependence threat activation. Some dependencies are, or at least appear to be, more threatening than others for reasons beyond dependence magnitude. Our theory explains the factors that activate the threats posed by dependencies, leading firms to manage those dependencies more aggressively. Using a cross-classified multilevel model in which firms are dependent on multiple U.S. states, we develop hypotheses about the effects of firm-level and state-level factors on corporate political contributions. We test the hypotheses using 2010 and 2012 state-level election cycle data and find strong support for five of the seven hypotheses.

Sustainability of Fast-Moving Consumer Goods: Managing Environmental Impacts of Consumption within the FMCG Value Chain
Bahaudin Mujtaba, Nova Southeastern University
Ian J. Sanderson, Ramkhamhaeng University

Fast-moving consumer goods (FMCG) are vital for many basic human health, hygiene and sanitary needs, especially in the developing world. They include hand soaps, floor cleaners, disinfectants and detergents. However, the greenhouse gas emissions and environmental impacts of consumer use within the FMCG value chain remain a constant cause for concern. In order to investigate, the paper utilizes an exploratory sequential research methodology and focuses mainly on sustainable consumption and the related elements of the FMCG value chain. Mixed methodology is utilized with a focus group of 11 participants in either part-time or full-time employment plus a structured survey yielding 212 responses. The main aim was to examine consumer awareness of sustainability concepts, value chains, responsibility, consumer purchasing attitudes and buying behaviors, and FMCG usage. The findings indicate that consumers are aware of global warming through media, but remain mostly unaware of the size of their environmental impacts compared to other impacts on the value chain. A desire to share responsibility for sustainability with the manufacturer is indicated. A sense of personal social responsibility positively impacts sustainable consumption, but consumers display cognitive dissonance in the purchasing and usage phases. The younger generation, females, and those of Asian descent are shown to be the most sustainability oriented, but many consumers ignore labeling and instructions for use on FMCG. The report concludes with a discussion and recommendations for FMCG managers and leaders. Limitations of the research and ideas for future researchers are highlighted, along with a summary of the research undertaken.

Compliance Training in Previously Sanctioned MNCs
Donna Cooke, Florida Atlantic University
Kfir Manor, College of Management Academic Studies - Israel

Each year multinational corporations (MNCs) devote considerable attention to compliance efforts encompassing risk assessments, compliance training, and monitoring. The industries, markets, local cultures and other environments in which the MNCs operate greatly influence the regulations and mechanisms which govern the compliance activities. Board members, top managers (Luo, 2005), and employees throughout the organization need to be trained about compliance. Despite the importance of corporate compliance training, very little research has been done on training within domestic corporations, and even less within MNCs. The few empirical studies are largely limited to ethics (Watson & Weaver, 2003), supplier compliance (e.g., Egels-Zandén, 2014), and CSR (e.g., Baumann-Pauly, Wickert, Spence, & Scherer, 2013). By examining compliance more broadly, this paper makes a significant contribution to the literature on compliance as it presents the research based on primary interviews with 28 compliance officers in 26 MNC regarding their compliance training. The findings show that in the sample, MNC which had been previously sanctioned were more likely to offer other programs in addition to ethics training than those which had not. Overall, the models which best depicted the training at the subsidiaries of sanctioned Fortune 500 MNCs included senior management involvement. One implication of this paper is that Fortune 500 MNCs which continue to do less for compliance training than what previously sanctioned MNCs do may be at-risk for being investigated by the most stringent regulatory agencies.

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Compliance Training in Previously Sanctioned MNCs
Donna Cooke, Florida Atlantic University
Kfir Manor, College of Management Academic Studies - Israel
In an environment where health care costs keep climbing, health providers—especially hospitals—are under pressure to provide quality medical care while controlling their costs of operation. The challenge for hospitals is how to balance between resource efficiency and delivering patient value. This mandates the close collaboration between marketing and operations—both of which are directly associated with the creation of patient value. This paper looks at the interdependencies of both marketing and operations in hospital performance. A non-radial two-stage Data Envelopment Analysis (DEA), an operations research method used in performance measurement, is employed in measuring and assessing the interdependencies of intangible marketing assets (brand mind share) and operations in hospital performance. This study differs from previous studies that use financial outcomes as indicators for marketing efficiency. The results in this study show that intangible marketing assets are critical in determining the performance of hospitals. This study adds both theoretical and strategic insights for hospital management and various stakeholders into how brand mind share can be integrated with operational efficiency in delivery patient value in the healthcare industry.

Examining Organizational Social Responsibility, Employee Identification and Engagement in a Municipal Context
Shelia Hammon, Athens State University
Marjorie Icenogle, University of South Alabama

Organizations other than corporations conduct massive amounts of business, employ millions of employees, and participate in social responsibility initiatives, yet they have not been included in discussions related to corporate social responsibility (CSR). This study responds to appeals set forth by scholars for more research to be conducted on CSR at the individual level of analysis (Aguinis & Glavas, 2012; Bauman & Skitka, 2012) and for the research to examine CSR in different contexts (Hammon & Icenogle, 2017). Past research has shown a link exists between social responsibility initiatives and organizational identity and also between social responsibility initiatives and employee engagement in the corporate world. This study contributes to theory by confirming these relationships exist with a contextual variation based on a municipal sample. A new term, “Organizational” Social Responsibility” (OSR) is introduced to account for and enable the inclusion of other types of organizations such as government and not-for-profit entities in social responsibility research. Globally, governments employ millions of employees and spend billions of dollars each year providing products and services to constituents. The impact of government and not-for-profit’s “big business” on the global economy validates their inclusion in the research and discussion on OSR. They are accountable to stakeholders for the best use of resources, perhaps more stringently than corporations. Utilizing structural equation modeling, this study shows that government employees can develop attitudes and behaviors associated with organizational identity and employee engagement just as employees in the corporate realm do.

What Matters in Corporate Governance? A Configurational Approach
Murat Kizildag, University of Central Florida
Oguz Ozdemir, University of Nevada-Las Vegas
Melih Madanoglu, Florida Atlantic University

The adoption of corporate governance provisions has been regarded as the culprit of low firm financial performance. On the basis of tenets of agency theory, we use a set-theoretic method, such as the Qualitative Comparative Analysis (QCA) and uncover three configurations of governance provisions that lead to superior financial performance. The presence of poison pills appeared as a core condition in all configuration. A negated analysis indicates that the inappropriate bundling of governance provisions leads to poor firm performance. Our findings provided both theoretical and practical implications for corporate governance research by demonstrating that there are both beneficial and detrimental causal recipes of corporate governance provisions.

Managing LMX: A Follower’s Perspective
Vicki Taylor, Shippensburg University

This reflective exercise, designed for an undergraduate leadership course, helps to demonstrate how individual behaviors and attributes; leader/follower perceptions and identities; and situational factors influence the leader-member exchange relationships (LMX). Working in small groups, students share personal examples of high and low LMX relationships and discuss the factors that help to explain the nature of the relationship that developed. Next students brainstorm ideas for specific follower behaviors that could be used to alter the exchange relationship between the leader and the follower from low to high LMX. Debriefing highlights the role of follower behaviors and attributes; situational factors; and leader/follower perceptions and identities in influencing in-group or out-group placement.

Fake News: Using Real and Fake Business Media in an Introductory Management Course
Andrew Bennett, Old Domoncton University

During the past year, the phrases “fake news” and “alternative facts” have dominated the media and public conversation. In this session, I describe how I integrated media literacy into an introductory management course, developed activities focused on helping students recognize real versus false information, and had classroom discussions about how fake news can impact organizations. In addition, I demonstrate interactive methods and sample questions that stimulate student discussion about news media, provide additional instructor resources (with rubrics) that participants can use in their class, and share practices that have worked well.
Corporate political activity (CPA), as one prominent form of nonmarket strategies, is an important area of scholarly inquiry in strategic management. Beyond exploring the overall firm political engagement, recent research in this area has begun looking into how senior leaders’ (such as CEOs and board of directors) political activities, in particular, might influence strategic choice and firm performance. This study contributes to the on-going scholarly work by empirically examining the relationship between founder-CEOs political engagement and firm performance. Drawing from the strategic leadership and resource dependence theory arguments, we empirically examined the relationship between (a) CEO political engagement and firm performance and (b) CEO founder status and political engagement. In addition, we explored whether founder-CEOs tend to display a more liberal political ideology. Our analysis of data from 135 U.S.-based, publicly-traded firms suggests that CEO political engagement is significantly related to some accounting (Return on Equity) and market-based (Market-to-Book ratio) measures of firm performance. Further, our findings show that founder-CEOs have a higher level of political engagement compared to their non-founder counterparts as measured in political contributions. Finally, our preliminary analysis supports our predictions that founder-CEOs tend to have a more liberal political ideology compared to non-founders. Implications of these findings are discussed.

Organizational Perception Balancing: Using Corporate Social Responsibility to Improve Organizational Perceptions Following Stock Option Backdating

John Busenbark, University of Georgia
Curtis Wesley, University of Houston
Scott Graffin, University of Georgia

Managers have strong incentives to influence stakeholders’ perceptions of the organization by using impression management techniques. Past research relies heavily on event-centric approaches wherein managers employ tactics to mitigate negative reactions to a specific event. In this study, we suggest firms often operate with concealed information that may have negative implications and elicit negative reactions toward the firm. Managers cannot predict, however, if and when such information will become public. Accordingly, we identify an impression management technique we term perception balancing, which we define as ongoing perception management not coupled to a specific event. We look specifically at corporate social responsibility after the provision of lucky stock options grants, and we posit managers seek to balance negative perceptions from conferring lucky stock option grants by engaging in increased corporate social responsibility. We find evidence of this activity, and we find managers engage in more perception balancing when their firms have higher reputations and are covered by more security analysts and less when their firms have stronger recent stock market returns.

Temporal Interactions of Internal and Collaborative R&D: The Effect of Industry Life Cycle

Aleksey Martynov, University of Houston-Clear Lake

This paper studies interactions of internal research and development (R&D) and collaborative R&D using two concepts: the temporal dimension and industry life cycles. It argues that (1) firms will benefit from specific ways of temporal sequencing the emphases on internal R&D and collaborative R&D and (2) the performance effect of such sequencing will depend on the stage in the industry life cycle. In particular, the paper argues that early stages in the industry life cycle will reward emphasizing collaborative R&D prior to internal R&D while mature stages in the industry life cycle will reward emphasizing internal R&D prior to collaborative R&D. The theory is tested on a comprehensive sample of the U.S.-based publicly-traded software firms spanning the period of 1990-2009.

Friday, 8:30 to 10:00 AM
Sawgrass

Session Facilitator:
Erica Anthony, Morgan State University

The Career Success of Mentors in Developmental Networks
Andrew Dhaenens, Mississippi State University
James Vardaman, Mississippi State University

Mentoring research contends that although the benefits of a mentoring relationship are primarily directed towards the protégés, mentoring relationships are mutually beneficial and provide substantial career benefits to the mentor. However, these career benefits are more assumed than empirically known, and the career related outcomes have not been articulated. This paper seeks to address this lack of understanding by proposing that mentoring fosters objective and subjective career success by increasing the mentor’s network centrality. We also suggest that emotional intelligence and proactive personality will play a role in engendering these career success outcomes by moderating the effect of providing mentoring on network centrality. In addition to articulating the heretofore unexplored process through which the positive career effects of participating in mentoring relationships are derived, this paper extends theory by theorizing the ways in which providing mentoring can create stores of social capital.

Testing the Gender Sorting Effect of High Performance Work Systems
Jeong-Yeon Lee, Seoul National University
Min-Kyu Joo, University of Houston

The study explores and tests the gender sorting effect of High Performance Work Systems (HPWS). Despite the skill-, motivation-, and opportunity-enhancing feature of HPWS, women may expect a smaller amount of rent accumulation under HPWS. Given the shorter expected tenure and lower labor attachment for women, the time- and location-flexibility requirement, input-based measures of commitment, and increased level of participation imposed by HPWS could be more costly for women than men. For this reason, HPWS may sort more female subordinates into the system, resulting in a reduced female subordinate ratio in subsequent years. The results of our study support the gender sorting effect of HPWS. Interestingly, however, the ratio of female middle managers alleviates the effect. The implications of the study are discussed and presented.

Watching Foreign TV Series or Chatting with a Foreigner? A Socio-Cultural Approach to Multicultural Experience and Creativity
Zeynep Aytug, California State Polytechnic University-Pomona
Tuvana Rua, Sacred Heart University
Deborah Brazal, California State Polytechnic University-Pomona
Jeanne Almaraz, California State Polytechnic University-Pomona
Carlos González, California State Polytechnic University-Pomona

As the borders of nations blur and globalization dominates world economies, the impact of multicultural experiences on psychological states and organizational outcomes increasingly attract researchers’ interest. Enhanced creativity has been shown to be one of the positive impacts of multicultural experience; however, current findings fall short of distinguishing different types of multicultural experiences towards the end of identifying which specific experiences enhance creativity. Rooted in sociocultural theory, this research examines the influence of two types of multicultural experience, multicultural interactions versus multicultural exposures, on creativity and the role of cognitive flexibility in this relationship. Results of two studies indicate that multicultural interactions rather than exposures are associated with enhanced creativity (Studies 1-2) and confirm cognitive flexibility as the mediating mechanism (Study 2). Implications for organizations and educational institutions are discussed.
Fundamental Psychological Needs in Energy at Work: Does Self-determination Theory Tell the Whole Story?  
**Amanda Shaffer, University of Missouri**  
**Daniel Turban, University of Missouri**  
**Clarissa Steele, University of Missouri**

What psychological experiences are associated with the exertion of energy at work? According to self-determination theory (SDT), fulfillment of fundamental psychological needs allows people to follow their natural tendency to exert energy, and thwarting of psychological needs causes people to experience negative outcomes. While SDT proposes that there are three fundamental needs (i.e., autonomy, competence, and relatedness), other theorists have proposed fundamental psychological needs, although as yet little research has examined the SDT and other proposed needs. Through a series of three studies, we investigate individuals’ experience of candidate fundamental psychological needs prior to and during an event in which they exerted more than typical effort (Studies 1 and 2) and during an event in which they exerted less than typical effort (Study 3). We also investigated the association of the candidate needs with self-rated energy. Our results offer some support for the SDT needs as well as suggest that perhaps there are other candidate needs that warrant further investigation. Furthermore, our results suggest that perhaps needs influence behavior in multiple ways. We hope to encourage future research on fundamental psychological needs.

Psychological Contracts and the Economy: Effect on the Relationship between Promises and Job Offer Attractiveness  
**Tanja Darden, Georgia State University**  
**Lisa Schurer Lambert, Georgia State University**  
**Nikolaos Dimotakis, Georgia State University**

In this study we examine the moderating effect of the economy on job offer attractiveness within two industries – the information technology industry and from the hospitality industry. Using psychological contract and equity theories, we hypothesize that job offers representing parity (or comparable amounts of contributions and inducements) will be viewed more favorably in a weak economy than in a strong economy. Similarly, we hypothesize that under-reward and over-reward will be assessed more favorably in a weak economy than in a strong economy. We receive partial support for our hypotheses as they hold in the hospitality industry but not in the IT industry. Our paper contributes to applicant attraction and psychological contract literature as it sheds light on how the economy and contributions play a part in an important decision-making process – whether to accept a job offer. Limitations and future research opportunities are provided.

Antecedents and Consequences of Motivation to Lead: A Meta-Analytic Examination  
**Sibel Ogen-Novelli, Florida International University**  
**Andrew Laginess, Florida International University**  
**Chockalingam Visvesvaran, Florida International University**

What makes leaders have been a central question in the history of leadership research. Recently, motivation to lead has attracted global research attention as an individual-differences construct that can affect individuals’ decision to assume and persist in leadership training and roles. The present study is the first meta-analytic effort to quantitatively synthesize and consolidate empirical research on the antecedents and consequences of MTL. Our final sample consisted of 81 studies and 92 independent samples ($N = 53,405$). We contribute to prior literature by delineating antecedents that underpin motivation to lead and by showing its association with two important leadership outcomes: leadership emergence and effectiveness.

**80. Track 6: Transformational Leadership and Supervisory Support**

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Evaluating Crisis Leadership Potential: The Role of Transformational Leadership, Trust, and Identification with the Team  
**Ethlyn Williams, Florida Atlantic University**  
**Juanita Woods, Augusta University**  
**Hertelendy Attilla, George Washington University**

This study extends existing research on leadership potential in a crisis management setting. We test a model that describes how perceptions of transformational leadership, trust in the leader, and team identification reports influence supervisory evaluations of crisis leadership potential. Questionnaires were completed by U.S. fire rescue personnel. Results support the theoretical model in which individuals with high levels of trust in a transformational leader were evaluated by the supervisors as having stronger potential to become crisis leaders. After presenting competing hypotheses, we found that lower levels of identification with the team strengthened the transformational leadership to trust association, as well as the indirect effect of transformational leadership on crisis leadership potential (through trust in the leader). We discuss the implications of these findings for research and practice as well as directions for future research.

Boxed In by Your In-Box: Implications of Daily Email Overload for Managers’ Leader Behavior  
**Ravi Gajendran, Florida International University**  
**Christopher Rosen, University of Arkansas**  
**Lauren Simon, University of Arkansas**  
**Russell Johnson, Michigan State University**

Over the past 50 years, the nature of communication at work has changed. Managers, in particular, rely increasing on email to communicate with their supervisers and subordinates. Critically, researchers and practitioners alike have provided evidence that employees frequently report feeling overloaded by the email demands they experience at work. In the current study, we develop a self-regulatory framework that articulates how managers’ day-to-day email demands relate to a lack of goal progress, which have a negative impact on the subsequent enactment of different leader behaviors (i.e., initiating structure and transformational leader behavior). We further theorize how two cross-level moderators (i.e., importance of email to one’s job and trait self-control) serve to amplify, or attenuate, these relationships. In an experience sample study of 48 full-time managers across 10 consecutive workdays, our results illustrate that email overload is associated with a lack of perceived goal progress, to which managers respond by reducing key leader behaviors. The effects of email demands on leader goal progress were strongest when email was perceived as less central to performing one’s job and the effects of low goal progress on initiating structure and transformational leader behaviors were strongest for leaders low in trait self-control.

LMX and Transformational Leadership: A Critical Review and Assessment  
**Mortaza Zare, Louisiana State University**  
**Wayne Crawford, New Mexico State University**

This paper provides a review of past meta-analyses of transformational leadership (TFL) and leader-member exchange relationship (LMX), and compares their similarities and relationships with common related constructs. The reviews of meta-analyses suggested that LMX and TFL are correlated highly and follow the same pattern with common variables, which suggests that LMX and TFL might not be distinct, or at least might share a large degree of similarity. To investigate whether differential effects exist between the two theoretical perspectives, we conducted incremental validity and meta-analytic structural equation modeling (MASEM), which is a technique that integrates meta-analysis
and structural equation modeling. The results of the analyses showed that, in most cases, TFL and LMX share a large degree of similarity and these findings suggest that researchers need to be careful to capture the components of TFL that do explain above and beyond LMX without concluding that these two constructs are either completely different or totally redundant. The empirical findings of this paper encourage researchers to think again about TFL and the ways in which it has been defined and measured.

81. Track 1: Does Size Matter?
Friday, 8:30 to 10:00 AM
Banyan

Session Facilitator:
Daniel Holt, Mississippi State University

Perceived Accuracy and Utility of Performance Appraisal in Small Versus Large Firms
James Wilkerson, The Pennsylvania State University
Ben LeVan, Charleston Southern University

This study addresses a topic at the intersection of entrepreneurship and human resource management: performance appraisal in small firms. Employees (N = 185) responded to an online questionnaire involving, among other measures, the employees’ perceptions of performance appraisal accuracy and utility. Results of t-tests supported predictions that 91 employees in small firms (100 and fewer employees) would perceive more accuracy and utility in performance appraisals they had received than would 94 employees in large firms (1,000 and more employees). These results also held when controlling for the respondents’ union membership and being appraisers of other employees.

Competitive Dynamics of Small Business
John Upson, University of West Georgia
Kim Green, University of West Georgia

The study of competitive dynamics has emerged as a distinct research topic in the strategy field; however, much of our knowledge is drawn from large firm observations. Such firms can differ dramatically from small and medium-sized enterprises (SMEs) which tend to lack extensive consideration in the last several decades. Despite extensive consideration, scholars have yet to fully explore the role of the top management team (TMT) in the establishment of EO. Accordingly, this study draws on upper echelons theory to examine if and to what extent key TMT characteristics are related to the EO of transitioning organizations. Specifically, we utilize a sample of 202 initial public offering (IPO) firms to examine if TMT age, tenure, education level, and gender ratio is related to levels of EO in organizations differing in size. Our analysis, including a post hoc study, reveals the importance of organization size, but we find it to be direct and curvilinear, rather than a moderator.

82. PDI: Using Time in the Study of Occupational Stress/Health
Friday, 10:15 to 11:45 AM
Indian Key

Session Coordinator:
Shani Pindek, University of Haifa

Panelists:
Shani Pindek, University of Haifa
Stephanie Andel, University of South Florida
Maryana Arvan, University of South Florida
Jack Carson, Auburn University
Rebecca Cash, National Registry of EMTs
Remle Crowe, National Registry of EMTs
Yitzhak Fried, Texas Tech University
Michele Gazica, Embry-Riddle Aeronautical University
Kaylee Hackney, Baylor University
Stacey Kessler, Montclair State University
Jeremy Mackey, Auburn University
Charn McAllister, Northeastern University
Pamela Perrewé, Florida State University
Paul Spector, University of South Florida

Advancing our knowledge on workplace stress/health and work/non-work issues is of utmost importance. This symposium will showcase and discuss how studies using multiple measurement points over time can unveil new knowledge in the field of occupational stress/health and help uncover processes that promote workers’ well-being. In this session, we present 5 studies that utilize a variety of designs involving time. The discussion will illuminate what we can learn from the use of time in occupational stress/health research.

83. PDI: Baby Steps: An Introduction to Latent Growth Curve Modeling
Friday, 10:15 to 11:45 AM
Bird Key

Session Coordinator:
Lisa Schurer Lambert, Georgia State University

If you have not had the opportunity to find out what latent growth curve modeling is, then this workshop is for you. We review the conceptual basis for growth curve modeling, emphasizing an intuitive understanding, and explain how it is similar to and different from other approaches to testing longitudinal data. We will walk through examples proceeding from simple models to more complex models and participants can leave with some sample syntax.

84. PDI: Panel Discussion: Leading for Diversity in the 21st Century
Friday, 10:15 to 11:45 AM
Palm

Session Coordinator:
Claudia Cogliser, Texas Tech University

Presenters:
Claudia Cogliser, Texas Tech University
Lucy Gilson, University of Connecticut
Caren Goldberg, Bowie State University
Daniel Gullifor, Texas Tech University
Pamela McCauley, University of Central Florida
Edwin Mourino-Ruiz, Rollins College
Edwin Nassiff, University of Central Florida
Terri Scandura, University of Miami
Lori Tribble, Texas Tech University
Frankie Weinberg, Loyola University New Orleans
This session will encourage discussion regarding emerging diversity trends with implications for leaders and organizations. Current and future shifts in workplace demographics have important implications for leadership. An expert panel of scholars will address trends related to leading women and millennials, as well as role of gendered communication and technology in either increasing or decreasing barriers to effective leadership of the 21st century workforce. This highly interactive session is intended to provide insights into extant research and practice and prompt additional future research in the area.

85. Track 2: Information and Data Management in Health Care Systems
Friday, 10:15 to 11:45 AM
Glades

Session Facilitator:
Geoffrey Silvera, Auburn University

Modeling Electronic Medical Record Adoption
Eric Ford, Johns Hopkins University
Kevin Lowe, University of Auckland & University of Sydney
Timothy Huerta, Ohio State University
Claudia Gonzalez, National Institutes of Health

The Electronic Medical Record (EMR) is the platform that allows for the integration of both hardware and software applications designed to improve care quality and increase operational efficiency. To those ends, the U.S. has introduced policies designed to promote EMR ‘Meaningful Use’ of evermore-sophisticated functions. Hospitals are a prime example of the networked technology that is adopted and then updated repeatedly. The purpose of this study is to explore when hospitals will achieve critical EMR functionality and clinical application adoption benchmarks. HIMSS Analytics’ ‘Electronic Medical Record Adoption Model’ (EMRAM) dataset and Bass Diffusion models we used to assess current EMR capability-levels and forecast future technology diffusion levels. Results indicate that U.S. hospitals are decades away from fully implementing sophisticated decision support applications and interoperability functionalities into their EMR platforms. The Bass model had good explanatory power; the external and internal influence coefficients mapped closely to the existing regulatory environment; and forecast estimates were consistent with other literature.

Geospatial Influences on the Service Supply Chain: Insights and Cautions from U.S. Hospital Big Data
William Ritchie, James Madison University
Steven Melnyk, Michigan State University
David Cavazos, James Madison University
John Ni, University of Miami (Ohio)
Wolfgang Hall, ESRI

The emergence of digital mediums appears to have overcome geographic boundaries in various aspects of business. However, recent studies argue that there is a need to investigate and understand the impact of geography on managerial processes. This study examines the impact of network dispersion on the service-level outcomes among healthcare organizations. Drawing upon literature on organizational proximity and knowledge spillovers, we test the notion that macro-level effects influence practice outcomes. Our results lend support to the notion that network proximity can inhibit practice effectiveness such that knowledge spillovers associated with proximity impact the service supply chain in a network.

Factors Associated with the Provision of Inpatient Care in Hospices
Mengying He, Texas A&M University-San Antonio
Stephen O’Connor, University of Alabama at Birmingham

The purpose of this study was to examine market and organizational factors that are associated with the provision of hospice inpatient care. This study used a retrospective, longitudinal design (2009 to 2013).

86. Track 4: Training Effectiveness and Gamification
Friday, 10:15 to 11:45 AM
Sabal

Session Facilitator:
Alex Rubenstein, University of Memphis

Nothing but a “g” Thing? Developing and Testing an Individual Differences Model of Frame-of-Reference Rater Training Effectiveness
C. Allen Gorman, East Tennessee State University

Rater training is important for improving the quality of human resource decisions. However, there is little research that has examined the influence of trainee individual differences on rater training effectiveness. In Study 1, I found support for a partially mediated model in which learning goal orientation, internal locus of control, and promotion focus influenced rater training motivation through general self-efficacy. In Study 2, I extended the model to include rater training criteria, and I found that rater training motivation did not predict declarative knowledge, rating validity, or rating accuracy, but cognitive ability predicted all three outcomes. Overall, the results suggest that although individual differences in attitudes are relevant for understanding rater training motivation, cognitive ability may be much more important for understanding rater training effectiveness. Implications for rater training theory and practice are discussed.

Sexual Harassment Training Effectiveness: An Interdisciplinary Review and Call for Research
Mark Roehling, Michigan State University
Jason Huang, Michigan State University

Although sexual harassment (SH) training is widespread, has many important consequences for individuals, organizations and society, and is of demonstrated interest to researchers across a wide range of disciplines, there has never been a comprehensive, interdisciplinary attempt to identify and systematically evaluate relevant research findings. This article addresses that need in the literature. It provides an organizing framework for understanding the primary factors influencing SH training effectiveness, critically reviews empirical research providing evidence of the effectiveness of SH training, and sets forth a research agenda.

Gamification at Work
Graham Lowman, University of Alabama-Tuscaloosa

Gamification, commonly referred to as the use of game design elements in a non-traditional game context, is now a common practice in organizations. This is attributed to the variety of benefits associated with gamification, such as improving engagement, training outcomes, and work performance. Coupled with these benefits is the growing number of Millennials in the workforce who consider video games a significant part of their lives. However, despite the prominence of gamification in practice, our understanding of gamification within the
organizational context and the neurological processes that underpin the mechanics of gamification is extremely limited. In this way, we have missed the opportunity for prescience by largely failing to anticipate the need for a strong theoretical framework and dialog to guide our understanding of gamification within the organizational context. To address, I propose a novel theoretical framework for work gamification to (1) advance our theoretical conceptualization of gamification within the context of management and organizations from both the organizational and individual perspective, (2) identity appropriate theoretical linkages to focus research on gamification in the workplace, (3) understand the neurological processes behind gamification, and (4) provide guidance on how work gamification can be and is being utilized by organizations in practice.

87. Track 8: Writing, Teaching, and Publishing Case Studies

Friday, 10:15 to 11:45 AM

Citrus

Session Coordinator:
Millicent Nelson, Middle Tennessee State University

Panels:
Writing, Teaching and Publishing Case Studies: Can Millennials Benefit from Case Studies as Undergraduates?
Millicent Nelson, Middle Tennessee State University
Richard Tarpey, Middle Tennessee State University
Grandon Gill, University of South Florida
Matthew Mullarkey, University of South Florida

Case studies are important to illustrate complex situations for students with real life examples. This process allows students to develop their analytical skills while using critical thinking to make decisions and solve problems. In this session, case studies experts and editors will utilize case studies to present the art of writing, teaching and publishing cases. Most instructors assign case studies at the graduate level where students generally have more experience and understanding of working in organizations. This session will also investigate using case studies with millennials at the undergraduate level and discuss best practices for effective implementation in the classroom.

88. Track 7: Losing Friends and Influencing People: Power, Hubris, and Turnover in Top Management Teams

Friday, 10:15 to 11:45 AM

Long Key

Session Facilitator:
Ying Schwarte, Auburn University

CEO Gender and the Legitimacy Substitution Effect of Power
Richard Devine, Florida State University
Bruce Lamont, Florida State University

Although the amount of studies examining gender in the upper echelons has been increasing, the literature lacks a consistent theory with regard to the behavior of female executives. Whereas research suggests that women emphasize agentic leadership qualities in order to succeed in male-dominated organizations, upper echelon research has frequently invoked literature on gender roles to explain leadership differences between males and females. To reconcile this divide, we draw on social identity theory to describe how performance and legitimacy pressures prompt women to overcompensate in order to distance themselves from other women. Women do this by presenting themselves as even more agentic than their male counterparts. At the same time, we detail a legitimacy substitution effect whereby positional power acts as a replacement for the validity that women seek to obtain through engaging in agentic behaviors. Thus, we argue that females’ agency and leadership styles are dependent upon the positional power they are afforded. We test our predictions in a sample of activist challenges against S&P 1500 firms from years 1997-2014 and find that our arguments are supported. Results underscore the need for further research on gender and power in the upper echelons.

Stay the Course or Adjust the Sails? Untangling the Effects of CEO Hubris and Narcissism on Failed Aspirations and Problemistic Search

Rachel Mui, Oklahoma State University
Aaron Hill, Oklahoma State University
Federico Aime, Oklahoma State University

Using a behavioral theory of the firm (BTOF) framework, this paper proposes a theoretical model that explores the differential effects of CEO hubris and narcissism on attainment discrepancy and strategic change. Hubris and narcissism are two self-concept constructs that have recently been at the heart of inquiry in executive research. Despite similarities between these two constructs, we believe further insight into their distinction lies in how CEOs with varying levels of hubris and narcissism may react differently in the face of poor firm performance. We posit that in situations of negative attainment discrepancy such as when firms are underperforming relative to their aspirations, CEOs high on hubris will “stay the course” and engage in less strategic change because of their escalation in commitment towards their own abilities. Conversely, when firms are underperforming relative to their aspirations, CEOs high on narcissism will “adjust the sails” and engage in more strategic change because of their need for reaffirmation and avoidance of criticism from others. In turn, we discuss how the performance consequences may differ because of their chosen course of strategic actions.

Logic Multiplicity and Conflict: The Effect of Multiple Logics on Board Turnover

Stephen Smulowitz, IESE Business School

While institutional theory research has shown that multiple institutional logics can exist in the same organization, researchers have just begun to theorize when multiple logics will instantiate in ways that engender conflict. Moreover, despite the abundant research showing the effect of conflict on important organizational outcomes such as turnover, no research has examined how the conflict engendered by logic multiplicity can affect these organizational outcomes. Building on insights from institutional theory and the literature on conflict, we examine how logic compatibility and resource dependence will affect turnover in bank boards of directors. We show that logic compatibility decreases turnover, and that resource dependence increases turnover. We also show that board turnover is greatest in organizations with both low compatibility and high resource dependence. Accordingly, our study both deepens our understanding of institutional logics, and provides important insights on the phenomenon of board turnover.

89. Track 5: Diversity and Discrimination

Friday, 10:15 to 11:45 AM

Sawgrass

Session Facilitator:
Michael Abebe, University of Texas-Rio Grande Valley

Antecedents of Shareholder Activism for Greater Board Gender Diversity
Jaime Williams, University of Mississippi
John Berns, University of Mississippi

The proportion of female representation on boards has been steadily increasing over the last decade. However, further calls to increase gender diversity have continued to be brought forth. In several countries around the world, the state has mandated gender quotas for boards. In the US, a lack of comparable state-level action has prompted shareholders to take action into their own hands. Over the last several years, shareholder proposals to increase board diversity have increased steadily. To better understand why certain firms are targeted, we examine some of the antecedents to such shareholder generated proposals. Using a panel sample of S&P 500 firms, we find that having a male-dominated board is strongly related to subsequent shareholder generated gender proposals. Furthermore, we find that
having an independent board strengthens this relationship, but having a female CEO appears to have no effect.

“Warm” and “Competent” or “Deferential” and “Cooperative”: A Conceptual Framework of Immigrant Status and Race on Labor Exploitation

Jason Lambert, Texas Woman’s University
Dayo Akinlade, Saint Xavier University
John Zhang, Florida International University

There are mixed accounts regarding the behavior and experiences of immigrants (Gill & Long, 1989; Syed, 2008). Some argue that immigrants enjoy greater success compared to native people, where some others contend that immigrants are subject to mistreatment, discrimination, and exploitation. This paper explores how immigration status impacts employee exploitation during the recruitment process. Rather than studying groups of immigrants as a monolith, we develop a comprehensive model of labor exploitation that demonstrates how immigration status and immigrant ethnicity affect employment behaviors differently. Drawing from recent socio-cognitive theories of multiple categorization, we integrate prior research on immigration, workplace diversity, and exploitation with theories of intersectionality to propose a framework that identifies how immigrant characteristics and employer characteristics influence immigrant exploitation.

*Best Doctoral Paper in Track*
From Tokens to Key Players: Board Gender Diversity and Corporate Discrimination Lawsuits

Hazel Dadanlar, University of Texas-Rio Grande Valley
Michael Abebe, University of Texas-Rio Grande Valley

The conspicuous under-representation of women in senior corporate leadership positions continues to attract a great deal of scholarly and policy-maker attention. A growing body of work in the corporate governance literature has started to explore the organizational outcomes of gender diversity at the senior executive and board levels. This study contributes to the on-going scholarly work in this area by exploring the relationship between female representation on the board of directors and the likelihood of corporate discrimination lawsuits. Drawing from prior works that showed women leaders’ empathy with and advocate for workplace diversity initiatives, we proposed that greater female board representation is negatively related to the likelihood of discrimination lawsuits. Further, using insights from the “tokenism” and “critical mass” perspectives, we also proposed that the presence of at least two female directors on the board is more likely to reduce the occurrences of such discrimination lawsuits. We tested our predictions using a longitudinal dataset of S&P 500 publicly-traded U.S. firms from 2010-2015. Our findings mostly provided support for our arguments. Greater proportion of female directors was found to be negatively related to the likelihood of discrimination lawsuits. In addition, the findings suggest that the presence of two female directors, not solo or three or more female directors, was found to significantly reduce the likelihood of discrimination lawsuits. Implications for research and practice is discussed.

90. Track 6: This Too Shall Pass: Organizational Change and Transformation

Friday, 10:15 to 11:45 AM
Jasmine

Session Facilitator:
James Dulebohn, Michigan State University

My Past and My Friends: The Role of Change History and Social Influence in Employee Interpretation and Acceptance of Organizational Change

Liam Maher, Florida State University
James Vardaman, Mississippi State University
Christopher Sterling, California State University, Fresno

Gaining employee buy-in is acknowledged as a major hurdle to transforming workplace practices and procedures. This study draws upon a social information processing perspective to present and test a framework for understanding individual acceptance of change. Drawing on a study of nurses undergoing a significant change to their task operating procedures, this paper hypothesizes that interpretation of the organization’s change communication is the primary mechanism through which social information processing influences individual acceptance. The results indicate that one’s history with organizational change and the emotions of one’s friends toward the focal change shape individual perceptions of the quality of the organization’s change communication, and indirectly influence individual acceptance of change. Results also demonstrate the indirect effects of friends’ emotions on change acceptance are contingent on the change recipient having a sufficient number of friends to make social influence possible. This article extends theory on individual reactions to organizational change by showing that interpretation is seminal for change acceptance, and sheds light on why individuals who receive the same change communication interpret it in differential ways. This study also highlights that emotion is a powerful social influence in the interpretive process of change recipients.

Employees’ Cumulative Experience of Organizational Change: Why So Negative?

Kristin Cullen-Lester, University of Houston
Brian Webster, Ball State University
Bryan Edwards, Oklahoma State University
Phillip Braddy, Center for Creative Leadership

Employees are thought to appraise most organizational changes negatively and as a result respond negatively to greater amounts of change. However, previous research has not measured the number of changes occurring in organizations or examined employees’ appraisals of the many changes they experience. We find, that contrary to popular belief, employees appraised fewer changes as negative than positive or neutral and the changes they appraised negatively tend to be viewed as having a smaller magnitude of impact on their job. However, we also demonstrate that this relatively small number of negative workplace changes disproportionally influenced employees’ reactions to their changing work environment. We discuss the theoretical and practical implications of our empirical examination of employees’ appraisals of the many changes in their workplace.

The Role of Organizational Commitment in Employee Readiness for Organizational Transformation

Mary Jackson, Stetson University
Nancy McIntyre, West Virginia University
Rikert Allen, The University of the West Indies

Employee readiness for change is a critical driver in all types of organizational change efforts, but especially for organizational transformation. The purpose of this study was to explore the antecedents of employee readiness for organizational transformation by refining and expanding the study done by Rafferty & Simon (2006). The results indicate that participation, self-efficacy for change, and perceived organizational support have a positive and significant relationship with employee readiness for organizational transformation. Organizational commitment was then added to the model. The findings indicate that organizational commitment also has a positive and significant relationship with employee readiness for organizational transformation. Finally, the results of structural equation modeling are reported.

91. Track 6: Nothing More Than Feelings: The Impact of Emotions at Work

Friday, 10:15 to 11:45 AM
Sawyer Key

Session Facilitator:
Brian Miller, Texas State University

*Best Doctoral Paper in Track*
The Role of Events and Affect in Perceived Organizational Support: A Within-Person Approach
Perceived organizational support (POS) captures employees’ global perceptions regarding the extent to which they feel their work organization cares about their well-being and values their contributions. A majority of the extensive research on POS has been cross-sectional in nature, which ignores potentially important within-person variation in POS. Furthermore, most research on POS has not directly investigated the role of affect, despite POS connoting caring by the organization. The current study addresses these two related gaps by integrating affective events theory with organizational support theory, as events may elicit transient emotions, which have implications for fluctuations in POS. Using a diary-study method, 56 working adults responded to three surveys per day for ten days. The results suggest POS is relatively stable but fluctuates in the short term. We also found that the events employees experience at work are significantly related to both happiness and anger (discrete emotions). In turn, both happiness and anger are significantly related to POS. Furthermore, the need for esteem moderated the relationship between discrete emotions and POS such that the relationship was stronger in those with higher need for esteem. These results advance organizational support theory and affective events theory by highlighting the role of affect in relation to POS and illustrating momentary changes in affect relate to momentary changes in POS. Practically, the current study as evidence for the importance of providing signals of POS in socialization processes for new employees, as it seems once POS develops, it is relatively stable other than short-term fluctuations.

*Best Paper in Track*

How Exhausting!? An Examination of the Contagion Effects of Emotional Exhaustion Using Social Networks Analysis

Thomas Zagenczyk, Clemson University
E. Erin Powell, Clemson University
Kristin Scott, Clemson University
Dan Nielubowicz, Clemson University

We draw on research on the Emotions as Social Information model to argue that employees will report similar levels of emotional exhaustion as compared to the levels of emotional exhaustion reported by workflow ties, friendship ties, advice ties, and structural equivalents. We tested our hypotheses among 91 employees working for a construction company in the southeastern United States. We controlled for factors that may have been related to similarity in emotional exhaustion including age, sex, tenure, supervisor, hierarchical level, department, need for affiliation, and perceived quality of the employer-employee relationship. Consistent with our hypotheses, we found that employees had similar levels of emotional exhaustion to coworkers with whom they maintained workflow and friendship ties, and that these effects explained significant variance beyond our control variables. Inconsistent with our expectations, employees did not have similar levels of emotional exhaustion compared to coworkers with whom they maintained advice ties or to those with whom they reported structurally equivalent positions. Further, supplemental analysis revealed that within- and cross-department workflow ties, as well as within-department friendship ties, were related to similarity in emotional exhaustion. Our work contributes to research on emotional contagion, social networks, and emotional exhaustion by offering a theoretically-driven and comprehensive test of the types of ties and positions through which emotional exhaustion occurs while also accounting for varying levels of analysis. Implications for research and practice are offered.

Leader Work Competence Impacts How They Are Treated By Followers: The Impact of Competence Driven Contempt and Empathy on Leader-Directed OCB and CWB

Siting Wang, University of Illinois-Chicago
Don Kluemper, University of Illinois-Chicago
Michele Williams, University of Iowa

Leadership literature emphasizes that leaders are expected to have high work competence, which guides and helps them make administrative decisions in the workplace. However, not all leaders will be viewed as a high work competent leader by their followers. According to cognitive appraisal theory, through individuals’ cognitive appraisals, employees’ perception of their leader work competence could elicit certain emotional reactions. We argue that employees’ appraisals of their leader’s work competence will lead to leader-directed discretionary behaviors through the emotions of contempt and empathy. In the current study of 243 leader-follower dyads, our results show that perceived leader competence is indirectly negatively related to deviance behaviors toward the leader via contempt and is indirectly positively related to citizenship behaviors toward the leader via empathy. The study provides support for cognitive appraisal theory in which different emotions generate independent behaviors, as well as extends the emotion literature in the leader-follower context.

Entrepreneurship and Charismatic Leadership

Janice Black, Coastal Carolina University
Richard Oliver, New Mexico State University
Lori Paris, California State University-Bakersfield

Charismatic leaders in larger organizations have been found to have an enhancing effect on work groups and their ability to gain high performance levels. Scholars have begun to understand that with respect to taking an entrepreneurial orientation both leadership and context matter in small organizations (Muchiri & McMurray, 2015). The questions arise to the impact of charismatic entrepreneurship during the very beginning stages of an organization. To examine this construct of charisma in the uncertainty and messiness of cross-level influences especially during early stage businesses is best done through the use of a computational model or simulation (Dionne & Dionne, 2009). This simulation looks at developing a new firm with its entrepreneur and small group of followers. Our agent-based model suggests that followers perceive an entrepreneur as charismatic more quickly in the uncertain stages of the new venture life cycle as in the more certain stages.

Entrepreneurial Callings: Exploring Antecedents and Outcomes

Saurabh Srivastava, University of North Texas
Pratigya Sigdual, University of North Texas
Michele Medina, Middle Tennessee State University

Research on callings, which is deeply meaningful work that individuals view as their purpose in life, has linked callings with a number of work outcomes. In this study, we examine the relationship between callings and firm performance by investigating entrepreneurs. Our study also provides insights on whether personality traits of entrepreneurs, i.e. their learning goal orientation and their core self-evaluation, influences the perception of callings for established entrepreneurs. We tested our hypotheses by collecting data from 124 active entrepreneurs in the Southwest region of United States. Our hypotheses suggest that callings are moderately related to firm performance.

Advancing Work-Family Interface Research at the Family Unit Level of Analysis

Kimberly Eddleston, Northeastern University
Jennifer Jennings, University of Alberta
Jamie Lodge, Northeastern University

Although scholars have started to examine the work-family interface (WFI) from an interpersonal rather than intrapersonal perspective, an important gap is nonetheless evident. Very little attention has been paid, as yet, to the family unit as the focal level of analysis. Addressing this lacuna is of theoretical import given the field’s established reliance
upon family systems theory as an overarching paradigm. It is also of pragmatic import given that an individual’s WFI experiences are unlikely to be fully understood in isolation from those of the family in which he or she is embedded. We offer two foundational conceptual tools for advancing WFI research at the family unit level of analysis: (1) a typology of family-system WFI profiles reflecting different aggregate combinations of work-family conflict and enrichment; and, (2) a multi-level model of key antecedents and outcomes associated with the different profiles. Drawing on insights from the family business literature, we ground our theorizing in the WFI experiences of business-owning families—a type of family system that represents an ‘extreme case’ of work-family overlap.

93. SMA Incoming Board Meeting
Friday, 12:00 to 3:00 PM
Horizons West

Session Coordinator:
Kevin Lowe, University of Auckland & University of Sydney

By invitation only

94. PDI: Creating a Digital Lab Notebook: Best Practices for Using Microsoft OneNote to Document the Research Process
Friday, 1:15 to 2:45 PM
Indian Key

Session Coordinator:
Jeremy Meuser, University of Illinois

Presenters:
Jeremy Meuser, University of Illinois
Chantal van Esch, California State Polytechnic University-Pomona

Do you or your students struggle with tracking research details? This interactive workshop introduces Microsoft OneNote, a software most already have installed as part of the Office suite, as a solution to keeping good research notes. This is a hands-on experience will provide best practices for integrating all content that arises through the research process from inception to publication into a notebook (e.g., pictures, screen captures, drawings, audio, video, equations, data files in any format, output files from statistics software, MS Word, PDF, etc.). To get the most from the session, please come with a laptop/tablet and OneNote installed.

95. PDI: Latent Change Analysis
Friday, 1:15 to 2:45 PM
Bird Key

Session Coordinator:
Robert Vandenberg, University of Georgia

The primary objective of this professional development workshop is to teach participants how to use the features within the Mplus software package to test longitudinal types of models. This is an advanced workshop in that participants should possess a strong understanding of latent measurement models, and tests of latent path models using SEM. The workshop starts with some of the theoretical considerations that need to be addressed when designing a longitudinal study. It then progresses into undertaking latent change score analyses – analyses undertaken when data were collected at two points in time. It will also be demonstrated how these latent change variables may be used in various roles; that is, as exogenous, endogenous, and mediating variables. The instructor will provide the data and the syntax files used in the workshop. Perhaps then participants with Mplus installed on their laptops can run some of the exercises during the workshop. Regardless of the latter, participants go home with usable examples and syntax.
Researchers in the social sciences are increasingly turning to online data panels, or crowdsourcing platforms, for data collection. One of the more prominent and popular crowdsourcing platforms is Amazon’s Mechanical Turk (AMT). While there is evidence that AMT provides many benefits to researchers, including the ability to efficiently provide more diverse sample pools and generalizable results (Buhrmester, Kwang, & Gosling, 2011) than many traditional sampling methods, little is known about AMT workers’ (MTurkers) perceptions of and attitudes toward crowdsourcing research and the degree to which these perceptions and attitudes impact the quality of data. This exploratory study was mixed-method in nature; we gathered data through both qualitative, open-ended interview questions as well as quantitative queries. The purpose was to better understand MTurkers’ (a) thoughts toward survey research, (b) perceptions of data quality gathered thereby, and (c) suggestions to improve both data quality and the overall crowdsourcing survey process. Recommendations for researchers using crowdsourcing data are provided.

A Review of Best Practice Recommendations for Text Analysis in R (and a User Friendly App)

*Best Overall Paper and Best Paper in Track*

**You Gotta Keep Em’ Separated: The Efficacy of Proximal Remedies for Method Variance**

**Christopher Castille**, Rutgers University—New Brunswick

**Wayne Crawford**, New Mexico State University

**Marcia Simmering**, Louisiana Tech University

Scholars have argued that method factors, such as common rater effects, bias estimates of covariation from same-source and single time-point investigations. In response, researchers have proposed procedural remedies. For such studies, recommended remedies include (1) presenting participants with a cover story to disguise the purpose of the survey (which addresses respondents’ ability to produce data consistent with researchers’ hypotheses), (2) randomizing item and scale presentation around filler scales (which addresses item and scale context effects), and (3) introducing a brief temporal separation (which addresses respondents’ momentary mood). Though researchers have relied upon these proximal method variance remedies, there are no studies examining whether they nullify method variance. Here, we present the findings from two experiments utilizing the same measurement model and demonstrate that such remedies do, indeed, reduce (and in some instances, eliminate) the presence of method variance attributable to (1) consistency motifs, (2) context effects, and (3) mood. However, these sources of method variance did not substantially bias our findings. Rather, other sources of method variance (i.e., positive affectivity and negative item wording) consistently biased estimates. We conclude with recommendations for researchers wishing to addresses method bias in their same-source investigations.

*Best Doctoral Paper in Track*

**Amazon’s Mechanical Turk Masters’ Perceptions of Research Surveys: A Mixed Methods Approach to Improving Online Panel Data Quality**

**Matt Lovett**, University of Louisiana-Monroe

**Marcia Simmering**, Louisiana Tech University

**Saleh Bajaba**, King Abdulaziz University

**Myra Lovett**, University of Louisiana-Monroe

Although the link between nurse staffing and care quality outcomes has been established across health care facilities, shortages in nursing supply threaten care facility administrators’ ability to provide high-quality care. The objective of this examination is to determine the effect of proximity to nurse staffing resources (nursing schools) on care quality. In examining this relationship, existing theories present differing conclusions. Social network theory suggests that proximity to nurse staffing resources would result in close, strong ties for health care facilities, resulting in a positive influence on care quality. Conversely, the resource-based view of the firm suggests that proximal access to nurse staffing resources has a negative influence on nursing home quality outcomes, confirming a resource dependent view of the firm.

To test these relationships, a pilot examination of Alabama nursing homes is presented. Proximity data is developed utilizing geographic information systems (GIS) software and is analyzed via an ordinary least squares (OLS) regression with robust standard errors using data from CMS’s Nursing Home Compare and Johnson & Johnson’s Campaign for Nursing’s Future. Results find that proximity to nurse staffing resources has a negative influence on nursing home quality outcomes, confirming a resource dependent view of the firm.

Additional analysis is offered to examine whether the nature of this relationship is sensitive to whether health care facilities are located in “hot spots”, areas of high density of competition and staffing resources. The results of this analysis confirms principal findings.
Shannon Breske

"Because I Said So," Isn’t Good Enough: Integrating Self-Authorship Theory Concepts in Management Curriculum

K. Ashley Gangloff, University of Missouri
Shannon Breske, University of Missouri
Gay Albright, University of Missouri

Management curriculum and educators aim to develop competent managers. However, student development theory is rarely mentioned in management education scholarship. Here we provide a four-part curriculum that fosters students’ journey toward self-authorship within management curriculum. By incorporating 1) instructor-directed “push content”, 2) instructor-directed investigation and analysis, 3) student-directed, but instructor supported, investigation and analysis, and 4) student-directed investigation and analysis, into management curriculum, students will be more prepared to face the challenges of adult and professional life. We provide recommendations for the integration of self-authorship theory concepts in the development of management curriculum.

99. Track 7: Novel Approaches to Competitive Advantage
Friday, 1:15 to 2:45 PM
Long Key

Session Facilitator:
Josh Daspit, Mississippi State University

A Multilevel Model of Business Celebrity
Laura D’Oria, Iowa State University
Rhonda Rege, University of Missouri
Michael Pfarrer, University of Georgia
Annette Ranft, North Carolina State University

CEOs and entrepreneurs or entire organizations often become celebrities known and acclaimed by audiences within and beyond the boundaries of their industries. Previous research has investigated antecedents and consequences of individual- and organizational-celebrity, specifically focusing on the role played by the media as the central information intermediary for the development of these social approval assets. Previous research has investigated antecedents and consequences of individual- and organizational-celebrity, specifically focusing on the role played by the media as the central information intermediary for the development of these social approval assets. We contribute to celebrity theory in three main ways. First, we identify the factors that influence its development at one level rather than the other, or why and how it can emerge at both the individual and organizational levels. Second, we theorize how individual and organizational celebrity co-evolve over time. We discuss theoretical and practical implications. We conclude discussing theoretical and practical implications.

Resource Based Theory: The Role of Tribal Sovereignty in Sustainable Competitive Advantage
Carma Claw Nez, New Mexico State University
Terry Adler, New Mexico State University
Gavin Clarkson, New Mexico State University

While substantial research on tribal sovereignty exists in law and economics, little research in business strategy examines how tribal sovereignty provides a fundamental basis for competitive advantage. This article attempts to bridge that gap by identifying tribal sovereignty as a resource according to the Value-Rarity-Imperfect Imitability-Organization (VRIO) framework. After providing background on the history of federal Indian law and policy as well as the historical evolution of tribal organizations, this article identifies the attributes of tribal sovereignty and then evaluates them in terms of related diversification, organizational identity, strategic control, and plenary power of tribes. While much has been written about organizational frameworks, deeper insight is needed into how tribal communities generate horizontal synergies with the tribe categorized as an organization. In addition, tribal sovereignty is more appropriately categorized as a resource given its rarity as a governance mechanism. The authors conclude that despite the economic challenges confronting Indian country, discussion of tribal sovereignty from a resource-based perspective holds significant promise for tribal economics and their subsequent sustainable competitive advantage.

Institutional Heresy: Nonconformity for Competitive Advantage
Rudi Bresser, Free University-Berlin
Andrea Kusch, Free University-Berlin
Jana Costas, Europa-Universität Viadrina

Institutional theory suggests that firms are embedded in multiple networks of shared values and norms. Stakeholder groups such as competitors or customers exert institutional pressures on business firms to conform to their norms, values and demands. Traditionally, the institutional literature has argued that organizations should accept and adjust to the demands of their institutional environments, while nonconforming behavior has been viewed as threatening legitimacy. In this study, we draw attention to firms that establish strategic advantage and leadership through nonconforming behavior, i.e., by breaking institutionalized norms. We name such nonconforming behavior institutional heresy because institutional heretics employ nonconformity strategically to gain competitive advantage. Based on case studies from the international clothing industry, several conditions facilitating successful nonconformity are theoretically developed.
couch our hypotheses within three socially based theories: social identity theory, social exchange theory, and social learning theory.

Culture's Consequences for the Mechanics of Institutional Isomorphism
Alexander Lewis, University of Texas-San Antonio

Institutional theory has been predominantly developed in Western contexts, and as a result, the implications of cultural differences for the strength with which the institutional environment is capable of influencing organizations is largely unaddressed in current literature. This void is particularly alarming given the regularity with which international business scholars leverage institutional theory. Drawing heavily from the institutional models presented by Scott (1995) and DiMaggio and Powell (1983), this paper addresses this void by detailing the mechanisms by which institutions--formal and informal--exert isomorphic pressure on organizations in the context of five well-established cultural dimensions: cultural tightness, collectivism, uncertainty avoidance, power distance, and performance orientation. These dimensions interact with institutional mechanisms so that institutional pressure is greatest in societies which are high in cultural tightness, collectivism, uncertainty avoidance, and power distance and low in performance orientation. As such, the relationships presented in this paper have particularly meaningful ramifications for the study of institutional duality, institutional distance, and international institutional entrepreneurship.

Katia Galdino, Florida State University
Gonzalo Molina Sieiro, Florida State University
Bruce Lamont, Florida State University

Early internationalization is a phenomenon of increasing importance in the business world worldwide. Yet, research on born global firms has mostly focused on developed economies and high-tech industries. Research on institutional determinants of born global firms have focused on institutional distance or the environment at the host country. We focus on the external environment in the home country to explain why firms in resource-constrained environments choose to go abroad. Additionally, a corrupt and fractionalized society plays a role on the likelihood a firm undergoes early internationalization. In that context, we use resource dependence theory to explain how avoidance and legitimation strategies by firms push them to either go abroad early and how engagement in bribery affects these chances. Using a sample of 1,837 African firms, we find that choosing to engage in bribery in a low corruption and less corrupted country decreases the chances of early internationalization. Using a sample of 424 individuals in 94 teams, we found that narcissism was positively related to centrality and psychopathy was negatively related to it, and ability moderated both of these relationships. We discuss how this research extends work in social exchange theory as well as dark triad research and make recommendations for next steps in this line of inquiry.

Good Situations, Bad People: How Enhanced Workplace Variables “De-Activate” Employee Psychopathy and Improve Subsequent Job Performance
Benjamin McLarty, Mississippi State University
Jeffrey Muldoon, Emporia State University
Kerry Sauley, Louisiana State University

In this manuscript, we utilize trait activation theory (TAT) and social exchange theory (SET) to argue that socially malevolent personality can be “de-activated” by workplace factors. Specifically, we argue that trait psychopathy present in employees can be buffered by the presence of positive workplace factors such as leader member exchange, autonomy, job meaning and organizational commitment. This ultimately results in enhanced task performance by the employee. Our results using time-separated and multi-source data indicate that organizations that emphasize positive workplace characteristics and relationships can overcome the tendencies of negative personality to harm task performance.

When and How Are Narcissistic Leaders Effective? The Role of Political Skill and Leader Attractiveness
Erik Dietl, Hohenheim University

Organizational researchers have become increasingly interested in the impact of narcissism on leadership. Yet studies investigating the relationship between a leader’s narcissism and his/her physical appearance are scarce. Consequently, the present research examines the role of narcissism, political skill, and attractiveness in leadership effectiveness. Drawing on recent research that distinguishes two dimensions of narcissism (admiration and rivalry; Back et al., 2013) and socioanalytic theory (Hogan & Shelton, 1998), I hypothesize that the interactive effect of narcissistic admiration and political skill predicts increased leader attractiveness, which in turn is positively related to leader effectiveness (i.e., a first-stage moderated mediation). I expected political skill to moderate the relationship between narcissistic admiration and attractiveness, such that leaders with high levels of narcissistic admiration are perceived as more attractive when a leader also possesses high political skill. I found support for these predictions in a multi-wave and multi-source field study: Moderated mediation analysis indicated that the indirect effect of leader narcissistic admiration on leader effectiveness via leader attractiveness was significant for high political skill, but nonsignificant at medium or low levels of political skill. This study contributes to the narcissism literature by demonstrating that narcissistic leaders may benefit their organization under specific conditions.
various types of behaviors. This study examines the relationship between follower-member role orientations and leader ratings of follower performance, promotability, and satisfaction with follower as moderated by follower competence. Data from 178 employees at two service organizations demonstrates that followers with stronger co-production orientations receive the most variation in manager ratings with those high in competence being rated significantly higher than those low in competence. Conversely, among followers with stronger passive role orientations, only those rated lowest in competence received poor assessments from managers. Our results provide evidence to the growing literature on followership and demonstrate that managers react differently to the engagement of the followers, and this reaction largely depends on their level of competence. This study also shows the importance of including followership variables in studies of leadership and leader outcomes.

We Don't Talk the Way We Used To: The Evolution of Performance Feedback Processes in Leader-Follower Relationships Walter Davis, University of Mississippi
Paul Johnson, University of Mississippi
David Marshall, University of Mississippi

We argue that feedback is an important part of the exchange relationship between a leader and a follower. Feedback is not just a piece of information or an event; it is a dynamic process that takes place within the context of the relationship between a leader and follower. This paper integrates recent perspectives on feedback processes with Leader-Member Exchange (LMX) theory to offer unique insights into the nature of relationships between leaders and followers. We describe how the nature of feedback exchanges evolve as a relationship progresses through stages of role-taking, role-making, and role-routinization. We then explain how individual differences in goal orientation affect the fit between a leader and follower. Based on this analysis we conclude that leaders and followers often develop a “dyadic goal orientation” that can guide goal directed efforts within the context of the leader-follower dyad. We conclude with a discussion of how dyadic goal orientation may have important implications for understanding organizational learning and organizational change initiatives.

When “High” Is too “High”: A Re-Examination of Relative Leader-Member Exchange and Employee Outcomes Natalia Lorinkova, Georgetown University
Sarah Perry, Baylor University
Melih Madanoglu, Florida Atlantic University
Peter Ricci, Florida Atlantic University

We apply activation theory and the job demands-resources model to conceptualize an inverted U-shaped curvilinear relationship of relative leader member exchange (RLMX) with employee performance via the mediator engagement. We suggest that a threshold exists at high levels of RLMX where this otherwise “good thing” becomes a demand on employees as they strive to reciprocate and maintain their highly favored status. We also position individual-focused leadership (IFL), representing the individual consideration and intellectual stimulation dimensions of transformational leadership, as a moderator to this relationship. We hypothesize and find that high IFL strengthens the inverted U-shaped relationship of RLMX with engagement. Our results suggest that indeed very high levels of RLMX may be associated lower levels of engagement and subsequent performance in a field sample of hotel employees, and high IFL exacerbates this condition. We suggest this may be due to high pressure placed on the focal individual, at a point in which the resources the leader provides can no longer fully enable the employee to fulfill expectations to reciprocate and maintain their unique status. Thus, we contribute to theory and practice on LMX and employee engagement by considering leader-member relationships within the context of all other leader-member relationships within the workgroup, and in conjunction with individually-focused transformational leadership behaviors.

The Effects of Leaders’ Regulatory-Focus on Follower Outcomes: A Moderated Mediation Model Wongun Goo, Indiana University-East
Karen Han, Ball State University

Based on the self-regulatory and substitutes for leadership theory, this study examined a moderated mediation model specifying (a) leadership behaviors (visionary leadership and initiating structure) as mediators of the effects of leaders’ regulatory focus on follower outcomes (work engagement and frustration) and (b) followers’ workload as a moderator of the mediated effects of leaders’ regulatory focus on follower outcomes. By using 157 leader-follower dyads, this study found that promotion focus was positively related to visionary leadership and that prevention focus was positively related to initiating structure. Results show that the regulatory focus-follower outcome relationship was mediated by leadership behaviors and that these mediated effects vary along the level of followers’ workload. Findings may contribute to understanding self-regulation and leadership processes.

I Do Not Think that Word Means What You Think It Means: A Critical Investigation of Shared Leadership Operationalization, and a New Measure G. James Lemoine, SUNY - University at Buffalo
Gamze Koseoglu, University of Melbourne
Terry Blum, Georgia Institute of Technology

Although research on shared leadership has flourished in recent years, inconsistent results across studies and meta-analyses present questions as to its validity and usefulness. We propose that the ways we currently measure shared leadership may at least partially explain the issues with the construct. Social network measures of density and decentralization are typically used as interchangeable operationalizations of shared leadership, but we argue that these are both distinct network properties and neither is appropriate and valid as a complete operationalization of this construct. To resolve these issues, we propose a new measure combining network logic from principles of density, decentralization, and eigenvector centralization. We test the measure’s validity in a series of Monte Carlo simulations and laboratory studies. We find that this new ‘Shared Leadership Statistic’ has high convergent, discriminant, and criterion validity, and provide a downloadable tool for its calculation.

104. Track 1: Entrepreneurial Orientation and Innovation
Friday, 1:15 to 2:45 PM
Banyan

Session Facilitator: William Tabor, Mississippi State University

Traditional and Knowledge-Based Value Chains in an Innovation Learning Organisational Context
Angelina Zubac, Central Queensland University
Rubal Vinaik, Strategy Link

This paper considers how innovation learning occurs at organisations using value chain logic, and the implications for business model research. Its objective is to gain insight into how organisations evolve internally to cope with and learn about hyper-innovation in the global business ecosystem. It combines two systems-based value chain conceptualizations of business models: Itami and Nishino’s (2010) activity-based business model framework with Kodama’s (2009) knowledge integration business model framework, which is knowledge-flow based. It concludes that as a foundation for understanding systems-based business models, the value chain should be viewed not just as value activities performed by the firm to deliver value to customers but as including concurrent two-way, micro-macro flows of knowledge. This suggests potentially powerful new strands of typologies for business model research.
Before It’s too Late: Navigating the Turbulent Seas of Disruptive Innovation

Manjot Bhussar, Auburn University
LaKami Baker, Auburn University
Michelle Zorn, Auburn University

With an increasingly competitive and challenging environment, firms are facing disruptive technological changes at an increasing rate. Research has suggested that firms should look beyond their boundaries to create new knowledge through acquisitions. We build on this research on adaptability and suggest that industry incumbents should use acquisitions as a method to build and increase their existing knowledge bases. We suggest that incumbents with higher acquisition intensity will have higher post-acquisition innovation performance and subsequent higher product market performance. We also suggest that the age of the acquired targets plays an important role in boosting acquirer innovation output, such that mature start-ups have more post-acquisition innovation performance than do young start-ups. We explore our arguments in the context of the mobile software industry from 2006 to 2015, following the introduction of the iPhone, which created a mobile industry disruption. We find support for our hypotheses and suggest implications for both research and practice.

Searching for Valid Proxies for Measuring Entrepreneurial Orientation

Connor Lubojacky, Univ. of Houston

It has been argued that entrepreneurship is the key to sustaining firm innovation, profitability, and survival. Entrepreneurial orientation (EO) is a measure of entrepreneurship at the firm-level and its study has the potential to unravel the mysteries of firm renewal and competition. But the study of EO is held back by the lack of a valid set of archival proxy measures. Using a random sample from a range of industries, I explore the validity of a set of measures and set forth a starting point in a longer journey to discover a valid pool of EO archival measures.

105. SMA Networking Break
Friday, 2:45 to 3:15 PM
Banyan Breezeway

Session Coordinator:
Joy Karriker, East Carolina University
Sponsors: Old Dominion University and West Virginia Universit

106. Congratulations! You’re Promoted to Full: Now What?
Friday, 3:15 to 4:45 AM
Sabal

Session Coordinator:
Misty L. Loughry, Crummer Rollins College

Panelists:
Misty L. Loughry, Rollins College
Robert C. Ford, Rollins College
Neal Ashkanasy, University of Queensland
Mark Martinko, Florida A & M University
Anson Seers, Virginia Commonwealth University
Shaker A. Zahra, University of Minnesota
Sherry Sullivan, Bowling Green State University

With promotion to Full Professor, career academics not only move to the upper echelon of the field, but also reach the end of a clearly defined career path. This session brings together Fellows of SMA to share the path they selected for making the most of the freedom and opportunity that came with being a Full Professor. Panelists will discuss strategies for making the most of the full professor years. They will speak about setting new goals and how their choices about how to spend their post-promotion time in teaching, research and service evolved. A question and answer time follows.
107. PDI: Avoiding Red Flags in Micro and Meso Research Design
Friday, 3:15 to 4:45 PM
Citrus

Session Coordinator:
Timothy Munyon, University of Tennessee-Knoxville

Panelists:
Timothy Munyon, University of Tennessee-Knoxville
Lisa Schurer Lambert, Georgia State University
Anne Smith, University of Tennessee-Knoxville

This 90-minute PDI will introduce participants to the idea of “red flags” in quantitative and qualitative research designs. The session is not intended to be exhaustive, but rather to highlight common errors researchers make in their research designs, and to identify ways of effectively avoiding these errors a priori. The session will also give participants an opportunity to have their research designs peer reviewed in the session by other participants with similar research interests and backgrounds.

108. A Clinical Approach to Entrepreneurship
Friday, 3:15 to 4:45 PM
Glades

Session Coordinator:
Lewis Sheats, North Carolina State University

Panelists:
Lewis Sheats, North Carolina State University
Jeffrey Pollack, North Carolina State University
Jon Carr, North Carolina State University
Jared Childs, North Carolina State University

In this interactive session, we will suggest that an optimal alternative to traditional classroom-based entrepreneurship education is the clinical model whereby teaching and research are integrated in a structured set of co-curricular activities centered around an Entrepreneurship Clinic. We discuss the Entrepreneurship Clinic Model, as inspired by the university teaching hospital model, which integrates research, teaching and real world experience. Entrepreneurship clinics provide a place where faculty, students, entrepreneurs and service providers go to learn and build the next generation of businesses. In this interactive session we will explore how a clinic model can enhance entrepreneurship education and research.

109. ct on Your Research - Workshop on Making Research Videos
Friday, 3:15 to 4:45 PM
Indian Key

Session Coordinator:
Bart Debicki, Towson University

Presenters:
Bart Debicki, Towson University
Julita Haber, Fordham University

We are excited to present a workshop on making research videos. This workshop serves as a follow-up to the Act on Your Research contest organized at the SMA meetings in 2014 and 2015. The objective of this session/contest is to create an innovative way of sharing research findings through short films and performances. Researchers will be invited to workshop their scripts, storylines or ready videos illustrating the practical implications of their research results. As a part of the workshop, we will create a contest for best videos that participants will bring to the workshop with cash prizes amounting to $800 sponsored by Towson University and Fordham University. For more information: https://bdebicki.wixsite.com/act2017

110. PDI: Decisions in Latent Modeling
Friday, 3:15 to 4:45 PM
Bird Key

Session Coordinator:
Larry Williams, University of Nebraska

This workshop covers key decision points in implementing a latent variable model. The goal is to translate recent translate recent technical work and make it accessible so as to improve use of best practices by organizational researchers. Decisions to be covered include: Decision 1: What type of measured variables (items vs. parcels)? Decision 2: Type of link between latent variables and indicators (reflective, formative)? Decision 3: How to determine if measurement model is acceptable? Decision 4: How to determine if path model is acceptable? Decision 5: How to investigate mediation/moderation hypotheses? Decision 6: What to report from my SEM analyses?

111. Track 7: Teams of Rivals: Strategic Cooperation and Alliances
Friday, 3:15 to 4:45 PM
Long Key

Session Facilitator:
Michelle Zorn, Auburn University

Determinants of Early Movers in International Strategic Alliances:
A Study of Technology Intensive Indian Firms
Mohammad Fuad, Indian Institute of Management
Anita Mital, Indian Institute of Management
Ajai Gaur, Rutgers University-Newark

International strategic alliances are interfirm cooperative agreements between partners from different countries, to achieve their strategic objectives. Drawing upon the resource based view and agglomeration theory, we study determinants of entry timing in the formation of international strategic alliances against the backdrop of Indian liberalization. Our findings suggest that firms lacking technological resources and those with lesser international exposure form alliances early. Further, firms located within global cities alliance early and service firms located within clusters were found to move early in alliance formation. We observe that lack of resources, superior geographic locations and industry affiliation temporarily impact emerging market firms to enter into international strategic alliances earlier than their rivals.

How Does Cooperation Affect the Competitive Dynamics Between Rivals? The Case of Multimarket Contact
Klemens Klein, University of Cologne
Thorsten Semrau, Trier University
Sascha Albers, University of Antwerp
Edward Zajac, Northwestern University

The study of competitive interaction has been the focus of the sizable literature examining the influence of multimarket contact among rivals on new market entry, yet very little is known about how cooperation may affect such competitive dynamics. This paper directly addresses this question, analyzing how and why the introduction of alliances among rivals will affect the established inverted-U relationship between multimarket contact and market entry. Using extensive longitudinal data from the European airline industry from 2004 to 2010, we find support for our predictions that the presence of alliances among rivals exerts an attenuating effect on both ends of the familiar curvilinear relationship.

Market Entry through Partnerships: The Case in the Venture Capital Industry
Lei Zhang, University of South Florida
Alex Markarevich, ESADE Business School
We examine the patterns of partnership formation of new market domain entrants in the U.S. venture capital (VC) industry. Drawing on the principle of exclusivity in partner selection under uncertainty, we extend it to the analysis of new entrants’ partnership formation in VC investment. In contrast to prior dyad-level studies, we focus on the syndicate-level analysis as better reflecting partnership formation patterns. Our empirical analyses reveal that new market entrants syndicate predominantly with other new entrants. Syndicates of a higher percentage of new entrants tend to invest in more mature start-ups, rounds of smaller amount, larger syndicates, and avoid the turbulent environment of popular market domains. The study highlights the interplay of partner selection preferences, environmental uncertainty, and transaction settings in partnership formation of new market entrants. It also shed lights on the differences of de novo entrants and de alio entrants in these interplays.

112. Track 3: Social Judgments and Processes
Friday, 3:15 to 4:45 PM
Palm

Session Facilitator:
Richard Devine, Florida State University

An Instrument of Legitimacy Judgments
Alexander Lewis, University of Texas-San Antonio

Microinstitutions are an increasingly important facet of institutional research (Gehman, Lounsbury, & Greenwood, 2016; Powell & Colyvas, 2008) and institutional experiments represent a fertile but unploughed field in this vein (Deephouse, Bundy, Tost, & Suchman, 2017). In the spirit of this movement, I draw on Tost’s (2011) framework to construct an instrument which captures multidimensional legitimacy judgments. Legitimacy judgments are social judgments which, in aggregate, represent the institutional legitimacy of some evaluated entity. Exploratory factor analysis revealed a three factor structure, aligning with Tost’s theory, and confirmatory factor analysis, conducted with a separate sample in a separate setting, support the three dimension 14 item instrument.

*Best Paper in Track*
Credible Quality Signal or Symbolic Identity Marker? Market Status and the Social Construction of Wine Value
Daniel Davis, University of North Carolina-Charlotte
Wie Zhao, University of North Carolina-Charlotte

Departing from the predominant notion that market status is a credible signal of product quality, we view market status as a symbolic identity marker that is dependent on categorizations within an institutional classification system. Specifically, we propose that a more distinct and exclusive categorical status exerts a greater impact on product valuation in higher-tier market segments. We further argue that categorical status can affect product valuation independent of or even fully decoupled from product quality, particularly when the status is associated with a collective honor based on group membership. Drawing empirical evidence from the California wine market, we use quantile regression analyses to provide support for our arguments.

Proto-Institutionalization as a Complex Social Process: Hyperlink Networks and STEM Diversity Practices
Daniel Davis, University of North Carolina-Charlotte

While institutional theory explains the diffusion of established social practices, much less is known about the emergence of new institutional practices or proto-institutionalization. Drawing on the complexity science literature, the theoretical concept of emergence can further extend scholarly understanding of proto-institutionalization. Although prior research proposes a theoretical framework to understand proto-institutionalization through collaborative networks among actors, these efforts do not fully investigate the complex relational structure of the network. The purpose of this paper is to address this limitation by exploring the network topology of an organizational community engaged in proto-institutionalization. Furnishing empirical evidence from organizational actors engaged in creating policies and programs to address the diversity crisis in computer science education, I use WebCrawler technology to collect a hyperlink network of organizations engaged in proto-institutionalization. Network analysis will specifically address the complex nature of the inter-organizational network and the mesoscale community structure of the network. The findings are supportive of a network that exhibits complex, small world properties, suggesting the potential for radical, emergent institutional change. This paper, therefore, further extends institutional theory through conceptual integration with complexity science arguments, offering avenues for further research.

113. Track 5: Workplace Policy, Factors, and Outcomes
Friday, 3:15 to 4:45 PM
Sawgrass

Session Facilitator:
Dewynna Horn, Texas Woman’s University

Framework for Understanding the Effects of Anticipatory Justice on Retrospective Perceptions of HR Diversity Policies
Samantha Jordan, Florida State University
Gerald Ferris, Florida State University

As organizational diversity becomes increasingly common, human resource (HR) departments must learn to manage heterogeneity within organizational contexts effectively. Although HR diversity policies and practices seem like an adequate solution to workplace diversity problems, employee anticipatory justice perceptions regarding the fairness of HR policies may offer an explanation as to why these formal policies are not always successful at leading to positive outcomes. Therefore, a pressing question for both researchers and practitioners should concern how to effectively increase positive employee anticipatory justice perceptions when implementing new HR policies. To begin to address this question, this paper develops a justice framework examining organizational justice perceptions regarding HR diversity policies over time. Within this framework, we consider the dynamic relationships between employee- and organizational-level moderators on the HR diversity policy—anticipatory justice relationship, while also considering the effects of employee anticipatory justice on retrospective fairness perceptions. The contributions of this proposed framework are discussed as are directions for future research and practical implications.

Telework’s Impact on Objective and Subjective Career Success: More Than Just Climbing the Corporate Ladder?
Timothy Golden, Rensselaer Polytechnic Institute
Gary Powell, University of Connecticut
Kimberly Eddleston, Northeastern University

Given the absence of prior research, this study investigates the impact of telework on objective and subjective career success. In particular, whereas the teleworking and careers literature have progress largely as separate streams of research, we integrate career theory into the telework literature to examine telework’s impact on objective career success including promotions and salary growth, and subjective careers success in terms of job satisfaction and turnover intentions. Using a large sample of employees matched with corporate promotion and salary growth data, we not only compare teleworkers to non-teleworkers in the same organization, but also examine if the extent of teleworking impacts objective and subjective career success. Moreover, we further explore the nature of these relationships by examining if the teleworker’s work context influences telework’s potential impact on promotions and salary growth. Results indicate differences between teleworkers and non-teleworkers in terms of salary growth, job satisfaction, and turnover intentions, but not promotions. Moreover, the extent of teleworking was negatively associated with promotions and salary growth, positively associated with job satisfaction, and negatively associated with turnover intentions. The moderating effects
of the teleworker’s work context provided some support for the influence of these important factors, indicating the extent of telework’s potential effects on career success may be tempered by some aspects of the work context, and suggesting the need for further study.

**To Breed or Not to Breed: A Typology and Framework of Parental Leave in the Workplace**

Wenjuan Guo, University of North Texas  
Jestine Philip, University of North Texas  
Julie Hancock, University of North Texas

The changing nature of workforce in the U.S. has been marked by increasing numbers of dual-career couples (Kossek, 2005), working women, working mothers, and fathers desiring to more participative in parenting responsibilities (Harrington, Van Deusen, & Humberd, 2011). Practices such as family-leave policies, flexible work scheduling, and child care assistance are often included together in prior studies as bundled family-friendly programs. However, there is a need for more exploration of the roles that maternity, parental, and paternity leave play in individual outcomes. We develop a typology identifying four types of employees: Breeders, Soon-to-Breeders, Veterans, and Childfree. Next, we classify these employee types into two categories based on the likelihood and degree to which they would be affected by parental leave policies: affected employees, such as new mothers, fathers, and adopters and those of childbearing age with goals of having a family, and unaffected employees, including those who have finished having children or those who do not plan to have children. Constructing a theoretical model based in justice and social exchange theories, we depict how type of employee influences perceptions of parental leave, how these perceptions lend themselves to attitudinal and behavioral outcomes, and the possible moderating influence of paid versus unpaid parental leave. As the trend of paid parental leave continues to grow, organizations must be prepared to balance perceptions of fairness of parental leave among these groups of employees in order to maintain positive work outcomes. We offer practical insights for addressing these concerns.

**114. Track 6: Team Dynamics and Behaviors**  
Friday, 3:15 to 4:45 PM  
Sawyer Key

Session Facilitator:  
Phoebe Pahng, Iowa State University

**Exploring Trait and State Predictors of Cooperative Behavior within Extreme Work Teams**

Andra Serban, Virginia Commonwealth University  
Sebastiano Massaro, University of Warwick  
Rossana Castaldo, University of Warwick  
Tyson Hayes, University of Warwick  
Leandro Pecchia, University of Warwick

Aggression and terrorism are pressing behavioral problems of our times. In extreme situations, leaders in a variety of arenas put together task forces to respond to these. Given the scarcity of research on teams operating in extreme environments and how selection of individuals into these teams can impact mission success, we examine, in a laboratory setting, the role of personality and gender on individual cooperative behavior. We use a multiplayer first person shooter video-game, where counter-terrorist teams are tasked with rescuing a hostage, while preventing acts of terror. Additionally, we explore three different facets of affect: negative affectivity, affective intensity, and affective regulation as mediators between individual traits and cooperative behavior, with affective intensity and regulation assessed through objective physiological measures (i.e., HRV analysis). Our results indicate affective intensity and several negative affectivity dimensions partially mediate the relationship between personality and gender, as predictors, and cooperative behavior, as outcome. We discuss implications of these findings and suggest future avenues for both research and practice on antecedents of individual and team effectiveness in extreme contexts.

**“How Could You Support That Presidential Candidate?” Effects of Group Political Disparity on Group Effectiveness**

Ashley Robinson, Oklahoma State University  
Rebecca Greenbaum, Oklahoma State University  
Lindsey Greco, Oklahoma State University  
Yun Chung Kim, Oklahoma State University

Despite recognizing the importance of organizational politics, researchers have yet to investigate the dynamics of government politics in the workplace. We expect government politics to facilitate group political disparity among group members that consist of political liberals and conservatives. We define group political disparity as within-group variances in political views. We distinguish liberals from conservatives based on five moral foundations. Liberals uphold two of the five moral foundations, while conservatives uphold all five. Because political views are situated in moral foundations, we expect liberals and conservatives to engage in tension and animosity in their political thinking to the extent that group members disclose personal information. Furthermore, when groups disclose personal information, groups high in political disparity are expected to experience more relationship conflict, resulting in lower group organizational citizenship behaviors and performance. Theoretical and practical implications are discussed.

**A Theoretical Model for Multilevel Effects of Team Emergent States on Motivation in Team Training**

Ipek Mete, Middle East Technical University

The purpose of the present paper is to propose a conceptual model that emphasizes the effects of team emergent states on individual training motivation in team training settings. The conceptual model that is proposed here focuses on previously neglected associations, namely the cross-level (top-down) main and moderating influences of team emergent states (i.e., team efficacy, team psychological safety, team learning orientation, team empowerment) on individual training motivation, as well as the indirect effects of these states on individual training outcomes (e.g., learning, transfer) via training motivation.

**115. Track 6: Tell Me How You Really Feel: Emotional Expression at Work**  
Friday, 3:15 to 4:45 PM  
Jasmine

Session Facilitator:  
Ian Mercer, Auburn University

**The Expression of Envy: Culture, Fairness Perceptions, and Counterproductive Work Behavior**

Yingli Deng, Oklahoma State University  
Cynthia Wang, Oklahoma State University

Envy is a universal emotion that provokes deleterious behaviors that can harm organizations. Few scholars, however, have considered how reactions to envy may vary across cultures. We examine when and why the expression of envy differs across two cultures—North America and Singapore. We argue that, although envious individuals across both cultures experience feelings of unfairness, North Americans will respond to these feelings via counterproductive work behaviors, whereas Singaporeans will not engage in counterproductive work behaviors. By examining reactions to envy in two cultures, we clarify when and why envy does not lead to counterproductive work behaviors.

**A Relational Framework of Compassion: A Multidisciplinary Review**

Hongguo Wei, Case Western Reserve University  
Shaobing Li, Miami University (Ohio)

With a multidisciplinary review of research on compassion, we find that albeit different definitions and interpretations of compassion, all implicitly recognize the importance of the relational nature in the formation of compassion. From the relational perspective compassion can be viewed as emotional, moral and behavioral connections between
two agents. However, there lacks an in-depth, concrete understanding of the relational meaning of compassion. To explore the relational meaning and the underlying mechanisms of how compassion works, we build a relational framework of compassion regarding its antecedent condition, connotation, direction, and effects of compassion, and then conduct an integrative review of all these aspects. This enriches our knowledge of compassion from the relational perspective and demystifies its paradoxical impacts at work. As such, we propose future research directions around the relational and paradoxical meaning of compassion at work.

Identity Coactivation: Cognitive Dissonance as an Explanatory Mechanism of the Emotional Response
Jennifer Roblin, Bradley University
Heidi Baumann, Bradley University
Jan Kottik, Bradley University

Much is known about how identities form in the workplace and how organizational identification drives work behavior, but relatively less about how out-of-context identities influence work behavior, particularly when activated at work. This study is a preliminary investigation into the measurement of multiple identities and their coactivation. Specifically, our purpose is to begin an empirical investigation of the nature and outcomes of identity coactivation, the moderating influence of self-concept clarity, and the usefulness of cognitive dissonance as an informative and explanatory theoretical mechanism explaining individuals' reactions to identity coactivation. In this initial study, data were provided by 157 undergraduate students who completed a survey and described a coactivation event. Event descriptions were coded and data were analyzed using hierarchical regression. Results showed that when conflicting identities were coactivated, both high and low arousal negative emotions were consequent, while high and low arousal positive emotions were consequent to compatible identities. Support was not found for the moderating role of self-concept clarity in the coactivation-emotion relationship, but supplemental analyses showed a three-way interaction between self-concept clarity, conflict, and the operation of a chronic identity (i.e., gender) in predicting negative emotional states low in arousal. Implications and limitations are discussed.

116. rack 1: The Family Side of Family Business
Friday, 3:15 to 4:45 PM
Banyan

Session Facilitator:
David Witt, University of Tennessee-Chattanooga

For the Family: Family-Centered Goal Prioritization and Nonfamily Managers - The Role of Occupational Identification
William Tabor, Mississippi State University

While the current management research recognizes that nonfamily managers are beneficial in helping family firms achieve their economic goals, there is a general assumption within the literature that nonfamily managers will generally hinder family firms in their pursuit of family-centered noneconomic (FCNE) goals. This is in part assumed because of the common belief that nonfamily managers will primarily be committed to helping the firm achieve economic goals with, which they will tangibly benefit, leaving noneconomic goals to the family. However, the purpose of this paper is to demonstrate that not only will nonfamily managers likely commit to assisting family firms in their pursuit of FCNE goals but will, in many cases, excessively prioritize these goals. To do this, this paper will look at occupational identification among nonfamily managers to show that high levels of this form of identification will lead nonfamily managers to pursue the ends or goals of ownership, regardless of any direct benefit it will provide for them. As this paper will demonstrate, the outsider status among nonfamily managers with high levels of occupational identification is likely to lead nonfamily managers to overemphasize and excessively prioritize FCNE goals. We will conclude by discussing practical implications of this and potential avenues for future research.

*Best Paper in Track*
The Relationship between Familiness and Social Performance; a Stewardship Perspective
Jason Lortie, University of Mississippi
Kevin Cox, Florida Atlantic University
David Marshall, University of Mississippi
Roland Kidwell, Florida Atlantic University

Business families vary in the extent to which they exert influence in their respective family businesses. However, the heterogeneous nature of business family influence has important implications for both family business and societal outcomes. In this study, we theoretically and empirically examine how the business family influence, manifested as “familiness” relates to the importance family businesses place on socially beneficial goals and subsequent social performance. By applying stewardship theory to the relationships between family businesses and society, we argue that greater familial influence on family businesses results in greater concern for socially beneficial outcomes. Based on evidence from a survey of 303 family business owners, we find evidence supporting our hypotheses and discuss the implications for family business research and practice.

Servant Leadership: Righting the Wrongs of Injustice in the Family Firm
William Tabor, Mississippi State University
Laura Marler, Mississippi State University
James Chrisman, Mississippi State University

Satisfying and retaining nonfamily employees is a perennial challenge for family firms. Due to their propensity to benefit family members in personnel decisions, these firms jeopardize their socioemotional wealth when nonfamily employees develop perceptions of injustice and form negative views of the firm. To advance the understanding of nonfamily employee behavior in the family firm, we theorize that family firm leaders will engage in a unique and distinctive style of leadership, servant leadership, wherein they will show intense care and concern for nonfamily employees in order to preserve socioemotional wealth. By engaging in servant leadership, family firm leaders are able to mitigate the consequences of family bias in personnel decisions. In particular, family firm leaders can mitigate the effects of perceptions of injustice on nonfamily job satisfaction and turnover intentions. Therefore, our theorizing offers servant leadership as a broader explanation as to why family firms can be successful despite the preferential treatment of family members and the associated perceptions of injustice among nonfamily employees.

117. SMA Beach Bash 2017
Friday, 6:30 to 9:30 PM
Breck Deck

One of our conference highlights is the Friday evening social, scheduled on the TradeWinds Breck Deck. Please join us for an evening of good food, beach games, karaoke, and dancing!!!

Session Coordinator:
Joy Karriker, East Carolina University

Sponsor: SAGE

118. Cafe SMA Coffee Bar
Saturday, 8:00 to 8:30 AM
Banyan Breezeway

Session Coordinator:
Joy Karriker, East Carolina University

Saturday, October 28
119. SMA Registration & Solutions Desk
Saturday, 8:00 to 9:00 AM
Banyan Breezeway

Session Coordinator:
Don Kluemper, University of Illinois-Chicago

120. Retire or Not to Retire: A Decision Making Model
Saturday, 9:00 to 10:30 AM
Indian Key

Session Coordinator:
Millicent Nelson, Middle Tennessee State University

Presenters:
Millicent Nelson, Middle Tennessee State University
Garry Adams, Auburn University
Jennifer Collins, Florida A & M University
Matrecia James, St Bonaventure University
Emma Metcalf, VA Medical Center, Lexington, KY
Angela Miles, North Carolina Central University
Sally Sledge, Norfolk State University
Richard Tarpey, Middle Tennessee State University

Many faculty members are at or approaching a fork in the road leading to the last stage of their careers where retirement decisions are being considered. Generally age and financial issues are determinants for retirement planning; however, non-financial concerns can also be important factors for decision making. Non-financial issues can include health, family, hobbies or other interests, as well as job satisfaction. There are no clear guidelines that incorporate both financial and non-financial issues for retirement decision making. This interactive session will allow participants to develop a decision making model and explore various factors that may be antecedents for retirement.

121. PDI: Dyads: Research Designs and Analytical Strategies
Saturday, 9:00 to 10:30 AM
Bird Key

Session Coordinator:
David Woehr, University of North Carolina at Charlotte

Panelists:
David Woehr, University of North Carolina-Charlotte
Jane Thomas, Purdue University-Northwest

Andrew Loignon, NEOMA Business School
Janaki Gooty, University of North Carolina-Charlotte

The dyad, or pair of people, is the most basic unit of interpersonal interactions in the workplace. In this workshop, we review the definition and application of dyadic constructs in management research. We also illustrate important design considerations for collecting dyadic data and the application of four dyadic data analysis techniques: actor-partner interdependence models (APIM), the social relations model (SRM), one-with-many models (OWM), and cross-classified models (CCM). The goal of this workshop is to formally introduce dyadic data analysis techniques to management scholars, discuss how they differ from other forms of non-dyadic data analysis, and review relevant applications of these approaches. We also provide example data files and syntax for participants to practice on their own.

122. Tour of Tampa Bay Lightning Facilities
Saturday, 11:00 AM to 2:30 PM
Off-Site Event

Session Coordinator:
Garry Adams, Auburn University
Michelle Harrolle, University of South Florida
Joy Karriker, East Carolina University

$10 Transportation Fee, Pre-registration required

123. SMA Group Event: Hockey Game Night - Tampa Bay Lightning Vs. Anaheim Ducks
Saturday, 5:15 to 11:00 PM
Off-Site Event

Session Coordinator:
Garry Adams, Auburn University
Michelle Harrolle, University of South Florida
Joy Karriker, East Carolina University

$40 Ticket and Transportation Fee, Pre-registration required
ANALYSIS OF THE IMPACT HOSPITAL VALUE-BASED PURCHASING SCORES HAVE ON TRAUMA CERTIFIED HOSPITALS

INTRODUCTION

Medicare’s Hospital Value-Based Purchasing (HVBP) continues to impact the reform efforts of the delivery of health care in the United States. This reform has concentrated on relying less on volume for compensation and emphasizing the quality of care provided as the primary factor to determining Medicare reimbursement. The HVBP is a CMS initiative that rewards acute-care hospitals with incentive payments for the quality of care they provide to Medicare beneficiaries. As such, organizations must focus on providing the highest quality and most economical care or face reductions in their Medicare payment. Several recent studies have provided indication that the HVBP does demonstrate success in improving quality within hospitals (Benzer et al., 2014; Wolosin, Ayala, & Fulton, 2012). However a number of additional studies provide questions about its success (Ryan, Burgess, Pesko, Borden, & Dimick, 2015) revolving around efficiency (Zhao, Haley, Spaulding, & Balogh, 2015), profitability (Turner, Broom, & Counte, 2015), and relation to other desired outcomes (Figueroa, Tsugawa, Zheng, Orav, & Jha, 2016; Spaulding, Zhao, & Haley, 2014). However, researchers and policymakers remain optimistic about the impact of HVBP on quality and cost (Conrad, 2015; Lindenauer et al., 2007).

Of some concern is how different types of organizations perform on HVBP metrics (Chatfield, 2016; Davidson, Moscovice, & Remus, 2007; Gilman et al., 2015; McFarland, Ornstein, & Holcombe, 2015). Due to the nature of HVBP measures, organizations which treat more complex patients may face unfair penalty (Figueroa et al., 2016; Ramirez et al., 2016;
Werner & Asch, 2005). For example, Trauma centers are facilities equipped to handle major injuries and provide the community with a resource to serve needs that are likely to be unmet within other healthcare delivery locations. Organizations with trauma level certification are likely to face a different type of patient, but also must have improved functionality and staff skill level in order to acquire and maintain trauma certification. As such, we do not know if HVBP adversely affects trauma centers, or organizations which acquire the various levels of trauma certification. In order to evaluate this association, this study examines how trauma certification and level of certification correlates with HVBP’s four domain scores.

CONCEPTUAL FRAMEWORK

Health care reform and the implementation of HVBP are intended to promote greater quality, patient-centered, and cost-effective care in an attempt to move the U.S. health care system from one of curing to one of preventative care (Benzer et al., 2014; CMS, 2015). HVBP pushes hospitals to standardized care while paying attention to patient experience, outcomes, and efficiency in terms of cost per Medicare beneficiary (CMS, 2016).

The licensing and certification of staff and facilities are intended to provide indication to public consumers as to the quality of process and outcomes achieved by the facility (Fonarow et al., 2010; Greenfield & Braithwaite, 2008). Those hospitals that fail to achieve or maintain accreditation may find that their patient load decreases, as they may be unable to accept CMS patients, and in the worst case, they will have to close their doors (CMS, 2014). Conversely, hospitals with accreditations and certifications can make themselves more attractive to patients, as the public may perceive that the hospital can offer more beneficial services and specialties (Braithwaite et al., 2010). As such, health centers with trauma certifications are expected to be able to attract more patients through their doors (Hsia, Wang, Torres, Saynina, & Wise, 2010).
Trauma certification falls into two categories: trauma center level of care designation and trauma center verification (Society, 2016). Trauma centers must first adhere to specific national standards that dictate which resources must be in the hospital, which services must be provided, and the expected yearly trauma patient load. From there, state legislature and/or state regulatory bodies specifically outline the requirements for each level of trauma center designation. Trauma centers are designated Level I, II, III, IV, or V. Level I centers are equipped to deal with the most serious conditions, such as extensive automobile trauma and gunshot wounds (Society, 2016). Verification of trauma centers is conducted by the American College of Surgeons (ACS) in a process similar to Joint Commission accreditation. Resources listed in *Resources for Optimal Care of the Injured Patient* comprise the requirements for verification (Surgeons, 2016). The ACS verifies that the resources listed are in fact present in the trauma centers. States certify that trauma criteria have been met and award certification. Verification is voluntary and currently lasts for three years (Society, 2016).

Both designation and verification require the use of quality improvement programs. In order to attain trauma certification, the centers must also show that they have performance improvement programs, quality patient care, and processes in place for teaching and continuing education (Surgeons, 2014, 2016). Previous studies have indicated that hospitals which have obtained trauma certification have a lower mortality rate (Branas et al., 2005; Celso et al., 2006). In order to achieve certification, hospitals must streamline processes and strive for the best outcomes in the most complex cases that they are able to see based on their level of certification (Surgeons, 2014, 2016). Based on this increased qualification level, we can expect that hospitals that obtain trauma certification are also more likely to score well on three of the four CMS
HVBP domain scores (process, outcome and efficiency), which are indications of a hospital’s quality of care.

In order to meet both HVBP and trauma certifications guidelines, hospitals must strive to continuously improve and streamline processes, while making sure that they continue to fit within the guidelines provided by CMS and ACS (CMS, 2015, 2016). Attaining the certification demonstrates that the hospital has the processes necessary to achieve the most desired outcome in complex cases (Ayers & Czuhajewski, 2015). These processes promote a quicker response time by staff and provide more resources allocated to patient care. In addition, previous inquiry has provided indication that achieving trauma certification is associated with improvements in process of care measures including: time in the emergency department, time spent in trauma resuscitation areas, x-rays, intubations, initial and final pupil examinations, O_2 saturation and several other Advanced Trauma Life Support measures (Cornwell, Iii, Chang, Phillips, & Campbell, 2003; Olson et al., 2001). As a result, more desirable outcomes should be achieved and an overall increase in the outcome domain score observed particularly in centers which see greater volumes (Ayers & Czuhajewski, 2015; Branas et al., 2005; Celso et al., 2006; Nathens, Jurkovich, Maier, & et al., 2001). Stemming from the above discussion on the improvement in the processes, the overall efficiency of the processes must improve as hospitals attain certification. As improvements required for certification occur, the hospital will be focused on providing evidence-based care that is appropriate for the patients’ needs. As such, this should serve to maximize the quality of care per CMS dollar, thus resulting in a higher efficiency domain score (CMS, 2016). Therefore, we hypothesize (H1) that trauma certified hospitals will score higher in the domains for process of care, outcomes, and efficiency.
In addition, hospitals that have trauma certification should also see a raise in the number of admissions. In many cases, the certification indicates that the hospital may be the only one in the area capable of receiving certain patients (Branas et al., 2005). However, with a greater number of patients, a corresponding limitation in physician time per patient may occur (Nathens et al., 2001). Furthermore, patient demographics may cause a facility to experience a decrease in quality of care scores. A recent study conducted by Rogers and colleagues (2013) found that within trauma centers, younger patients who do not have surgery but who do experience complications tend to rate their experience of care lower than older patients who do have surgery. Unless trauma centers are willing to invest a greater amount of capital to increase their size, in both terms of capacity and space, to meet the demands of more patients, it would seem that patient perception of care is likely to suffer. As a result, (H2) we expect the patient’s experience of the care domain to be lower in hospitals with trauma certification.

As previously stated, each level of trauma certification requires specific metrics to be met. As an organization achieves a higher level of certification, it must provide additional requirements (Surgeons, 2014, 2016). The highest level is a Level I center, which must be able to provide care for any situation, regardless of complexity and trauma, at any time of the day (Society, 2016). As such, the higher the level of certification, the more in-depth quality improvement programs, the more specialization, and more staff availability required. This should also associate with greater volumes and associated process of care and outcome scores (Celso et al., 2006; Hsia et al., 2010; Nathens et al., 2001; Rogers et al., 2013). Therefore, we hypothesize (H3) that hospitals with a higher level of trauma certification will score higher on HVBP dimensions.

METHODS
Data Sources

This study used the following databases: the 2015 HVBP database, 2015 Area Health Resources Files (AHRF) database, and the 2015 American Hospital Association (AHA) database. The HVBP database provides scores separated into the following domains: clinical POC, patient experiences, outcomes, efficiency, and overall HVBP total performance score (CMS, 2015). The AHRF database provides the market variables such as market competition, aging population, and per capita income level. Finally, the AHA database contains annual survey data collected from U.S. hospitals and focuses on hospital characteristics, services, and functions (AHA, 2015).

Sample. After the merging of the above data sources and data cleaning we identified a total of 2,168 hospitals that qualified to be in our analysis. Hospitals that were excluded from the analysis did not have complete records or did not participated in the HBVP program.

Variables

Dependent variables. This study reviews five key dependent variables: the HVBP total performance score (TPS) and the four domains used to calculate the TPS. CMS operationalized total performance score by using associated weights for each domain, the corresponding weights for 2015 were: process of care (POC), weighted at 10%; patient experience of care (PEOC), weighted at 25%; outcome, weighted at 40%; and efficiency, weighted at 25% (CMS, 2016).

Independent variables. The main independent variables in this study are the trauma certification status of the hospitals and the trauma certification level (Trauma 1, 2, 3, or 4), as reported by the AHA database and the American College of Surgeons. In order to conduct the analysis for trauma certification level, levels 3 and 4 were combined into one variable due to low bin counts when taking into consideration the study control variables.
**Control variables.** To control for differing organizational characteristics, we were limited to hospital or environmental level data therefore, we used the following variables: organizational ownership, system status, organizational size, teaching status, average length of stay, percent of the population 65 or older, the Herfindahl-Hirschman Index (HHI), and percentage of the hospital’s Medicare and Medicaid population. Organizational size is defined by the number of staffed beds and is categorized as small (less than 100), medium (100 to 199), and large (greater than 200 staffed beds). Size helps provide indication of hospital quality (Sosunov et al., 2016). Organizational ownership is categorized as non-federal government, for-profit, and not-for profit and is utilized to provide indication of financial and quality performance (McKay & Deily, 2005). System status is a binary variable and indicates if the organization is part of a larger system and provides indication as to the resources available to the organization (McCue & Diana, 2007). Teaching status has been demonstrated to correlate with patient safety scores and therefore is an important control variable for this study (Shahian et al., 2012). The Herfindahl-Hirschman Index (HHI) is a measure of competition within the market and is a continuous variable between 0 (pure competition) and 1 (pure monopoly) (Hsieh, Clement, & Bazzoli, 2010; Menachemi, Shin, Ford, & Yu, 2011). Per capita income and percent of the population 65 or older are measured as continuous variables and provide indication of the availability of resources for the hospitals within the analysis (Yeager et al., 2014). Finally, the percentages of the Medicare and Medicaid population are reported as continuous variables and provide an indication of the financial health of the organization (Bazzoli, Chen, Zhao, & Lindrooth, 2008; Bazzoli et al., 2007).

**Analysis**
The associations between trauma certification, trauma certification level and HVBP (TPS, POC, PEOC, and outcome) scores were assessed through regression analysis (Long & Freese, 2006). In order to analyze the association between the trauma certification and level of certification and HVBP efficiency scores, zero inflated negative binomial regression was utilized due to over-dispersion and the large number of zero counts (Long & Freese, 2006). Vuong tests supported the use of zero inflation correction. STATA 14 was used to run all analyses, and models were estimated through maximum likelihood. All variables were checked for collinearity and outliers. Odds ratios, standard error, and significance are reported.

**RESULTS**

Table 1 provides descriptive characteristics of hospitals with and without trauma certification. Overall, there is a combined sample of 2,168 hospitals within the analysis. Of those, 1031 are trauma certified. A number of hospitals were dropped from the analysis due to missing HVBP scores. In general, the mean HVBP scores for trauma-certified hospitals are lower than those that are not trauma certified. In addition, trauma-certified hospitals had a lower Medicare and Medicaid percentage, they were more likely to be non-federal government owned and provide medical education, and they were on average larger.

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|Insert Table 1 About Here|
hospitals. Teaching hospitals also have lower scores than non-teaching hospitals. Ownership status does not have a consistent association with scores across the domains.

Insert Table 2 About Here

Table 3 shows the regression and zero inflated negative binomial models for the association between HVBP scores and the trauma certification controlling for organizational and market characteristics. TPS, POC, and outcomes were significantly different between trauma and non-trauma-certified hospitals. The results indicate that trauma centers are associated with a 1.19 point decrease in TPS, a 2.06 point decrease in the process of care, and a 1.74 point decrease in the outcome domain compared to non-trauma centers, keeping all else equal. In addition, the PEOC domain demonstrates no difference between trauma and non-trauma certification. As such, H1 and H2 are not supported.

When reviewing the control variables, we find that the greater the Medicaid or Medicare percentages, the lower the score on each domain with exception to the efficiency score. Within the efficiency score, an increase in Medicaid rate results in a 1.52 point increase when comparing the all zero efficiency group to the all non-zero efficiency group. In other words there is a greater Medicaid percentage within the non-zero efficiency group. An increase in Medicaid rate results in an 8.5 point decrease among organizations which score above zero in efficiency. While an increase in Medicare percentage is associated with a 0.33 point increase for hospitals which score above zero in efficiency. For-Profit ownership status compared to government non-federally owned hospitals were associated with increases in POC, outcome and membership in the non-zero efficiency group, but were associated with a decrease in the PEOC domain. Larger
hospitals are associated with decreases in all domains as well as indicate membership in the non-zero efficiency group compared to small hospitals. Teaching hospitals also demonstrated a decrease in domain scores compared to non-teaching hospitals for PEOC and outcomes. The only other variable that demonstrated significant difference between domains is the Hefindahl-Hirschman Index. An increased HHI (more monopolistic) is associated with increases in PEOC and increased efficiency among non-zero efficiency hospitals, and a decrease in scores for outcomes and membership in the all zero scoring efficiency hospitals compared to the all non-zero efficiency hospitals. Finally, within the overall TPS, trauma centers are associated with a decrease in TPS, as are an increase in Medicare and Medicaid percentage, medium or large hospitals compared to small, and teaching vs non-teaching hospitals. Not-for-Profit status compared to governmental non-federal ownership, and an increased HHI are both associated with increases in TPS.

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Table 4 shows the regression and zero inflated negative binomial models for the association between HVBP scores and the trauma certification levels controlling for organizational and market characteristics. Results indicate that TPS, PEOC, and the zero-inflated part of the efficiency score demonstrate differences between levels of certification. Trauma level 3 is associated with a 3.04 point increase in TPS score compared to trauma level 1 certification. Within the PEOC domain, trauma level 3 is associated with a 3.29 point increase compared to trauma 1 certification. Within the zero-inflated model, both trauma 2 and trauma 3 hospitals are associated with membership in the all-zero efficiency group compared to trauma 1, however
there are no differences between the different levels of trauma certification in efficiency in the negative binomial part of the model. Thus, H3 is not supported.

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Insert Table 4 About Here

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DISCUSSION

Referring to Table 1, we see that having a trauma certification resulted in lower domain scores for POC, outcomes, and TPS when compared to hospitals without trauma certification. As such, our results were directly in contrast to the first hypothesis. We deduce several reasons for this observation. First, Trauma Centers focus on treating patients who have greater injuries that may not seek care at other facilities. As a result, trauma centers are likely to have a different type of clientele that may have a greater chance of poorer outcomes. While the HBVP scores are risk adjusted, there could be a need to further adjust scores due to the more significant injuries treated at Trauma Centers (Figueroa et al., 2016; Ramirez et al., 2016; Werner & Asch, 2005). On the other hand, a study by Ang and colleagues (2009) found that patients at trauma centers were more likely to have higher complications leading to potentially poorer outcomes due to practice styles even after patient case mix adjustment. Additionally, differences in practice styles may also address differences in process of care scores in that complex cases may require more interventions, tests, and procedures, or a more aggressive approach to treatment (Ang et al., 2009; Matsushima, Schaefer, Won, & Armen, 2016). Lastly, since trauma patients require more resources and are more costly to transport, costs per beneficiary may be greater due to the nature of the injury. Furthermore, previous studies have indicated that over- triage of low-risk injured patients could drive up costs associated with trauma center, particularly when transport is
considered (Newgard et al., 2013). These reasons may partially explain why our results did not support H1.

Regarding H2, we find no support for our hypothesis that the overall PEOC was lower in trauma-certified hospitals. This finding is in line with a previous study which found that trauma patient satisfaction scores do not negatively impact on overall patient satisfaction (Bentley-Kumar et al., 2016). Despite this association, the previous authors do indicate that it is a common belief that trauma patients are at “high risk” when considering HCAHPS (patient experience of care scores) and that there hasn’t been much inquiry to justify this belief. Although H1 was not supported for the reasons above, those reasons can facilitate our understanding of why patient experience could potentially suffer in trauma hospitals. Poorer outcomes, more severe cases, more interventions, and a greater number of younger patients may all combine to lower the patient’s experience of care (Rogers et al., 2013; Sun et al., 2000). Also, with more complex patients and a higher volume of patients, trauma center providers have less time per patient, which could also lower the patient’s experience of care (McFarland, Shen, & Holcombe, 2016; Nathens et al., 2001).

Hospitals with a greater degree of trauma specialization (Level 1 being the highest) were associated with lower TPS and PEOC scores. Level 1 trauma centers have the most severe and complex patients through their doors. As such, the more greatly injured patients are likely to require more interventions, cost more, and have worse outcomes. A recent review provided by Weinberg and Fabian (2014) concludes that the association between volume and outcome is not clear and may be influenced by study design. The findings in this study add to the ongoing debate surrounding outcomes associated with greater volume within trauma centers and provide additional indication that greater volume may not be associated with better HVBP scores.
Finally, we would expect the process of care to be higher in level 1 trauma centers due to the additional requirements associated with the certification. As a level 1 trauma center, the organization would have to develop and demonstrate efficient care pathways; however we found no differences between trauma levels within this domain. This finding does not dismiss the previous finding that non-trauma centers may adhere more closely to process of care measurements than do trauma centers due to the nature of the care provided, and may suggest that HVBP measures do not distinguish differences in process of care measures closely enough (Ang et al., 2009; Matsushima et al., 2016).

The major findings of this study that trauma certified hospitals and the higher level of the trauma certification are negatively associated with HVBP scores have significant policy implications. While CMS and other payers tried to connect hospital reimbursements with quality and outcomes, unintended consequences may occur, as evidenced in this study. The trauma certified hospitals may be disproportionately penalized due to the special vulnerable patient populations they serve. These patients are more complex and require more resources to achieve certain outcomes, hospitals serving these patients may be more likely to face poorly on quality and rankings and receive financial penalties. Policy makers should consider how to avoid the unintended consequences for hospitals that treat trauma patients when implement the HVBP in the future.

LIMITATIONS AND FUTURE RESEARCH

This is a cross-sectional study and provides only a snapshot of the association between HVBP scores and trauma certification and levels. As such, there are trends and associations which are not evaluated which could influence the association. However, the nature of the HVBP program restricts the ability to assess HVBP dimensions over time as measures are changed,
added or reweighted on a yearly basis. An additional limitation relates to the chance for missing data due to the merging of multiple datasets and the availability of data for each organization with each dataset. Data merge was completed to allow for assessments; however the resultant subset of the population may differ from the actual population to some degree. Therefore, generalizability for these data may be limited. This study does provide important insight on the HVBP program and its association with trauma certification and level. In addition, this is the first study to assess the differences associated with trauma certification and level with HVBP dimension scores. Future studies should seek to determine associations with individual measures within dimensions over time. This may provide a more clear understanding as to how HVBP measure and trauma center certification and level correlate.
REFERENCES

AHA; About; http://www.ahadataviewer.com/about/; November 12, 2015.


Long, J. S. & Freese, J. 2006. *Regression models for categorical dependent variables using Stata*. College Station, Tex.: StataCorp LP.


### Table 1

**Descriptive Characteristics**

<table>
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<th>Continuous Variables</th>
<th>Trauma Certified</th>
<th>Not Trauma Certified</th>
</tr>
</thead>
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<td>(n = 1137)</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>Standard Deviation</td>
</tr>
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<td>**</td>
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<td>Total Performance Score&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>10.96</td>
</tr>
<tr>
<td>Process of Care Score&lt;sup&gt;a&lt;/sup&gt;</td>
<td>57.77</td>
<td>18.76</td>
</tr>
<tr>
<td>Patient Experience of Care Score&lt;sup&gt;a&lt;/sup&gt;</td>
<td>34.73</td>
<td>17.10</td>
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<tr>
<td>Outcome Score&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>15.74</td>
</tr>
<tr>
<td>Efficiency Score&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>23.32</td>
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<tr>
<td>Average Length of Stay&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>Hospital Medicaid percentage&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>Aging population (%)&lt;sup&gt;b&lt;/sup&gt;</td>
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<th>%</th>
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**Trauma Certification**

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</tr>
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</tr>
<tr>
<td>System Hospital</td>
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**Ownership<sup>b</sup>**

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<td></td>
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</tr>
<tr>
<td>--------------</td>
<td>-----</td>
</tr>
<tr>
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**Size**

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<table>
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</table>

**Note:** N=1031 for trauma certified hospitals and N=1137 for non-trauma certified hospitals. * t-test and

* wilcoxon rank sum test

* * p < 0.01

** ** p < 0.05

*** *** p < 0.10
### Table 2
Dependent Variables and Descriptive Statistics

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<th>Ownership</th>
<th>Total Performance (TPS) Score Mean (SD)</th>
<th>Process of Care (POC) Mean (SD)</th>
<th>Patient Experience of Care (PEOC) Mean (SD)</th>
<th>Outcome Mean (SD)</th>
<th>Efficiency Mean (SD)</th>
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<td>49 (15.97)</td>
<td>19.19 (24.34)</td>
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<td></td>
<td></td>
<td></td>
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<td>55.5 (18.71)</td>
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<td>17.23 (23.14)</td>
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<td>8.27 (14.26)</td>
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## Table 3

### Multivariate Analysis HVBP and Trauma Certification

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<th></th>
<th>Total Performance (TPS) Score</th>
<th>Process of Care (POC)</th>
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<th>Efficiency</th>
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<th>Negative Binomial Part</th>
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<td>Coef (SE)</td>
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<td>Coef (SE)</td>
<td>Sig</td>
<td>Coef (SE)</td>
<td>Sig</td>
<td>Coef (SE)</td>
<td>Sig</td>
</tr>
<tr>
<td>Trauma Certification</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(No is reference)</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Trauma Certification</td>
<td>-1.19 (0.44)</td>
<td>***</td>
<td>-2.06 (0.84)</td>
<td>**</td>
<td>-0.704 (0.705)</td>
<td>-1.74 (0.71)</td>
<td>**</td>
</tr>
<tr>
<td>Ownership</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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</tr>
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<td>-0.60 (0.84)</td>
<td></td>
<td>5.00 (1.58)</td>
<td>***</td>
<td>-6.603 (1.331)</td>
<td>3.84 (1.34)</td>
<td>***</td>
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<tr>
<td>Not-For-Profit</td>
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<td>***</td>
<td>1.82 (1.25)</td>
<td>***</td>
<td>-0.146 (1.051)</td>
<td>2.49 (1.06)</td>
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<tr>
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<td>***</td>
<td>4.46 (0.96)</td>
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<td>-0.442 (0.807)</td>
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<tr>
<td>Medicare Percentage</td>
<td>-12.52 (2.17)</td>
<td>***</td>
<td>-16.38 (4.09)</td>
<td>***</td>
<td>-43.984 (3.445)</td>
<td>-5.79 (3.48)</td>
<td>*</td>
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<tr>
<td>Medicaid Percentage</td>
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<td>***</td>
<td>-10.01 (3.59)</td>
<td>***</td>
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<td>5.43 (3.05)</td>
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<td>-1.51 (1.07)</td>
<td>***</td>
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<td>-1.39 (0.91)</td>
<td>0.90 (0.13)</td>
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<td>-2.54 (1.53)</td>
<td>*</td>
<td>-14.491 (1.289)</td>
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<td>Teaching Hospital</td>
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<td>-1.16 (0.92)</td>
<td>*</td>
<td>-1.495 (0.778)</td>
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<td>Average Length of Stay</td>
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<td>-0.00 (0.15)</td>
<td>***</td>
<td>0.771 (0.129)</td>
<td>-0.04 (0.13)</td>
<td>-0.05 (0.02)</td>
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* * * indicates significance at the 0.001 level; ** indicates significance at the 0.01 level; * indicates significance at the 0.05 level.
<table>
<thead>
<tr>
<th></th>
<th>Aging population (%)</th>
<th>Herfindahl-Hirschman Index</th>
<th>Per capita income (1000s)</th>
</tr>
</thead>
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<tr>
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<td>1.26 (6.78)</td>
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<td>0.01 (0.02)</td>
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<td></td>
<td>12.41 (12.79)</td>
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<td>0.00 (0.04)</td>
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<td>-0.027 (0.034)</td>
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<td></td>
<td>**</td>
<td>***</td>
<td>*</td>
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<tr>
<td></td>
<td>1.07 (10.87)</td>
<td>-2.78 (1.31)</td>
<td>0.06 (0.03)</td>
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<td></td>
<td>-0.54 (1.48)</td>
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<td>*</td>
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<tr>
<td></td>
<td>0.25 (0.60)</td>
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Note: N=1031 for trauma certified hospitals and N=1137 for non-trauma certified hospitals.

* p < 0.01

** p < 0.05

*** p < 0.10
## Table 4

**HVBP Dimensions and Trauma Certification Level**

<table>
<thead>
<tr>
<th></th>
<th>Total Performance (TPS Score)</th>
<th>Process of Care (POC)</th>
<th>Patient Experience of Care (PEOC)</th>
<th>Outcome</th>
<th>Efficiency</th>
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<td>Coef (SE) Sig</td>
<td>Coef (SE) Sig</td>
<td>Coef (SE) Sig</td>
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<tr>
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<tr>
<td>(Trauma 1 is reference)</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Trauma 2</td>
<td>1.47 (0.93) **</td>
<td>-0.93 (1.8)</td>
<td>1.40 (1.47)</td>
<td>1.19 (1.51)</td>
<td>-0.42 (0.21) ** 0.1 (0.10)</td>
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<tr>
<td>Trauma 3</td>
<td>3.04 (1.01) ***</td>
<td>-3.19 (1.97)</td>
<td>3.29 (1.61)</td>
<td>2.12 (1.65)</td>
<td>-0.86 (0.23) *** 0.12 (0.10)</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>For-Profit</td>
<td>1.07 (1.22)</td>
<td>9.4 (2.38) ***</td>
<td>-7.16 (1.94) ***</td>
<td>7.04 (1.99) ***</td>
<td>0.68 (0.29) ** -0.19 (0.11)</td>
</tr>
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<td>4.07 (1.76) **</td>
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<td>6.22 (1.47) ***</td>
<td>-0.25 (0.21) 0.11 (0.08)</td>
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<td>3.15 (1.43) **</td>
<td>0.42 (1.16)</td>
<td>-1.50 (1.19)</td>
<td>0.06 (0.17) -0.06 (0.06)</td>
</tr>
<tr>
<td>Medicare Percentage</td>
<td>-6.09 (3.23) *</td>
<td>-15.99 (6.3) **</td>
<td>-39.85 (5.13) ***</td>
<td>1.53 (5.27)</td>
<td>-2.10 (0.78) *** 0.83 (0.25) ***</td>
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<tr>
<td>Medicaid Percentage</td>
<td>-9.83 (2.68) ***</td>
<td>-6.55 (5.23) **</td>
<td>-16.03 (4.26) ***</td>
<td>4.71 (4.37)</td>
<td>2.10 (0.66) *** -0.63 (0.17) ***</td>
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<td>Size</td>
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<td></td>
</tr>
<tr>
<td>Medium</td>
<td>-7.64 (0.93) ***</td>
<td>-2.43 (1.82)</td>
<td>-13.03 (1.48) ***</td>
<td>-0.46 (1.52)</td>
<td>0.78 (0.23) *** -0.40 (0.07) ***</td>
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<td>-4.48 (2.39) *</td>
<td>-14.86 (1.95) ***</td>
<td>-2.23 (2.00)</td>
<td>1.11 (0.29) *** -0.79 (0.10)</td>
</tr>
<tr>
<td>Teaching Hospital</td>
<td>-2.20 (0.74) ***</td>
<td>-1.09 (1.43)</td>
<td>-2.04 (1.17) *</td>
<td>-2.32 (1.20) *</td>
<td>0.21 (0.17) -0.08 (0.06)</td>
</tr>
<tr>
<td>Average Length of Stay</td>
<td>0.30 (0.14) **</td>
<td>0.21 (0.28)</td>
<td>0.97 (0.23) ***</td>
<td>-0.37 (0.24)</td>
<td>0.01 (0.04) 0.00 (0.01)</td>
</tr>
<tr>
<td>Aging population (%)</td>
<td>-5.75 (10.54)</td>
<td>-8.47 (20.54)</td>
<td>-22.20 (16.73)</td>
<td>-20.90 (17.17)</td>
<td>-3.26 (2.53) 0.54 (0.86)</td>
</tr>
</tbody>
</table>
### Herfindahl-Hirschman Index

<table>
<thead>
<tr>
<th>Index</th>
<th>4.64 (1.21)</th>
<th>1.45 (2.36)</th>
<th>4.27 (1.92)</th>
<th>0.34 (1.97)</th>
<th>-1.09 (0.28)</th>
<th>0.45 (1.0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita income (1000s)</td>
<td>0.04 (0.03)</td>
<td>0.02 (0.05)</td>
<td>-0.02 (0.04)</td>
<td>0.15 (0.05)</td>
<td>*** 0.01(0.01)</td>
<td>0.00 (0.00)</td>
</tr>
</tbody>
</table>

| \( R^2 \) | 0.265 | 0.046 | 0.244 | 0.057 | R² | 0.059 |
| Adj \( R^2 \) | 0.256 | 0.033 | 0.234 | 0.044 | LR Chi² | 205.880 |
| Prob>F | 0.000 | 0.000 | Prob>F | Prob>F | Prob>F | 0.000 |

Note: \( N=1031 \) for trauma certified hospitals and \( N=1137 \) for non-trauma certified hospitals.

* \( p < 0.01 \)

** \( p < 0.05 \)

*** \( p < 0.10 \)
INTRODUCTION

The last ten years has been extraordinarily fruitful for the study of legitimacy, particularly in the context of microinstitutional research. Powell and Colyvas’s chapter in *The Sage Handbook of Organizational Institutionalism* (2008) point towards the microfoundations of institutions as the next frontier of institutional theory and argued for an effort to tie micro-concepts—such as identity, sensemaking, typifications, frames, and categories—to macro level institutional phenomenon; Gehman, Lounsbury and Greenwood (2016) point to a similar direction. The study of legitimacy has answered the call, with a much research focusing on discursive strategies of legitimacy (Brown, Ainsworth, & Grant, 2012; Green & Li, 2011, Green, Li, & Nohria, 2011; Hardy & Maguire, 2010; Harmon, Green, & Goodnight, 2015; Maguire & Hardy, 2009, 2013; Moisander, Hirsto, & Fahy, 2016; Tracey, 2016; Vaara & Tienari, 2008, 2011) and the formation of individual legitimacy judgments (Bitektine, 2011; Bitektine & Haack, 2015; Haack, Pfarrer, & Scherer, 2014; Hoefer & Green, 2016; Huy, Corley, & Kraatz, 2014; Moisander et al., 2016; Tost, 2011).

However, Powell and Colyvas (2008) also point out that the study of legitimacy has been defined by theory and exploratory case studies; very rarely is legitimacy operationalized for hypothesis testing, in part due to the difficulty in measuring legitimacy (Deephouse & Suchman, 2008; Deephouse, Bundy, Tost, & Suchman, 2017). As a result, the study of legitimacy may have reached somewhat of a bottleneck, with qualitative work dominating quantitative work and macro quantitative work dominating micro quantitative work, despite commensurate interest in macro and micro within theory and qualitative research (Figure 1). The number of micro theory and qualitative papers published confirms Powell and Colyvas’s prediction, but the disparity
between the numbers of these pieces and the number of quantitative pieces is a reflection of the difficulty in measuring institutional theory’s most central concept.

[INSERT FIGURE 1 ABOUT HERE]

The aim of this paper is to develop a generalizable, multidimensional scale of legitimacy judgments—these judgments which, in aggregate, constitute an overall perception of an organization or practice’s appropriateness for its social context (Tost, 2011). The methodological quiver from which institutional theorists may draw when conducting experiments is alarmingly spare. It is my hope that this scale represents a powerful arrow which helps balance our microinstitutional theory building with quantitative theory testing.

For the initial instrument, I generated 46 items drawing primarily from the legitimacy typologies of Suchman (1995) and Tost (2011). I used exploratory factor analysis (n=429) to determine the dimensionality of the scale as well as to reduce the number of items. Confirmatory factor analysis conducted with a different sample (n=346) in a different setting confirmed a 14 item, three dimensional scale which aligns with Tost’s (2011) instrumental, moral, and relational legitimacy dimensions. The final scale in full is included in the appendix, and all 46 items will be made available upon request.

THEORETICAL BACKGROUND

Legitimacy

Institutions and legitimacy The study of legitimacy dates back to Weber (1968) and has been described as the most central concept in institutional research (Colyvas & Powell, 2006; Deephouse & Suchman, 2008). It is core to institutional change (Suddaby & Greenwood, 2005) as that change cannot become institutionalized if it is deemed illegitimate by important
institutional stakeholders (Greenwood, Suddaby, & Hinings, 2002; Suddaby and Greenwood, 2005; Tost, 2011). The definition of legitimacy has evolved over the last several decades, but at its core, legitimacy speaks to the appropriateness of an entity (e.g. field, organization, practice, structure, etc) within a certain context (Harmon et al., 2015; Suchman, 1995; Tost, 2011).

Highly legitimate entities gain several benefits from their legitimacy; most significant of these is that they can become institutionalized, taken for granted and unquestioned (Bitektine & Haack, 2015; Tost, 2011). In addition, legitimacy allows greater access to resources (Baum & Oliver, 1991; Drori & Honig, 2013; Wry, Lounsbury & Glynn, 2011; Zimmerman & Zeitz, 2002), as stakeholders are reluctant to invest in organizations and endeavors they consider illegitimate, and serves to insulate entities from negative external influence (Bansal & Clelland, 2004; Desai, 2008) so that the survival and diffusion some evaluated entity has become the most visible outcome of legitimacy (Suddaby, Bitektine, & Haack, 2017; Zimmerman & Zeitz, 2002).

**Legitimacy judgments** The legitimacy of an entity is comprised of the aggregate legitimacy judgments of varied institutional stakeholders (Bitektine & Haack, 2015; Suddaby et al., 2017). A legitimacy judgment is an individual’s evaluation of the appropriateness of some entity in a given social context (Tost, 2011) which is influenced by the evaluator’s personal values and beliefs (Finch, Deephouse, & Varella, 2015). Entities subject to legitimacy judgments are numerous (Deephouse & Suchman, 2008; Ruef & Scott, 1998), though most commonly they are organizations, organizational practices, or organizational structures, such as social enterprises (Tracey, Phillips, & Jarvis, 2011), multidisciplinary practices in accounting firms (Suddaby & Greenwood, 2005), and new roles like that of the nurse practitioner (Reay, Golden-Biddle, & Germann, 2006). Similarly, evaluating audiences are numerous and can be external—such as investors (Bansal & Clelland, 2004; Bell, Filatotchev, & Aguilera, 2014; Drori & Honig, 2013;
Pollock & Rindova, 2003), regulators (Deephouse, 1996; Suddaby & Greenwood, 2005); the media (Bansal & Clelland, 2004; Deephouse, 1996; Nigam & Ocasio, 2010; York, Hargrave, & Pacheco, 2016); and professional associations (Greenwood et al., 2002; Suddaby & Greenwood, 2006; Westphal, Gulati, & Shortell, 1997)—as well as internal, like employees, colleagues, and management (e.g. Drori & Honig, 2013; Huy et al., 2014; Reay et al., 2006; Treviño, den Niewenboer, Kreiner, & Bishop, 2014).

Suchman (1995) presents three types of legitimacy: cognitive legitimacy, pragmatic legitimacy, and moral legitimacy. Drawing on this typology, Tost (2011) suggests that legitimacy judgments primarily rest along three dimensions: a moral dimension, an instrumental (pragmatic) dimension, and a relational dimension. She departs from Suchman’s typology with the addition of relational legitimacy and the argument that cognitive legitimacy does not constitute a judgment but is instead a quality an entity possesses which spares it from judgment. An organization which possesses cognitive legitimacy is taken-for-granted and unquestioned (Greenwood et al., 2002; Suchman, 1995) and is therefore not subject to judgment and in fact its cognitive legitimacy may suppress judgment (Bitektine & Haack, 2015; Tost, 2011).

Moral legitimacy is motivated by pro-social logic and bestowed when the entity is perceived as “doing the right things” or as “the right way to be” (Bitektine, 2011; Suchman, 1995; Tost, 2011). Such judgments can be directed towards the worthiness of goals and the propriety of practices, structures, and leaders (Suchman, 1995). For example, social enterprises may seek legitimacy from the broader public by emphasizing the benefit of their activities to society at large (Tracey et al., 2011). Similarly, entities can gain moral legitimacy through congruence with relevant field or organizational values (Greenwood et al., 2002; Maguire, Hardy & Lawrence, 2004; Suddaby & Greenwood, 2005).
Judgments of *instrumental* legitimacy are primarily driven by self-interest (Suchman, 1995; Tost, 2011). In bridging institutional theory and social psychology, Tost specifies instrumental legitimacy as centered on material self-interest as opposed to something like emotional self-interest, which would then fall into her conceptualization of relational legitimacy. While Suchman does not specify material self-interest in his explanation of pragmatic legitimacy, the use of his conceptualization by subsequent researchers has been exclusively material in its focus on outcomes or on the efficiency of processes.

In evaluating legitimacy along this basis, an audience considers how the entity benefits them or others like them, whether the entity (or associated actors) have their best interests at heart, and the degree of influence they have with the entity, which may reassure constituents that the entity will work towards their interests. For example, the HIV/AIDS community bestowed greater legitimacy on organizations with HIV positive members in leadership positions than those they perceived as being driven more by profit because they trusted that the former organizations where more likely to have their best interests at heart (Maguire et al., 2004). In the study of nurse practitioners, Reay and colleagues (2006) recorded how doctors’ legitimacy judgments of the nurse practitioner role were influenced by the extent to which nurse practitioners could benefit them, making their jobs easier. Similarly, ethics and compliance officers needed to demonstrate the practical utility of their function, that their actions improved the company’s bottom line, in order to legitimate their role (Treviño et al., 2014).

Finally, *relational* legitimacy is gained when the entity affirms an evaluator’s identity and boosts self-worth and self-esteem (Tost, 2011). To date, the literature addressing relational legitimacy has focused entirely on internal stakeholders (Brown & Toyoki, 2013; Drori & Honig, 2013; Gawer & Phillips, 2013; Huy et al., 2014; Treviño et al., 2014). For example, ethics and
compliance officers gained legitimacy on relational grounds by making an effort to develop relationships with employees, implying their importance (Treviño et al, 2014), and Intel created buy-in by crafting identities around a change designed to enhance the self-esteem its internal stakeholders (Gawer & Phillips, 2013). Conversely, a design firm lost relational legitimacy as graphic designers felt their role to be deprioritized relative to software engineers and programmers (Drori & Honig, 2013), and a major change initiative lost support from middle managers as they felt they were receiving little support or personal consideration from the top management team spearheading the change (Huy et al., 2014).

Relational legitimacy, relative to moral and instrumental legitimacies, is not often studied. In part, its introduction to institutional theory is new, but there are also a number of likely antecedents shared with instrumental or moral legitimacies, though it should be noted that overlap in the three dimensions is consistent with the theory of legitimacy judgment (Tost, 2011: 694). However, most of the circumstances described in the extant literature on relational legitimacy are not those normally affiliated with either instrumental or moral legitimacy, and the theory as well as the empirical, qualitative research suggest this is an independent dimension on which an overall legitimacy judgment is made.

MEASURING LEGITIMACY

Previous measures of legitimacy

Despite its importance, legitimacy is a nebulous construct which does not easily lend itself to measurement (Ruef & Scott, 1998; Suddaby et al., 2017), and while there are a number of studies operationalizing legitimacy, particularly at the macro level, there is little consensus on its appropriate measurement (Vergne, 2011). Suddaby and colleagues (2017) broadly describe
the three most common approaches macro level approaches: density as a proxy for legitimacy, media accounts as a reflection of legitimacy, and accreditation as a consequence and a signal of legitimacy; indeed, these approaches dominate the quantitative study of legitimacy.

Though legitimacy is regularly operationalized at the organizational field level, there is increased movement towards its measurement at a microfoundational level (Deephouse, Bundy, Tost, & Suchman, 2017; Suddaby et al. 2017). One approach has been to use surveys to measure the validity of some entity (e.g. Elsbach, 1994; Nagy, Pollack, & Rutherford, 2012; Pollock, Rutherford, & Nagy, 2012), which refers to the degree with which society at large views an entity as legitimate (Bitektine & Haack, 2015; Tost, 2011). In an early example, Elsbach’s (1994) study of the cattle industry used a 12 item scale to measure legitimacy perceptions, with items such as The general public approves of the organization’s operating procedures and The organization is viewed by business writers as one of the top firms in the industry. These measures do not capture a legitimacy judgment, but rather a construct which is likely to suppress legitimacy judgments (Bitektine & Haack, 2015).

There have also been several studies which measure the propriety of an entity, that is, the degree with which evaluators themselves feel an entity to be legitimate: legitimacy judgments. However, common in these studies are psychometric issues or theoretical considerations which make them difficult to adapt for further use. For example, Diez -Martin his coauthors (Diez -Martin, Prado-Roman, & Blanco- González, 2013) use a 12 item survey to measure cognitive, pragmatic, and moral propriety and validity. However, their sample size (N=17) is very small, the reliabilities of their dimensions low, and they do not perform any factor analysis, standard for the development of a scale (Hinkin, 1998). Others treat legitimacy judgment as a one dimensional construct, measuring overall legitimacy and ignoring its constituent dimensions (e.g.
Chung, Berger, & DeCoster, 2016; Finch et al., 2015; Weisburd, Hinkle, Famega, & Ready, 2011), even though an evaluator may judge an entity illegitimate on pragmatic grounds while legitimate on moral grounds (Tost, 2011). Still others include cognitive legitimacy as a substantive dimension (e.g. Díez -Martin et al., 2013; Foreman & Whetten, 2002). For example, Foreman and Whetten’s (2002) study of farming co-ops, though psychometrically sound, develops a scale to measure individual perceptions of the cognitive and pragmatic legitimacy of the co-ops.

[INSERT TABLE 1 ABOUT HERE]

In sum, though there has been tremendous progress made in the measurement of legitimacy on the macro and micro levels, there is still a need for a well-developed instrument capable of accurately capturing the different dimensions of legitimacy judgments.

Scale development

The instrument was developed with two primary considerations: one, accurately capturing typologies of Suchman (1995) and Tost (2011), and two, following sound methodological procedures of scale development as laid out by Hinkin (1998) and Clark and Watson (1995).

Two subjects were selected to be evaluated entities, Omicron State University, a large public research university (>30,000 students) and Amazon.com, Inc., a large, publically owned American retailer (>200,000 employees). Within Omicron State, four entities were evaluated: the Omicron State football team (<10 years old), the Omicron State police department, Omicron State’s Financial Aid department, and the textbook company used by the respondents. In the case
of Amazon, the organization as a whole was rated as was a crowdsourcing initiative MTurk, recently launched by Amazon.

**Item Generation** Items were generated with a mind towards the expansive typology provided by Suchman (1995), in which he details different facets of cognitive (taken-for-grantedness and comprehensibility), moral (consequential, procedural, structural, and personal), and pragmatic (exchange, influence, and dispositional), as well as the thorough description of relational legitimacy in Tost (2011). In addition, I also adapted items from several previous attempts to measure legitimacy or related constructs (Chung et al., 2016; Foreman & Whetten, 2002; Weisburd et al., 2011). Though cognitive legitimacy does not represent a substantive judgment (Tost, 2011), it has been treated by such in previous subjects (e.g. Foreman & Whetten, 2002; Pollack et al., 2012) and is subject to legitimating rhetoric (Bitektine & Haack, 2015; Suddaby & Greenwood, 2005), and I therefore generated items which are likely to reflect it.

As recommended by methodologists, the number of constructs being measured was taken into account in determining the number of initial items (Fabrigar, Wegener, MacCallum, & Strahan, 1999; MacCallum, Widaman, Zhang, & Hong, 1999) and as well in anticipation of item reduction (Hinkin, 1998): 10 items were generated for cognitive legitimacy, 14 items for moral legitimacy, 12 for instrumental legitimacy, and 11 for relational legitimacy.

Content validity of the items was assessed in a manner prescribed by Hinkin (1998). Five naïve judges from a business school, 3 professors and 2 PhD candidates, were provided with construct definitions and asked to match each item with the legitimacy type they felt it belonged. Two items were classified incorrectly below the target level of 75% (Hinkin, 1998); one item was tossed out; in the case of the other item, the construct definition was vague, despite the
literature being clear, and after clarification, it was decided to retain the item for empirical item reduction.

**Exploratory factor analysis** The primary purpose of an exploratory factor analysis is to reveal the appropriate numbers of factors and the factor structure underlying data (Floyd & Widaman, 1995) as well as guiding item reduction in scale development (Hinkin, 1998). Though confirmatory factor analysis (CFA) may be more appropriate when there are strong theoretical or empirical expectations about a factor structure (Henson & Roberts, 2006), such an approach is not suitable for this given context. While Suchman’s 1995 and Tost’s 2011 typologies of legitimacy are both strong theoretically, this instrument represents an overlap of the two, meaning that an exploratory approach to initial factor analysis is a more sound approach. In addition, there are potential issues with two of the dimensions. One, Tost argues that cognitive legitimacy itself does not constitute a judgment but rather an absence of a judgment. Two, relational legitimacy, as discussed above, may suffer from issues of discriminant validity in a variety of likely scenarios. For these reasons, I proceed with an EFA.

The initial factor analysis was conducted with two upper level undergraduate management classes (N = 429), achieving a “safe” sample size for EFA (Fabrigar et al., 1999). As internal stakeholders, they were asked to rate the cognitive (sample item: *Omicron State PD is an unusual organization*), moral (sample item: *Omicron State PD’s mission is beneficial to society*), instrumental (sample item: *As a result of Omicron State PD, I am worse off*), and relational (sample item: *I am not proud of my relationship with Omicron State PD*) legitimacy. A seven point scale was used (*Strongly Agree* to *Strongly Disagree*). For the EFA, 434 surveys were collected out with 429 returned complete and useable. Four versions of the survey were used, each with a separate entity: the football program (100 useable surveys); police department
(118 useable surveys), financial aid (96 useable surveys), or the textbook publisher (105 useable surveys). The use of multiple judged entities was done to create a clearer factor structure, as some entities may be judged equally morally and instrumentally legitimate, for example, creating great inter-factor and inter-item correlations, while in others the two factors may be more distinct. In addition, Qualtrics software was used to randomize item order for each participant.

**EFA results** Before beginning the factor analysis, the reliability of each dimension was measured. Instrumental, moral, and relational legitimacy all showed high reliability, though Cronbach’s $\alpha$ is sensitive to the number of items being measured. Instrumental legitimacy had an $\alpha$ of 0.925, moral legitimacy an $\alpha$ of 0.925, and relational legitimacy an $\alpha$ of 0.879. However, the initial items used to measure cognitive legitimacy displayed low reliability, with $\alpha = 0.526$. Using MPlus 7.4, I conducted an EFA with all 46 items. Parallel analysis was used to determine the appropriate number of factors; this procedure has largely replaced the traditional Kaiser’s rule of retaining factors which have eigenvalues greater than one (Hayten, Allen, & Scarpello, 2004). The results of the parallel analysis were inconclusive, with three clear factors and a questionable fourth. However, ancillary fit statistics suggested that a four factor structure very slightly better fit the data, and with the potential for the inclusion of cognitive legitimacy, I proceeded with item reduction.

Item reduction was driven by both the data and theory. Items which did not load on any factors were eliminated first. Second, items which failed to load on the expected factor were eliminated. Third, items which significantly cross-loaded were considered for elimination. If an item had a cross-loading greater than .300, I examined the content of the item to determine whether there was a theoretical reason for this. This consideration was particularly important given the potential overlap between relational legitimacy and instrumental and moral legitimacy.
After a number of iterations, an approximately simple structure emerged in which each item loaded strongly on a single factor, and those which loaded weakly on other factors had theoretical reasons for doing so, with no cross-loading greater than .300. Three items remained cognitive legitimacy, five for instrumental legitimacy, five for moral legitimacy, and four for relational legitimacy. However, the three items retained for cognitive legitimacy displayed low reliability, $\alpha = 0.527$, which is below the prescribed minimum for scale development (Hinkin, 1998). Given this and in light of Tost’s (2011) argument that cognitive legitimacy does not constitute a substantive dimension of a legitimacy judgment, I opted to drop cognitive legitimacy from the scale, bringing the instrument in line with Tost’s theoretical model of legitimacy judgments, and reran the EFA with all 46 items.

The results of the second EFA revealed a similar factor structure with no items crossloading above .300. I retained five items for instrumental legitimacy, five for moral items, and four for relational (see Table 2). Fit statistics indicated a well-fitting model (CFI: 0.99, TLI: 0.98, RMSEA: 0.04 SRMR: 0.02). The three factors were all moderately but significantly correlated and displayed high reliability (see Table 3).

Confirmatory factor analysis 350 participants for the CFA were recruited via Amazon Mechanical Turk (MTurk), a crowd sourcing platform. MTurk has been extensively validated (Buhrmeister, Kwang, & Gosling, 2011; Mason & Suri, 2012; Shapiro, Chandler, & Mueller, 2014) and, due to cost, ease of use, and reliability, is being increasingly used in behavioral and organizational research (e.g. Brawley & Pury, 2016; Caleo, 2016; Campbell & Kay, 2014; Credé
& Harms, 2015; Duffy et al., 2017; Grietemeyer & Sagioglou, 2014) and more specifically in conducting factor analyses (e.g.; Cohen, Panter, & Turan, 2014; Mathieu, Hare, Jones, Babiak, & Neuman, 2013; Smith, Saklofske, Stoebert, & Sherry 2016)

Procedures for recruitment and data collection using MTurk followed the recommendations of Mason and Suri (2012). A “captcha” question was included to eliminate bots (“What color is a banana?”) and any surveys completed under three standard deviations of the sample mean completion time were tossed to control for spammers—Turkers who rapidly fill out tasks without consideration of quality; this lead to the dropping of four responses, bringing the total sample size to 346. In addition, participants were restricted to the United to obviate potential language issues (Feitosa, Joseph, & Newman, 2014). Though compensation has been shown to have little relationship with the quality of results, (Buhrmeister et al., 2011; Mason & Suri, 2011), I paid participants more than the typical MTurk job, $0.50 for approximately three minutes of work (the equivalent of $10 an hour), as doing so increases the speed with which participants are recruited. As in the EFA, all items were randomized for each participant to reduce common method bias.

CFA results Results of the CFA support the factor structure suggested by the EFA. An initial CFA indicated adequate fit (CFI: 0.94, TLI: 0.93, RMSEA: 0.07 SRMR: 0.04), though both CFI and TLI are slightly outside the thresholds recommended by Hu and Bentler (1999) as criteria of excellent fit: CFI ≥ .95, TLI ≥ .95, RMSEA ≤ .08, and SRMR ≤ .06. After examining modification indices, to improve fit, I freed two items to correlate with other items within the same factor. In addition, I freed one of the instrumental legitimacy items to correlate with moral legitimacy (“Amazon is motivated to benefit people like me.”). This item was moderately correlated with moral legitimacy (0.181, p < .001) which is not surprising: we often view
favorably the morals of those we perceive as motivated to benefit us. Ancillary fit statistics of the model after the adjustments indicated excellent fit (CFI: 0.97, TLI: 0.96, RMSEA: 0.05 SRMR: 0.04). In addition, all factors demonstrated good reliability (see Table 5). Inter-factor correlations were high, raising questions of discriminant validity. However, given this context, a strong relationship between the three dimensions is quite likely. The relationship between these dimensions is likely stronger for internal stakeholders than for external stakeholders.

Involvement with a moral entity or endeavor will improve self-concept (Shamir, 1991) and thus moral and relational legitimacy will be related. In addition, we are predisposed to favor that which benefits us (instrumental legitimacy), and for internal stakeholders receiving some form of compensation from an organization, to then strongly judge its actions illegitimate on moral or relational grounds may then lead to cognitive dissonance (Festinger, 1957).

[INSERT TABLE 4 ABOUT HERE]

[INSERT TABLE 5 ABOUT HERE]

DISCUSSION AND CONCLUSION

This article presented a brief overview of the theory of legitimacy judgments as well as extant measures of similar constructs. Building on this, I constructed a scale of Tost’s (2011) legitimacy judgments and assessed the internal consistency, dimensionality, and discriminant validity with two samples, conducting an EFA for item reduction and to determine dimensionality and then a CFA to confirm the factor structure of the 14 item, three dimension instrument.

There is a pressing need for such a scale. Microinstitutions are an increasingly important facet of institutional research, and while a seminal work in the field was experimental (Zucker,
Institutional experiments have largely stagnated over the last three decades. However, with increasing interest in this direction, recent progress has been made. For example, Glaser, Fast, Harmon, and Green (2016) manipulate institutional schema to understand how different logics influence can influence action, and Neto and Mullet (2016) explore the legitimacy of executive bonuses, manipulating information present to participants concerning the executive or the company and capturing legitimacy with a single item measure.

A scale measuring legitimacy judgments—foundations of institutional legitimacy—will prove a boon to researchers continuing to quantitatively pursue microinstitutions. As discussed earlier, existing scales of legitimacy related constructs had several attributes which made them difficult to adapt for such purposes. None reflected the current theory of legitimacy judgments laid out by Tost (2011) and further explored by Bitektine and Haack (2015) and Suddaby, Bitektine, and Haack (2017). Some measured general legitimacy or perceptions of collective legitimacy (validity). In addition, none were constructed with items intended to be generalized and used to evaluate a variety of different subjects. Finally, several of these suffered from methodological issues.

Going forward, the three dimension 14 item scale requires further validation. Though there was good model fit, the correlations between the factors are high. There is strong theoretical to consider legitimacy judgment a multidimensional construct; in addition, the setting and the sample—internal stakeholders in a high legitimate organization—explain the high inter-factor correlation. Nevertheless, future work should either select a setting or use experimental manipulations to further explore the discriminant validity of the scale.
REFERENCES


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Huy, Q. N., Corley, K. G., & Kraatz, M. S. (2014). From support to mutiny: Shifting legitimacy judgments and emotional reactions impacting the implementation of radical change. *Academy of Management Journal*, 57(6), 1650-1680.


Weisburd, D., Hinkle, J. C., Famega, C., & Ready, J. (2011). The possible “backfire” effects of


Figure 1: Interest in legitimacy 2005-2016

Papers with institutional legitimacy is a core construct published in *Academy of Management Review, Academy of Management Journal, Administrative Science Quarterly, Organization Science, Organization Studies, and Journal of Management Studies*. To be included, the paper needed to either include “legitimacy” and “institutions” or “institutional theory” as a key word or to include “institutions” or “institutional theory” as a key word and use legitimacy as the primary driver of the explored topic.

Table 1: Existing measures of legitimacy judgments

<table>
<thead>
<tr>
<th>Study</th>
<th>Description of legitimacy judgment</th>
<th>EFA</th>
<th>CFA</th>
<th>Instrumental legitimacy</th>
<th>Moral legitimacy</th>
<th>Relational legitimacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chung, Berger, &amp; DeCoster, 2016</td>
<td>Judgment of overall legitimacy of the pharmaceutical industry</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finch, Deephouse, &amp; Varella, 2015</td>
<td>Judgment of overall legitimacy of oil sands industry</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Foreman &amp; Whetten, 2002</td>
<td>Perception of cognitive legitimacy and judgment of pragmatic legitimacy of farming co-ops</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Weisburd, Hinkle, Famega, &amp; Ready, 2011</td>
<td>Judgment of overall legitimacy of police</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 2: Geomin rotated factor loadings

<table>
<thead>
<tr>
<th>Retained items</th>
<th>Legitimacy Dimensions</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Instrumental</td>
<td>Moral</td>
<td>Relational</td>
<td></td>
</tr>
<tr>
<td>I5. I am better off as a result of the campus police department.</td>
<td>0.844</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I6. The campus police department provides what I need from this type of organization.</td>
<td></td>
<td>0.705</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I7. The campus police department is motivated to benefit people like me.</td>
<td></td>
<td>0.724</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I11. People in the campus police department want to help me.</td>
<td></td>
<td>0.834</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I12. The campus police department helps me accomplish my goals.</td>
<td></td>
<td>0.988</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M4. The campus police department is trying to accomplish good things.</td>
<td></td>
<td>0.750</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M5. The campus police department is led by good people.</td>
<td></td>
<td>0.759</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M8. The campus police department behaves in an honorable manner.</td>
<td></td>
<td>0.826</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M9. The way in which the campus police department is organized is morally proper.</td>
<td></td>
<td>0.764</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M13. The campus police treat people fairly.</td>
<td></td>
<td>0.659</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R3. The campus police department makes me feel good about myself.</td>
<td></td>
<td>0.397</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R7. I would feel good if I were involved with the campus police department.</td>
<td></td>
<td>0.588</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R8. If I were involved with the campus police department, it would help my self-esteem.</td>
<td></td>
<td>0.738</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R10. If I were more involved with the campus police department, it would be an important part of who I am.</td>
<td></td>
<td>0.835</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Loadings > .300

### Table 3: Interfactor correlations

<table>
<thead>
<tr>
<th></th>
<th>Cronbach’s α</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Instrumental</td>
<td>.896</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Moral</td>
<td>.875</td>
<td>.766</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3. Relational</td>
<td>.830</td>
<td>.573</td>
<td>.523</td>
<td>1</td>
</tr>
</tbody>
</table>

Significant at the .01 level
Table 4: Standardized factor loadings

<table>
<thead>
<tr>
<th>Retained items</th>
<th>Legitimacy Dimensions</th>
<th>Instrumental</th>
<th>Moral</th>
<th>Relational</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1. I am better off as a result of Amazon.</td>
<td></td>
<td>0.714</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I2. Amazon provides what I need from this type of organization.</td>
<td></td>
<td>0.686</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I3. Amazon is motivated to benefit people like me.</td>
<td></td>
<td>0.785</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I4. People in Amazon want to help me.</td>
<td></td>
<td>0.799</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I5. Amazon helps me accomplish my goals.</td>
<td></td>
<td>0.749</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M1. Amazon is trying to accomplish good things.</td>
<td></td>
<td></td>
<td>0.830</td>
<td></td>
</tr>
<tr>
<td>M2. Amazon is led by good people.</td>
<td></td>
<td></td>
<td>0.848</td>
<td></td>
</tr>
<tr>
<td>M3. Amazon behaves in an honorable manner.</td>
<td></td>
<td></td>
<td>0.881</td>
<td></td>
</tr>
<tr>
<td>M4. The way in which Amazon is organized is morally proper.</td>
<td></td>
<td></td>
<td>0.801</td>
<td></td>
</tr>
<tr>
<td>M5. Amazon treats people fairly.</td>
<td></td>
<td></td>
<td></td>
<td>0.872</td>
</tr>
<tr>
<td>R1. Amazon makes me feel good about myself.</td>
<td></td>
<td></td>
<td></td>
<td>0.852</td>
</tr>
<tr>
<td>R2. I feel good as a result of my involvement with Amazon.</td>
<td></td>
<td></td>
<td></td>
<td>1.014*</td>
</tr>
<tr>
<td>R3. My involvement with Amazon helps my self-esteem.</td>
<td></td>
<td></td>
<td></td>
<td>0.872</td>
</tr>
<tr>
<td>R4. My involvement with Amazon is an important part of who I am.</td>
<td></td>
<td></td>
<td></td>
<td>0.779</td>
</tr>
</tbody>
</table>

*For an explanation of how standardized factor loadings can be greater than one, see Jöreskog (1999). Consistent with Jöreskog’s explanation, the factors are highly correlated. For other examples, see: Branje, van Lieshout, & Aken, 2004; Guo, Yuan, Archer, & Connely, 2011; Rao & Mahi, 2003

Table 5: Interfactor correlations

<table>
<thead>
<tr>
<th></th>
<th>Cronbach’s α</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Instrumental</td>
<td>.857</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Moral</td>
<td>.923</td>
<td>.843</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3. Relational</td>
<td>.894</td>
<td>.802</td>
<td>.724</td>
<td>1</td>
</tr>
</tbody>
</table>

Significant at the .01 level
Nothing but a “g” Thing?

Developing and Testing an Individual Differences Model of Frame-of-Reference Rater Training Effectiveness

ABSTRACT

Rater training is important for improving the quality of human resource decisions. However, there is little research that has examined the influence of trainee individual differences on rater training effectiveness. In Study 1, I found support for a partially mediated model in which learning goal orientation, internal locus of control, and promotion focus influenced rater training motivation through general self-efficacy. In Study 2, I extended the model to include rater training criteria, and I found that rater training motivation did not predict declarative knowledge, rating validity, or rating accuracy, but cognitive ability predicted all three outcomes. Overall, the results suggest that although individual differences in attitudes are relevant for understanding rater training motivation, cognitive ability may be much more important for understanding rater training effectiveness. Implications for rater training theory and practice are discussed.

Keywords: rater training; individual differences; FOR training; rating accuracy; rating validity
Nothing but a “g” Thing? Developing and Testing an Individual Differences Model of Frame-of-Reference Rater Training Effectiveness

Training raters has become a fundamental task for a number of human resource activities in organizations (Aguinis & Kraiger, 2009), including performance management (Woehr & Huffcutt, 1994; Roch, Woehr, Mishra, & Kiesczynska, 2011), job analysis (Aguinis, Mazurkiewicz, & Heggestad, 2009), employment interviews (Melchers, Lienhardt, von Aarburg, & Kleinmann, 2011), assessment centers (Jackson, Atkins, Fletcher, & Stillman, 2005; Schleicher, Day, Mayes, & Riggio, 2002), team development (Firth, Hollenbeck, Miles, Ilgen, & Barnes, 2014; Loignon, Thomas, Woehr, Loughry, Ohland, & Ferguson, 2016), and even certification testing (Dierdorff, Surface, & Brown, 2010). Indeed, the proliferation of multi-domain rater training research suggests that rater training is no longer exclusively a performance management topic (Roch et al., 2011). Thus, understanding antecedents of rater training effectiveness is of critical importance for organizational scholars and practitioners. One important question that has yet to be answered is what role do trainee individual differences play in rater training effectiveness, and how do individual differences relate to rater training motivation? Thus, in this manuscript I report the results of two studies that I conducted in an attempt to answer these questions.

Individual Differences and Rater Training

Individual differences can be useful in predicting training success (Herold, Davis, Fedor, & Parsons, 2002), and examining individual differences is essential to achieving a complete understanding of rater training and its outcomes. Individual differences have been linked to the quality of ratings (Bernardin & Pence, 1980; Borman, 1979; Zedeck & Cascio, 1982), and rater idiosyncrasies can account for differences in rating accuracy between raters (Uggerslev &
An Individual Differences Model of FOR Training Effectiveness

Sulsky, 2008). Rater training, on the other hand, generally improves rating quality by reducing rating idiosyncrasies (Smith, 1986). Individual differences among trainees are explicitly recognized in the theory behind frame-of-reference (FOR) rater training (Bernardin & Buckley, 1981), yet little previous research has attempted to model the influence of individual differences on rater training effectiveness (Hauenstein & Foti, 1989). In fact, individual differences have typically been treated as sources of variance that need to be controlled for in previous rater training studies (Cardy & Keefe, 1994).

Although some previous rater training studies have examined the influence of trainee individual differences (e.g., Dierdorff et al., 2010), the present research improves upon these studies in several ways. First, previous rater training studies have generally failed to acknowledge training motivation as an important individual difference variable (Dierdorff et al., 2010), which is surprising given the consistent finding that training motivation predicts a number of training outcomes (Aguinis & Kraiger, 2009; Colquitt, Lepine, & Noe, 2000; Salas & Cannon-Bowers, 2001). Even the study by Dierdorff et al. (2010), which pointed out the absence of training motivation as a focal variable in rater training research, did not use an actual measure of training motivation, instead relying on goal orientation and self-efficacy as indicators of "motivational forces" (p. 1182). Second, rating accuracy, the ultimate goal of rater training (Woehr, 1994), has not been examined in previous individual differences research. Thus, our current understanding of the impact of individual differences on rater training effectiveness is incomplete given the ultimate criterion has yet to be examined. Third, general cognitive ability (g), which has been found to impact training outcomes in numerous studies (e.g., Hunter, 1986; Ree & Earles, 1991; Salas & Cannon-Bowers, 2001), has not been studied in the context of rater training. Cognitive ability is likely to play an important role in rater training effectiveness given
that the evaluation of human performance is a cognitively demanding task (DeNisi, Cafferty, & Meglino, 1984; Feldman, 1981).

This paper contributes to the rater training literature in three important ways. First, in Study 1, I develop and test an individual differences model of rater training motivation (see Figure 1 for the hypothesized model of rater training motivation). This represents the first test of a structural model of individual difference variables as antecedents of rater training motivation. Second, in Study 2, I extend the model to examine the simultaneous influence of cognitive ability on measures of rater training effectiveness (see Figure 2 for the hypothesized model of rater training effectiveness). Cognitive ability has been linked to a number of training outcomes, but no rater training studies have examined the effects of cognitive ability. Finally, in Study 2, I examine the effects of individual differences on multiple rater training criteria beyond basic knowledge by including rating validity and rating accuracy, the ultimate rater training criterion, in the model.

Individual Differences and Training Outcomes

Learning goal orientation. Learning goal orientation (LGO) is a relatively stable disposition (Attenweiler & Moore, 2006; Button, Mathieu, & Zajac, 1996; DeShon & Gillespie, 2005) that significantly effects the allocation of effort and persistence during training (Brown, 2001; Fisher & Ford, 1998) as well as increased motivation to learn (Klein, Noe, & Wang, 2006). Thus, I expect that LGO will positively correlate with general self-efficacy and rater training motivation.

Hypothesis 1a: LGO will be positively related to general self-efficacy.

Hypothesis 1b: LGO will be positively related to rater training motivation.
Internal locus of control. Trainees with an internal locus of control (ILOC) tend to have more positive attitudes toward training because they are more likely to feel that training will result in tangible benefits (Noe, 1986; Noe & Schmitt, 1986). Therefore, I expect that ILOC will correlate positively with general self-efficacy and rater training motivation.

Hypothesis 2a: ILOC will be positively associated with general self-efficacy.

Hypothesis 2b: ILOC will be positively associated with rater training motivation.

Promotion focus. Individuals with a promotion focus (PF) tend to be concerned with advancement, growth, and accomplishment, and their objectives tend to revolve around goals, hopes, ideals, and aspirations (Higgins, 1997). In a work context, promotion focused individuals are more likely to engage in work activities, such as training, that offer growth and economic opportunities (Johnson & Chang, 2008). Thus, I expect that PF will correlate positively with general self-efficacy and rater training motivation.

Hypothesis 3a: PF will be positively related to general self-efficacy.

Hypothesis 3b: PF focus will be positively related to rater training motivation.

General self-efficacy. General self-efficacy (GSE) is important for training performance because perceptions of self-efficacy can affect beliefs about the usefulness or importance of training programs for developing job-relevant skills (Ford, Smith, Sego, & Quinones, 1993). Individuals with higher levels of GSE are more likely to engage and persist at a task and eventually succeed at that task (Phillips & Gully, 1997). Accordingly, previous studies have found that GSE is related to learning in the training setting (Gist, Schwoerer, & Rosen, 1989; Gist, Stevens, & Bavetta, 1991; Martocchio & Webster, 1992) as well as to transfer of skills to the job (Ford, Quinones, Sego, & Sorra, 1992). Therefore, I expect that GSE will be positively correlated with rater training motivation.
Hypothesis 4: GSE will be positively associated with rater training motivation.

Training motivation. Training motivation refers to the desire on the part of trainees to learn the training material (Hicks & Klimoski, 1987). Although many individual characteristics influence training outcomes (Tannenbaum & Yukl, 1992), motivation is one of the most important (Pintrich, Cross, Kozma, & McKeachie, 1986). Because of the robust positive relationship between training motivation and training outcomes, training motivation has been found to be an important intervening mechanism between individual difference variables and training effectiveness (Colquitt et al., 2000). Individual differences influence decisions to exert effort by creating differences in goals, assessments and interpretations of situations, and reactions to those interpretations (Herold et al., 2002). Although training motivation has been studied extensively, no research has examined trainee motivation in a rater training context. Based on the expansive training motivation literature, and consistent with the meta-analytic path model derived by Colquitt et al. (2000), I expect GSE will partially mediate the relationship between individual differences and rater training motivation (RTM).

Hypothesis 5: GSE will partially mediate the influence of LGO, ILOC, and PF on RTM.

Study 1

Sample and Procedure

One thousand one hundred and ninety-nine undergraduate students enrolled in psychology courses at a public university in the southeastern United States participated in the study in exchange for extra course credit. Participants were recruited using the psychology department’s online research administration management system, and all data were collected using the online survey system. To induce the expectation of a training situation, participants
were instructed that upon completion of the survey they could be randomly selected to participate in an actual rater training program for additional extra course credit.

Sixty-nine of the participants did not provide complete data for all of the study measures so their data were dropped, leaving for all analyses a final sample size of 1,130. Sixty-eight percent of the sample was female (32% male), and 85% was Caucasian. The average age of participants was 19.21 years ($SD = 2.61$).

**Measures**

Unless noted otherwise, items were measured on a 6-point Likert-type scale from 1 (*strongly disagree*) to 6 (*strongly agree*).

*Learning goal orientation.* LGO was measured using 5 items from VandeWalle (1997). A sample item is “I often look for opportunities to develop new skills and knowledge.” Cronbach’s alpha for the scale was .81.

*Internal locus of control.* ILOC was measured using 6 items from Levenson (1973). An example item is “My life is determined by my own actions.” Cronbach’s alpha for the measure was .73.

*Promotion focus.* I measured PF using 9 items from the General Regulatory Focus Measure (Lockwood, Jordan, & Kunda, 2002). All items were measured on a 9-point Likert-type scale from 1 (*not at all true of me*) to 9 (*entirely true of me*). A sample item is “In general, I am focused on achieving positive outcomes in my life.” Cronbach’s alpha for the measure was .90.

*General self-efficacy.* GSE was measured using 8 items from the New General Self-Efficacy Scale (Chen, Gully, & Eden, 2001). An example item is “I am confident that I can perform effectively on many different tasks.” Cronbach’s alpha for the scale was .90.
**Rater training motivation.** RTM was measured using 6 items adapted from Noe and Wilk (1993). All items were preceded by the statement, "If selected to participate in the rater training program...," and the items were measured on a 5-point Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). A sample item is “I will try to learn as much as I can from the training program.” Cronbach’s alpha for the measure was .86.

**Results**

Means, standard deviations, internal consistency estimates, and bivariate correlations amongst the study variables are presented in Table 1. As recommended by Anderson and Gerbing’s (1988) two-step approach to model evaluation, I first examined the measurement model before evaluating the hypothesized structural model. All models were evaluated using full-information maximum likelihood estimation in Mplus 6.12 (Muthén & Muthén, 1998-2010). Hypotheses were evaluated using the statistical significance (one-tailed) of the path coefficients.

**Measurement Model**

I assessed the fit of the five-factor measurement model based on commonly used fit criteria. The factors were LGO, ILOC, PF, GSE, and RTM. The measurement model provided an acceptable fit to the data, $\chi^2(517, N = 1130) = 896.331, p < .000$; comparative fit index (CFI) = .968; root-mean-square error of approximation (RMSEA) = .025; standardized root-mean-square residual (SRMR) = .037.

**Hypothesized Structural Model**

LGO was positively related to GSE ($\beta = .56, p = .000$) and RTM ($\beta = .17, p = .002$), supporting Hypothesis 1a and 1b. ILOC was positively associated with GSE ($\beta = .38, p = .000$) and RTM ($\beta = .22, p = .000$), supporting Hypothesis 2a and 2b. Hypothesis 3a was not supported, as PF was not associated with GSE ($\beta = .04, p = .097$), but Hypothesis 3b was
supported, as PF was positively associated with RTM ($\beta = .41, p = .000$). As hypothesized, GSE was positively related to RTM ($\beta = .13, p = .035$), supporting Hypothesis 4.

I assessed the fit of the hypothesized structural model using the same criteria as those used to assess the measurement model, and the hypothesized model provided a good fit to the data, $\chi^2(550, N = 1130) = 1254.795, p < .000$; CFI = .958; RMSEA = .034; SRMR = .037, supporting Hypothesis 5. Consistent with Colquitt et al. (2000), a chi-square difference test indicated that the hypothesized partially mediated model was a better fit to the data than a fully mediated model, $\Delta\chi^2(3, N = 1130) = 196.421, p < .000$.

**Discussion**

As hypothesized, LGO and ILOC were positively associated with GSE and RTM. PF was not related GSE but was related to RTM. Consistent with prior research on training motivation (e.g., Colquitt et al., 2000), GSE partially mediated the relationship between these individual differences and RTM. Also consistent with prior research, a partially mediated model was a better fit to the data than a fully mediated model, indicating that individual differences have both direct and indirect effects on RTM. Taken as a whole, the results supported a partially mediated model in which attitudinal constructs influence RTM through GSE. However, a critical question is to what extent does this model predict rater training criteria? Thus, I conducted a second study to extend the model to include these criteria.

**Study 2**

**Outcomes of FOR Training**

One of the primary outcomes of FOR training is the acquisition of declarative knowledge (DK) that can be used to improve the quality of ratings. DK is an indicator of learning as a result of training, and it is a key criterion in the assessment of training effectiveness (Ford & Kraiger,
An Individual Differences Model of FOR Training Effectiveness

1995; Kraiger, Ford, & Salas, 1993). DK indicates the extent to which a trainee has learned the basic fundamental principles of a task (i.e., the what) (Bell & Kozlowski, 2002). Previous research indicates that FOR training leads to an increase in DK of the training content among FOR trainees (Dierdorff et al., 2010; Gorman & Rentsch, 2009).

Improving rating validity (RV) is another intended consequence of FOR training. RV has historically been offered as the primary evidence as to the quality of ratings (Kline & Sulsky, 2009). The validity of ratings is typically assessed by examining correlations between the ratings and a set of “objective” measures, or “true” scores (Borman, 1975; Deadrick & Gardner, 1997; Vance, MacCallum, Coover, & Hedge, 1988). Given the theory behind FOR training, numerous studies have found that FOR training improves RV for FOR trainees (Gorman & Rentsch, 2009, 2017; Hoffman, Gorman, Blair, Meriac, Overstreet, & Atchley, 2012; Lievens, 2001).

Finally, rating accuracy (RA) is traditionally considered the ultimate goal of FOR training (Athey & McIntyre, 1987; Woehr, 1994). Although conceptually similar and unfortunately often treated as equivalent to RV, measures of RA provide more precise information as to the similarity between ratings and “true” scores rather than just correlational, or rank order, information (Kline & Sulsky, 2009; Sulsky & Balzer, 1988; Sulsky & Day, 1994). Accordingly, an abundance of studies have demonstrated the efficacy of FOR training for improving RA (Woehr & Huffcutt, 1994; Roch et al., 2012).

Thus, given the research evidence regarding rater training motivation reviewed earlier, I expect that RTM will predict FOR training outcomes.

**Hypothesis 6a**: RTM will be positively related to DK.

**Hypothesis 6b**: RTM will be positively related to RV.

**Hypothesis 6c**: RTM will be positively related to RA.
Cognitive Ability and FOR Training

Besides training motivation, general cognitive ability (g) is also one of the most important individual difference constructs for predicting training outcomes (Pintrich et al., 1986). Cognitive ability has been found to be an important determinant of learning and skill acquisition (Hunter, 1986; Kanfer & Ackerman, 1989; Salas & Cannon-Bowers, 2001). Because individuals higher in g are more likely to have positive task-related experiences and gain task-related knowledge, they should have high levels of GSE (Bandura, 1997). Cognitive ability, then, is related to perceptions of ability, as manifested by GSE (Chen, Casper, & Cortina, 2001). Thus, I expect that g will correlate positively with GSE.

**Hypothesis 7.** g will be positively associated with GSE.

Several large-scale studies in the military have found a strong relationship between g and training performance (Olea & Ree, 1994; Ree, Carreta, & Teachout, 1995; Ree & Earles, 1991). Cognitive ability is strongly related to training performance, and the relationship between g and performance increases with more complex and novel tasks (Ackerman, 1986; Hartigan & Wigdor, 1989; Hunter & Hunter, 1984; Schmitt, Gooding, Noe, & Kirsch, 1984).

There are theoretical reasons to expect that g would play an important role in FOR training effectiveness. For one, FOR training relies heavily on the retention and recall of performance information (Chirico, Buckley, Wheeler, Facteau, Bernardin, & Beu, 2004). For example, successful trainees must encode candidate behaviors as they observe them, remember what dimension each candidate behavior belongs to, evaluate whether the behavior was positive or negative, and then assign a rating based on their evaluation. This, of course, is a cognitively demanding set of tasks (Denisi, Cafferty, & Meglino, 1989; Feldman, 1981). As Bernardin and Cardy (1982) stated, "a considerable amount of research on human information processing and
cognition suggests that even when in a desirable climate and motivated to rate accurately, raters have highly fallible perceptions and recall" (p. 353). Thus, g may make a difference in the success of FOR training because FOR trainees higher in g may be better able to categorize performance information, which should then result in better retention and recall (Chirico et al., 2004). Thus, overall, I expect that g will relate to FOR training outcomes.

**Hypothesis 8a**: g will be positively associated with DK.

**Hypothesis 8b**: g will be positively associated with RV.

**Hypothesis 8c**: g will be positively associated with RA.

**Method**

**Sample and Procedure**

One hundred and thirty-seven undergraduate students enrolled in psychology courses at a regional public university in the southeastern United States volunteered to participate in this study in exchange for extra course credit. Two of the volunteers did not complete the training, so their data were dropped, leaving a final sample size of 135 for all analyses. The mean age of participants was 20 years (SD = 4.09). The participants were 55 percent female, 79 percent Caucasian, and 33 percent part-time workers. Seventy-five percent of the sample had no experience rating the job performance of another person.

Approximately one week prior to participating in the laboratory portion of the study, all participants completed an online survey that included all of the individual difference measures, except for g, as well as demographic information. Each session involved three to eight participants. First, participants were introduced to the study, completed the g measure, received FOR training, and completed a measure of DK. Then, participants viewed two randomly presented videotaped performance episodes. While viewing each performance episode,
Participants recorded specific behaviors on a rating form. After viewing each episode, participants recorded their ratings on the form. At the conclusion of the session, each participant was debriefed, thanked, and dismissed.

**Stimulus Materials and Comparison Scores**

The performance episodes that served as the stimuli in the present study consisted of videotaped performance episodes featuring actual participants in a developmental assessment center for senior-level executives. Consistent with other performance rating accuracy studies (Sulsky & Day, 1992, 1994; Schleicher et al., 2002), the videotapes depicted a scenario in which an executive played the role of a manager holding a one-on-one meeting with a subordinate. Participants were instructed to record their ratings of the executive’s performance. The exercises were designed to elicit behaviors relevant to the following performance dimensions: analysis, decisiveness, leadership, confrontation, and interpersonal sensitivity. Consistent with Gorman and colleagues (Gorman & Rentsch, 2009, 2017; Hoffman et al., 2012), each dimension was rated using an 11-point Likert-type rating scale (1.0 = extremely weak, 1.7 = very weak, 2.0 = weak, 2.5 = moderately weak, 2.7 = slightly weak, 3.0 = satisfactory, 3.5 = effective, 3.7 = very effective, 4.0 = highly effective, 4.5 = extremely effective, 5.0 = exceptional). Each performance episode was approximately 15 minutes in length. The videotapes used in the present study have been utilized in prior FOR training research (e.g., Gorman & Rentsch, 2009, 2017; Hoffman et al., 2012). To calculate rating accuracy and rating validity, I used the comparison scores generated by Gorman and Rentsch (2009).

**FOR Rater Training**

All training sessions were conducted by trained graduate students using a standardized written set of procedures. The FOR training relied on Gorman and colleagues' (Gorman &
Rentsch, 2009, 2017; Hoffman et al., 2012) methodology, according to the original procedures outlined by Pulakos (1984, 1986). Each training session lasted about 45 minutes. First, the trainer read the definition of each of five rating dimensions and the scale anchors to participant. Next, participants matched example behaviors to the dimensions. The trainer then discussed how these examples of behaviors represented good performance or poor performance on each dimension. Participants practiced matching behaviors and dimensions again by using list of sample behaviors (similar to those seen in the videotapes) and matching each to a behavior. The trainer then discussed these behaviors and provided feedback as to the dimension and level of performance (weak or effective) represented by each behavior. Participants then observed and rated a practice videotape (also a role play exercise using another assessment center candidate) similar to the ones used as the rating stimuli. To ensure that participants had exposure to examples of both weak and effective performance, the practice videotape consisted of a mixed performance episode where the candidate displayed both positive and negative behaviors across the five dimensions. Next, the trainer collected the ratings, wrote them on the board, and discussed the ratings with the group. Finally, the trainer provided feedback to the participants, explaining why the candidate should have received a particular rating on each dimension according to the comparison ratings.

Measures

LGO, ILOC, GSE, and RTM were all measured using the same scales as used in Study 1. PF was measured in Study 2 using a 6-point Likert-type scale from 1 (strongly disagree) to 6 (strongly agree). For Study 2, the following additional variables were measured.

Cognitive ability. Cognitive ability was measured using the Wonderlic Personnel Test (Form II) (WPT; Wonderlic, 1992). The WPT is a 50-item 12-minute timed test that has been
used extensively in prior training research as a reliable and valid measure of $g$ (Baldwin, Magjuka, & Loher, 1991; Lepine, 2003; Martocchio & Judge, 1997). Reliabilities for the WPT have ranged between .88 and .94 in previous research (Wonderlic & Associates, 1983).

**Declarative knowledge.** Post-training DK was measured using Gorman and Rentsch's (2009) 15-item measure. The measure required participants to match 15 managerial behaviors to their respective dimensions. DK was operationalized as the total number of correctly classified behaviors (0 to 15). Gorman and Rentsch (2009) reported a split-half reliability estimate of .65 for the measure.

**Rating accuracy.** I measured RA using stereotype accuracy (SA), one of Cronbach’s (1955) four indices of RA. Developed using an analysis of variance (ANOVA) framework, SA is interpreted as an index of the accuracy with which a rater discriminates amongst performance dimensions across ratees (Jelley & Goffin, 2001; Sulsky & Balzer, 1988). Lower scores on this measure represents higher accuracy. I chose SA as the focal accuracy index in this study because SA appears to show the strongest effects when it comes to the retention of FOR training (Gorman & Rentsch, 2017), which is most relevant for understanding FOR training effectiveness.

**Rating validity.** Borman’s (1977) differential accuracy (BDA) was also assessed. BDA measures the correlation between ratings on each dimension and the corresponding target scores across ratees. Higher scores on the index reflect better rating accuracy. Because BDA provides correlational information and is insensitive to distances between ratings, it is generally considered an index of RV (Sulsky & Balzer, 1988; Sulsky & Day, 1994).

Results
Means, standard deviations, and bivariate correlations among study variables are reported in Table 2. Given the low indicator to participant ratio in Study 2, I used path analysis to examine the theoretical model. The model provided an acceptable fit to the data, $\chi^2(13, N = 135) = 15.791, p = .261; \text{CFI} = .981; \text{RMSEA} = .040; \text{SRMR} = .046$. Study 2 hypotheses were evaluated using the statistical significance (one-tailed) of the path coefficients. Hypothesis 6a, 6b, and 6c were not supported, as RTM was not related to DK ($\beta = .07, p = .193$), RV ($\beta = .02, p = .431$), or RA ($\beta = .09, p = .146$). Cognitive ability was positively associated with GSE ($\beta = .11, p = .041$), supporting Hypothesis 7. Hypothesis 8a, 8b, and 8c were all supported, as $g$ positively related to DK ($\beta = .16, p = .037$), RV ($\beta = .24, p = .004$), and RA ($\beta = .14, p = .046$). Given the lack of direct relationships between RTM and the training outcome variables, I tested post-hoc for potential indirect effects of GSE, ILOC, LGO, and PF through RTM, but none of these tests for indirect effects were statistically significant. In addition, I tested for an interaction effect between $g$ and RTM on the training outcomes, but this model provided a poor fit to the data, $\chi^2(6, N = 135) = 379.492, p < .000; \text{CFI} = .274; \text{RMSEA} = .679; \text{SRMR} = .092$.

**Summary and Discussion**

In Study 1, I found support for a partially mediated model of RTM in which LGO, ILOC, and PF influence RTM through the construct of GSE. In Study 2, I extended the model to include rater training criteria and found partial support for a model in which RTM did not predict DK, RV, and RA, but $g$ did. The finding that $g$ predicted SA is consistent with the findings of Smither and Reilly (1987), who also found the same relationship in a study of $g$ and RA. Thus, $g$ may be most important for helping raters to distinguish between theoretically similar dimensions of performance.
These findings are in stark contrast to Colquitt et al. (2000), who found that the effects of motivation on learning are stronger than that of g and argued against a "g-centric" approach to trainability. This may represent a boundary condition for training motivation in that RTM does not predict FOR training success. I suggest that there may be at least three reasons for the findings in the present study. First, g may be important because evaluating human performance is a cognitively demanding task (Bernardin & Cardy, 1982; DeNisi, Cafferty, & Meglino, 1984; DeNisi & Williams, 1988; Feldman, 1981). Training motivation may be more important for training basic knowledge and skills, not complex skills. Second, the lack of relationship between RTM and training outcomes could also be the result of an omitted moderator variable in the model. Third, it is possible that because participants completed the study in exchange for extra course credit, they may not have felt that participation in the study was completely voluntary, thus reducing motivation.

The results of these studies could inform the development of future rater training programs such that training program coordinators may need to select trainees who are higher in g to get the full benefits of the training program. Future research should continue to systematically evaluate the impact of rater trainee g. Future research should also expand the model to include additional outcomes such as reaction measures and measures of procedural knowledge and skill transfer.

**General Conclusion**

Individual differences are important to understanding the effectiveness of rater training. Across two studies, I found that LGO, ILOC, and PF indirectly influence RTM through GSE. RTM, however, did not predict measures of rater training effectiveness, but g was predictive of both GSE and rater training criteria. Thus, it appears that although RTM is a theoretically
meaningful construct related to other attitudinal constructs, the most important predictor of rater training outcomes may simply be not much more than $g$. 
References


An Individual Differences Model of FOR Training Effectiveness


intervention on the acquisition and maintenance of complex interpersonal skills. *Personnel Psychology, 44*: 837-861.


An Individual Differences Model of FOR Training Effectiveness

CA: Muthén & Muthén.


### Table 1

**Means, Standard Deviations, and Zero-Order Correlations Between Study 1 Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>Learning goal orientation</td>
<td>4.41</td>
<td>.71</td>
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<td></td>
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<tr>
<td>Locus of control</td>
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<td>.39**</td>
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<tr>
<td>Promotion focus</td>
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<td>.36**</td>
<td>.47**</td>
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<td></td>
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<tr>
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<td>.67**</td>
<td>.54**</td>
<td>.46**</td>
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<tr>
<td>Rater training motivation</td>
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<td>.69</td>
<td>.30**</td>
<td>.33**</td>
<td>.49**</td>
<td>.33**</td>
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*Note. N = 1,130.*

*p < .05. **p < .01.

### Table 2

**Means, Standard Deviations, and Zero-Order Correlations Between Study 2 Variables**

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<tr>
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<tr>
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<td>Cognitive ability</td>
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<tr>
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<td>-.03</td>
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<td>-.08</td>
<td>-.14</td>
<td>-.14</td>
<td>-.23</td>
<td></td>
</tr>
</tbody>
</table>

*Note. N = 135.*

Values great than |.169| are significant at p < .05, two-tailed. For rating accuracy, smaller values on this index represent greater accuracy.
Figure 1. Hypothesized structural model tested in Study 1. Indicator variables omitted for clarity.
Figure 2. Hypothesized path model tested in Study 2.
EXPO Day: Utilizing Poster-Presentation Formats with Service-Learning Team Projects

ABSTRACT

This paper describes a team-based service learning project. Specifically, we highlight EXPO Day, where student teams showcase the result of their efforts in an interactive and educational poster-presentation forum. We describe the course project, discuss relevant supporting theory, and conclude with future pedagogical recommendations.

INTRODUCTION

Expectations for management students continue to evolve and today’s graduates must be prepared to work effectively in teams, communicate through a variety of media, and network with various stakeholders of the organization. Furthermore, organizations today require flexible, dynamic, and flatter structures that can cater to changing competitive conditions. Team designs are thus often called upon to meet such challenges, and incoming employees, especially those in supervisory and management positions, are expected to possess the training and education that will allow them to work in the context of such structures.

Courses in most management programs typically provide theoretical content related to topics such as interpersonal relationships, team design, and leadership. However, while recognized as being a vital part of students’ education, not all programs consistently provide contexts that allow students to put such theory into real practice. A typical team presentation, while allowing students to work together, is still confined to the classroom setting in an academic environment that is familiar to students. Such settings reinforce theory and do allow some practical application of team process; however, the potential is limited in terms of how adequately those projects match expectations surrounding teamwork found in potential hiring organizations. We believe the team project presented in the current paper overcomes some of
these limitations. With service-learning as the focus of the course, student teams partner with community organizations to execute a meaningful project over the course of the semester, culminating in a unique poster-presentation session called EXPO Day.

The following sections provide an overview of our course, stress the importance of service-learning and working in teams, highlight the benefits of poster-style presentations (with anecdotal evidence from our stakeholders), and offer recommendations for future pedagogical work in this area.

**TEAM & GROUP PROCESSES COURSE**

This course is required for all management majors in the college of business. It is currently the only course in the college that is designated as a service-learning course. The primary focus of the course is on theoretical coverage of concepts related to team design and process. Examples include, but are not limited to: stages of team development, group think and polarization, team conflict, team roles and norms, team decision-making and innovation, and communication. Early in the semester, teams of four to six students are tasked with selecting a community organization to partner with for their service-learning project. Working with their community partner, they develop a project proposal that includes SMART goals that are linked to objective deliverables. Throughout the semester, they work toward the attainment of their goals, and EXPO Day allows them to present the results of their team project in an interactive forum. Throughout the semester, teams engage in regular classroom activities to reinforce course concepts related to the team project. For example, to build team culture, they are tasked with writing a team mission statement, identifying team values, and creating a team logo. Such work is common across each topic and chapter. We feel that one of the most important benefits of the
course is its focus on service-learning. These benefits extend to our students, our college and university, and our community partners.

**IMPORTANCE OF SERVICE-LEARNING**

The importance of service learning in management coursework stems from three primary benefits. First, there is a significant academic component to the design of the project, where students work collaboratively with community partners. Such experiences enable course concepts to be applied to real world applications where students can examine theory, while simultaneously addressing meaning and tangible issues (Markus, Howard & King, 1993).

Second, in line with the goals of our course, service learning provides excellent opportunities for experiential learning whereby student teams work autonomously with shared accountability for their own success. In turn, their active participation in finding unique ways to meet community needs can build higher efficacy and team-building skills (see Kolb, 1998; Snell, Chan, Ma & Chan, 2015).

Finally, the nature of this team project puts students in contact with multiple stakeholders. While strategizing and working toward established goals and objectives, teams are often required to contact a number of individuals in the community. Examples include organizing tabling events on campus, gaining signatures for petitions, promoting canned food drives, and meeting with local school administrators. Furthermore, during the final EXPO DAY presentation, *all student teams* interact with a diverse audience made up of faculty, deans, other students, university administrators, community partners, and advisory board members, thus providing an enriched and more realistic experience than what would normally be experienced in a traditional classroom project.
In summary, service learning offers many unique opportunities for students to put their education into practice. We believe this step from theory to practice is critical for our students as they get ready for a challenging and dynamic business environment where their competencies will be immediately tested by various stakeholders. Communication skills, issue recognition, and applied teamwork represent some of the primary competencies desired by employers.

**STUDENTS WORKING IN TEAMS**

The authors acknowledge, as instructors of the course, their potential bias surrounding the benefits of student teams. Thus, we offer a brief sampling of empirical evidence. For example, research has shown that cognitive processes triggered by teamwork have the potential to lead to heightened creativity in decision-making, compared to individual decision outcomes (Hertel, 2011; Nijstad, Stroebe & Lodewijkx, 2002). In functional team settings, elaboration, fluency, and flexibility stem from wider and deeper divergent thinking. Furthermore, various studies have demonstrated the motivational advantages of teamwork, when members develop strong identification with their team and the overall team outcome (Gockel, Kerr, Seok & Harris, 2008; Williams & Karau, 1991). Collectively, team members may band together around a strong identity, working with more intensity, direction and persistence as they pursue team goals. In fact, we purposefully have students work on exercises early in the semester to assist in the development of team identities.

These motivational advantages are largely linked to the degree to which teams are able to collectively believe in the meaningfulness of the issues identified in their service-learning projects. In formulating project ideas, teams are encouraged to go far and above simple volunteering; they must identify a meaningful issue/need in the community and concretely address that need through their project. This is stressed in all aspects of the project, and is
especially apparent during the poster-presentation. The EXPO day format is an ideal venue for student teams to learn about mutual accountability, in that they are not displaying individual work, but the collective outcomes associated with the relationships each team formed with their community partner. Students seem to understand and appreciate the fact that their individual success (or failure) is tied to overall team performance.

**THE EXPO DAY POSTER PRESENTATION**

Each semester, three sections of the teams course jointly display their projects during EXPO Day. A total of 24 team project boards (eight teams in each class) are usually on display, set up on tables in the College of Business Atrium. Faculty members select judges from the university and the community to evaluate the presentations across three main criteria: Impact, Design/Professionalism, and Team Spirit. All poster boards are on display for 2-1/2 hours, during which time team members talk to audience participants about their project, in a venue that allows for an open discussion format. Students are expected to dress professionally and to have a strong knowledge of both their project and relevant course concepts. The following items are required elements for each poster board:

- **Introduction**
  - Team mission / vision; Team name / values
- **Background**
  - Provide information about community partner
- **Meaningful issue**
  - What is your meaningful issue? Be sure to provide research supporting your issue here.
- **Goals and Deliverables / KPIs**
  - Your goals should correctly reflect the SMART format! Your deliverables / KPIs should be objective, measurable indicators that are reflective of the project you have done with your community partner. Include the required chart from your proposal that displays each goal and its related deliverable. Be sure to have your objective deliverables on hand at the EXPO (examples: videos, photos, flyers you created, create a chart or graph displaying stats, etc.).
• Methodology & Processes
  o This section should include your Gantt chart or timeline and/or an overview of your team processes (e.g. What activities did you complete together?)

• Evaluation of project (and update of your progress-to-date)
  o How successful was your project? Link this analysis/reflection to your goals and objectives. Also, be sure to comment on the effectiveness of your team processes.

• Application of Course Concepts
  o How did you use the theory and concepts from this course to help you succeed in this project?

• Sustainability
  o How will your project impact your community partner beyond this semester?

There are numerous benefits to this presentation format. Students from three sections of the course come together in one single venue and collectively display the impact that they have made on their community. In this sense, students see each other’s work in one place and share in those successes. The feel of the event is celebratory in nature and allows students to be recognized widely for the work they have done. There are also a number of very important networking opportunities for students. Audience members include advisory board members, community partners, local business leaders, other faculty members, and university administration. Students have the opportunity to showcase their talents in front of these individuals and make connections that may lead to future opportunities. In short, EXPO Day offers numerous benefits to a wide array of students and stakeholders.

ANNECTODAL EVIDENCE

From one of the judges. “I can’t believe the type of experience these students are getting from this project. They may not realize it now, but later they will recognize the impact they’ve made for these organizations and that will become meaningful and will affect their future citizenship behaviors”
From a student. “This is amazing! I can’t believe how many people are here and how everyone is truly interested in what we have done this semester.”

From one of our Deans. “EXPO Day is a wonderful and meaningful way to display the impact that your students have had on our community partners. Congratulations on a terrific event!”

From a community partner. “This event is so special and really allows your teams to showcase their accomplishments. I am proud of what these students were able to do for Junior Achievement, in such a relatively short period of time! Their presentation today accurately displays the impact they had on ABC school and the kids in the classroom!”

CONCLUSION

In order to engage the audience when presenting this paper at SMA 2017, we plan to bring photos of EXPO Day plus several of the printed posters to display as examples. Regarding pedagogical recommendations, we encourage educators to consider the advantages of incorporating service learning components within management courses. Through these projects, students to gain exposure to real business problems/needs, while also creating relationships with members of the local community. Further, we hope this discussion inspires educators to consider incorporating potential adaptations of EXPO Day to their own courses. Rather than requiring student teams to present a slide presentation in class, allowing students to showcase projects through interactive forums is an impactful way to facilitate student learning and development.
REFERENCES


Reassessing Elton Mayo and the importance of temporal context

ABSTRACT

Elton Mayo’s research played an important role in the development of managerial thought. His discussion of results of Hawthorne Studies continues to inform management theory and practice. But since Mayo was such a paradox, his impact on the field of management is considered to be controversial. He was in a research field, but not a researcher; in academia, but not a true academic; a capitalist, but not a devotee to Adam Smith; an insider, but someone whose own background was more of an outsider. One way to resolve this paradox is to place Mayo’s ideas and accomplishments in the context of the time.

Keywords: Elton Mayo, Hawthorne Studies, Human Relations
Reassessing Elton Mayo and the importance of temporal context

INTRODUCTION

Historical figures are praised, then criticized, and then praised again. The praise or criticism of a deceased historical figure depends not only on the actions or ideas of that figure, but on the time passed since that person died. First, historical figures are generally praised after their death; then about fifteen years after they have died, revisionists criticize them harshly for failures, both perceived and real (Schlesinger, 2007). A generation after the first revisionists expressed their criticism, another group of revisionists return to the original model and praise the historical figure (Bedeian, 1998). This cycle of re-assessing historical figures is explained by the fact that all historians evaluate the work of others through the lenses of their own time period (Novick, 1988). An example of this trend is the historians of the New Left praising the abolitionists and denouncing Abraham Lincoln based on how the historical figures’ racial policies matched the New Left’s (Peterson, 1994). This re-assessment pattern has occurred in management history as well (Bedeian, 1998; 2004).

This paper attempts to reevaluate research and findings of Elton Mayo whose name is associated with the Hawthorne Studies undertaken at the Bell Telephone Western Electric manufacturing plant in Chicago during the period of 1924-1932. The plant’s Industrial Research Division conducted a series of experiments to investigate how the working conditions affected productivity and morale. Elton Mayo of the Harvard Business School helped carry out some of those experiments and interpreted results published in a classic report titled *The Human Problems of an Industrial Civilization* (Mayo, 1933). Although he helped lay a foundation for the human relations movement, Mayo’s reputation has been faint since he died almost seventy years ago. Unlike most historical figures, Mayo did not go through a praise period. Bendix and Fisher
(1949) issued the first criticism regarding Mayo soon after he died in 1949. They argued that Mayo was a poor social scientist; anti-democratic, and anti-union, someone who was more concerned with gaining fame than being a scientist. This criticism was merely one of many that questioned Mayo’s reputation and weakened the significance of the Hawthorne Studies and the Human Relations movement (Landsberger, 1958). It appeared that Mayo’s arguments did not appeal to scholars politically, especially because Mayo was anti-union during the climax of the American union movement (Muldoon, 2012, 2017). Another problem was that Mayo defended capitalism against critics, such as the socialist Daniel Bell (1960). Historians have found that Mayo did not research that much either (Wren, 2005). In short, Mayo is not considered to be as important or influential as he was during his lifetime (Smith, 1998).

Although Mayo continues to be well cited, there is nevertheless a troubling pattern with the citations, namely that 85 percent of citations that reference Mayo are neutral and are merely used to provide historical credibility (Rairdon, 2008). Regression analysis demonstrates that there is a trend of citing Mayo but with little discussion of his work, indicating that Human Relations is a dead field of study. Mayo’s reputation, relative to other historical figures has also been in decline. In 1977, Wren and Hay found that Mayo ranked fourth overall of historical management figures. But in 2010, Heames and Breland found that Mayo’s name on that list had fallen to 12th place. Bearing these findings, Schwarz (2015) found in a thematic review of the Journal of Management History that only one paper discussed the Hawthorne Studies, with no reference to Mayo. In addition, Bruce and Nyland (2006, 2011, 2015), through their examination of the works of Dennison, found that scientific management was more progressive and better researched than Human Relations.
In addition, rankings of the important management figures do not list Mayo very high in terms of influence for his writing (Bedeian & Wren, 2001). When Mayo was alive he was compared to Thorstein Veblen and John Dewey (Smith, 1998). Modern scholars have had a hard time placing Elton Mayo in his historical context because he was such a paradox. He was in a research field, but not a researcher; in academia, but not a true academic; a capitalist, but not a devotee to Adam Smith; an insider, but someone whose own background was more of an outsider. One way to resolve this paradox is to place Mayo’s ideas and accomplishments in the context of the time. This strategy is imperative for Mayo because he did not leave a “big book” or lasting testament. Much in the manner of Locke’s (1982) analysis of Taylor we analyze Mayo’s writings, both the context and its criticisms, to reassess Mayo.

**REASSESSING ELTON MAYO**

**Common Criticisms**

Elton Mayo’s work resulted in six books and over 30 articles published between 1919 and 1947, the year he retired from Harvard Business School (Bendix & Fischer, 1949). Over the years, Mayo’s publications have been reviewed, analyzed, and criticized by many. A review of the literature about Elton Mayo shows that there are some common general themes that have been a part of the record since the Hawthorne Studies were published. The first theme focuses on Mayo’s political views and states that Elton Mayo and his group were fascist. The second criticism is aimed at Mayo’s neglect of unions. The third trend is to contrast Mayo the advocate versus Mayo the scientist. In addition, we expound on some information further to mention criticisms of Mayo’s views of motivation, groups, elites, perceptions or research methods, and the claim that Mayo was not original. Finally, we conclude with a section on Mayo’s hopes for
the social sciences, Mayo’s relationship with Taylorism and Mayo’s influence as a teacher. For an overview of these areas of reassessment please see table 1.

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Insert Table 1 about here
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**Politics.** One of the common trends in assessment of Mayo’s work has been criticism over his politics (Kyle & Bruce, 2011; Muldoon, 2012; Rose, 1975; Smith, 1998). Scholars have noted Mayo’s conservative political nature and have criticized both him and Human Relations as a result (Landsberger, 1958; Muldoon, 2012; Stone, 1952). These criticisms emerged in part because there were differing funding sources for those doing industrial research as well as differing assumptions (Stone, 1952).

One example would be Rose’s description of Mayo’s work as “corporate fascism with a human face” (1978:121). This has been a typical complaint as scholars have called the Mayo group “cow sociologists,” “bomb makers” and “Nazis” (please see Muldoon, 2012 for a listing of the criticisms). The controversy was such that many intellectuals believed Mayo’s work would produce obedient workers: a permanent underclass (Bell, 1947). Bruce and Nyland agreed (2011:386) writing that, “Mayoism offered a more subtle and efficient means of exercising this power mentally via workers’ cognitions and emotions.” It was noted that Mayo’s perspective was different from Taylor’s who only wanted to manipulate workers’ physical environment (Bruce & Nyland, 2011). Thus, Mayo’s work was totalitarian from the critics’ perspective (Bell, 1947). The criticism was so great that all scholars who studied organizational behavior became very defensive (Whyte, 1969).

What does one think about this type of criticism? First, calling someone a “fascist” was a common slur of the 1930s, especially those on the political left (Diggins, 1972). Second, fascism
is an ideology which refers to the complete mobilization of society by the state and for the benefit of the state with its focus on military citizenship (Diggins, 1975). It is right-wing socialism in action that usually has a focus on “the other” and that the other should be destroyed. Mayo argued for none of these policies, expressing his views against both the absolute state as well as the hatred of other groups (Mayo, 1945). In fact he wrote: “But we have failed to develop an equal step the strategy of cooperation; we have allowed ourselves the easier path, the strategy of hate that leads inevitably to the City of Destruction” (Mayo, 1945: 123). Hardly the writings of a fascist!

Although some critics (Bruce & Nyland, 2011) stated that Taylor did not want to manipulate workers’ mental landscape, the review of Taylor’s contribution reveals the opposite. Taylor did talk about a mental revolution (Bendix, 1956). As Fraser (1989:59) notes, it was Taylor’s ideas which led to the destruction of peasant culture and customs in the workplace, replacing such a culture with utilitarianism. Fraser (1989) and Bell (1956) refer to this as a completely “Benthamite utilitarian psychology” that rejected the need of work culture due to the destruction of craft and peasant culture.

One last observation: J.H. Smith (1998), a Mayo defender, pointed out that Mayo was anti-government during a period in history when the government was held supreme. A quick review of the government at the time of Mayo’s writings results in an observation that many liberals in 1945 treated the U.S. government with a degree of suspicion (Brinkley, 1995). In fact, government involvement in the economy would decline rapidly in the post-war world and many New Dealers had backed away from government intervention (Brinkley, 1998). Perhaps the reason why Mayo was attacked politically was that he argued for management during a period
when liberals, but not the general public, were afraid of big business corporations (Brinkley, 1998; Pells, 1985).

**Unions.** According to some researchers, Mayo did not think highly of trade unions and was criticized for this as well (Bendix & Fisher, 1949). This criticism has been made over the years by many critics both contemporary and modern (Muldoon, 2015). What is rather remarkable about this was that unions in the United States tended to be racist, anti-Semitic and generally conservative (Patterson, 1997). Mayo did not write much about unions. This could be explained by three reasons. First, Mayo was concerned about spontaneous cooperation and social influences that went beyond contracts and other economic arrangements (Cooper, 1962). Therefore, it is not a surprise that unions would not be a direct focus of his research. Secondly, Mayo considered unions to be a conservative response to inept management (Mayo, 1933). Much like Taylor (Locke, 1982), he viewed them as a symptom rather than a cure. Finally, Mayo was not alone in 1945 in voicing concerns over unions. Most Americans had a fear of unions. Strikes in the United States had risen steadily throughout the War II period and had reached a high point in 1946 with over 4985 strikes (Patterson, 1997). Most of these strikes were illegal (Kennedy, 1999). Concern over Labor was a reason why Congress had shifted to Republican control in 1946 and conservative domination from 1938 onward. President Harry Truman wanted union leader John L. Lewis shot for trying to lead a strike during the war (O’Neill, 1993). Mayo was not alone in having a skepticism regarding unions.

The labor question dominated the life of Elton Mayo. His contemporaries, such as Franklin Roosevelt, William Beveridge, Robert Wagner, R. H. Tawney, and Winston Churchill, had to contend with the same problem. Some politicians, such as Senator Robert Wagner, wanted democracy and power to unions (Schlesinger, 1959). Other leaders, such as Winston Churchill
and Franklin Roosevelt had developed skepticism regarding unions yet wanted to engage them; still, there were others like William Beveridge, who sought to construct a welfare state (Schlesinger, 1959; Wrigley, 2001). Mayo, influenced by the English idealists sought to develop techniques to promote harmony. This was not an uncommon viewpoint in any country and it is not clear why May was singled out to be criticized for that.

**Mayo and workers.** Another common political criticism is that Mayo underestimated worker’s radicalism, perpetuating the myth of the docile worker (Bramel & Friend, 1981). Mayo and his research team were accused of being elitists who were unable to understand the viewpoint of workers. The basis of this attack has been the Marxist philosophical foundation of the critics who believed that it was impossible for the managerial elite not to oppress the workers (Stone, 1952). In addition, those ideological critics noted that Mayo ignored the resistance of workers as a class movement (Locke, 1982; Parsons, 1982). As a counter-argument for this issue, we would like to refer to Mayo’s 1933 and 1945 works in which Mayo discussed the potential radical nature of the work force. Mayo blamed this radicalism on poor management. Clearly a man that talks about the hate that social classes could hold for one another, understood very clearly how radical workers could be (Mayo, 1945). The prime difference was that Marxists like Bramel and Friend (1981) saw radicalism as something that should be encouraged; while Mayo discouraged. The modern scholar may take umbrage that Mayo had issues with labor radicals, but then, union leaders of that historical period had similar issues as well and sought to make unions as pro-capitalistic as possible (Kennedy, 1999; Patterson, 1997). Mayo’s viewpoint was not dissimilar to feelings among vital center liberals (Hamby, 1973) which could explain why Mayo became a consultant to the Labour government when he moved to England (Traihair, 1984).
Mayo the advocate. Mayo was criticized for being more interested in spreading his ideas than researching them (Gabor, 2000; O’Connor, 1999). This criticism started with Landsberger (1958) who argued that the Hawthorne Studies were legitimate research, but that Mayo’s advocacy for the Hawthorne Studies was problematic. Other scholars (Kerr, 1953; Merton, 1947; Mills, 1948; Moore, 1947) have issued the same concerns about a managerial bias in Mayo’s work. Recent scholars have argued that Mayo used the Hawthorne Studies to gain political capital for the Harvard Business School and was more concerned with promoting Human Relations than he was with scientific inquiry (Gabor, 2000; O’Connor, 1999). In addition, there has been a stated assumption that Mayo would trade his scholarly virtue for money and present what big businesses would prefer (Blumer, 1947; Merton, 1947).

What should one make of this criticism? Mayo was attacked for being an advocate and for not being an advocate at the same time (Muldoon, 2015). Surprisingly, sometimes, even within the same article, scholars challenge Mayo for being both an advocate and accepting the status quo (Muldoon, 2015). Yet, activism had a long established tradition in sociology (Steinmetz, 2007; Turner & Turner, 1990) and psychology (Capshaw, 1999). Furthermore, Mayo’s drive to increase production (which is only mentioned three times in the Social Problems) was a value shared with Industrial/Organizational psychologists and management scholars (Urwick, 1961; Zickar, 2004).

Mayo (1945) criticized scholars for not developing techniques to deal with the labor question, and he was not the only researcher who expressed this criticism. For example, Lynd (1938) was concerned about the same issue when he argued that scholars were collecting a great mass of information on subjects without having a basis of practical implications (Lynd, 1938). But it was Mayo who took a hit from Wilbert Moore in 1947 for expressing ideas of managerial
application. The famous phrase (or cliché) is that academics know more and more about less and less until they know everything about nothing. Lynd (1939) and others argue that scholars should have a bird’s eye view on their particular field and promote ideas and concepts to the general intelligent public. But even today in management, we have strong issues with applicability despite the efforts of scholars like Jeffrey Pfeffer (1998) and others (Rousseau, Manning, & Denyer, 2008) to make a management theory more applicable and practical.

What opinion should a modern researcher form about Mayo’s advocacy? Kornhauser (1934), in his review of Mayo’s Human Problems argued that Mayo’s views fit the mood of the time since it was practical. Furthermore, Mayo’s advocacy was not out of line among contemporary scholars of that period. Works of Schlesinger (1938) and Viteles (1941) are examples of studies published during Mayo’s lifetime which emphasized a scientist-practitioner model and bridged the world of academia and business. There were scholars who argued that Mayo should take his ideas public and disseminate them for industrial peace (Chase, 1946; Maier, 1948; Selekman & Selekman, 1947). In short, scholarly brilliance was once a function of effectively addressing the intelligent public rather than writing tomes that few individuals read.

Considering this, Mayo was a dynamic individual who tried to share his research with businesses and impact managerial practices.

Motivation. Mayo argued that motivation was more than economic self-interest (Mayo, 1933, 1945). In fact, he stated that attitudes and relationships are key motivators at work (Mayo, 1945; Whyte, 1969). Critics have scoffed at this assertion claiming that increases in production were the result of extra monetary pay (Bolton, 1994; Locke, 1982; Roy, 1952). One of the critics, Locke (1982), noted that most of the contention between labor and management had to do with monetary issues. Many scholars have long demonstrated the importance of money at work.
(Peach & Wren, 1991). In fact, even those researchers who criticized monetary motivation, such as Pfeffer (1998), included monetary incentives in their conceptual framework. Some critics even noted that Mayo got the Hawthorne Studies wrong and that it was monetary factors that lead to increased production (Locke & Latham, 1998). Based on this, it would seem that Mayo indeed was wrong about non-monetary factors impacting productivity.

Yet, Mayo was not just focused on traditional monetary motivation of employees’ performance. Rather his focus was on “spontaneous cooperation” (Homans, 1949a, 1949b; Whyte, 1969), the idea that two parties can exchange without monetary incentives being present (Homans, 1961). Mayo (1933, 1945) was correct that without some shared guides, culture or ritual, exchange between parties would not be able to occur. Although sometimes not clearly stated, Mayo’s ideas impacted research in the area of social exchange (Homans, 1984). For example, Mayo anticipated the leader member exchange concept of the social exchange framework (Crapanzano & Mitchell, 2005). He was also quite correct that workers’ attitudes, such as job satisfaction, can lead to higher levels of job performance (Judge, Thoresen, Bono, & Patton, 2001). In addition, Mayo argued that people could find fulfilment at work both socially and from the work itself. In doing so, he anticipated many of the work arrangements today which encourage workplace interaction (Gillespie, 1991).

For that, Mayo’s work has been praised by both his contemporaries and more recent scholars. For example, Parsons (1940) praised Mayo’s work for providing evidence regarding the “acquisitiveness of a sick society” and pointing to the fact that non-economic motives explain human exchange. Several scholars, while noting the paucity of evidence and a lack of developed themes, praised Mayo for taking the first step in developing a strong ideology of group dynamics and hoping that ideology would serve as a unifying theme in society rather than simple
acquisition (Hughes, 1947; Kalven, 1947). The Hawthorne Studies gained a groundswell of support within industry because they challenged and altered the view that workers were a simple aggregate of individuals motivated only by self-interest (Rogers, 1946).

Recently management scholars have mimicked Mayo by questioning the role that economics plays in the workplace and, by extension, society (Ferraro, Pfeffer, & Sutton, 2005; Pfeffer, 2007) Mayo was one of the first major scholars to question whether or not society should be organized based on the economic principle of acquisition. Like Mayo, today’s scholars argue that organizational performance would be enhanced by increasing intrinsic motivation in the workplace, narrowing the differences between labor and management (Pfeffer, 1998). The Hawthorne Studies would change perceptions in that they encouraged scholars to examine other means of motivation than just monetary factors (Viteles, 1953).

Critics of Elton Mayo stated that he was not concerned with changing workers’ conditions and pay (Gillespie, 1991; O’Connor, 1999). Rather Mayo’s focus was on perceptions of conditions and relative pay. Hence, some scholars have attacked Mayo to be a defender of the status quo. Mayo did note for the need for material improvement (Mayo, 1933: 147), but he also mentioned that modern life, due to a decline of social relationships had seen the rise of non-logical thought. Mayo was correct to note that people can distort both pay and conditions from a cognitive standpoint. This contention is one of the elements of equity theory (Adams, 1963).

Mayo was also correct that social relationships play a key role in the development of perceptions.

Groups. Mayo believed that groups affect personal behaviors and that not all behaviors could be related to economic motivation. He did not claim to be the founder of group effects (Mayo, 1933, 1945). In fact, Locke (1982) pointed out that Taylor anticipated the effects of groups well before Mayo, and Mathewson (1931) reviewed group effects on restricting
production in manufacturing. Therefore, there was nothing new in Mayo’s discovery. What was then Mayo’s contribution to studies of groups? The prime difference between Taylor’s and Mayo’s perspectives on group effects was that Taylor believed that group effects could be undone through incentives and scientific findings. Mayo was not certain about this. Rather he pointed out that people were more irrational and collectivist in nature (Mayo, 1933, 1945). Mayo (1933, 1945) argued that groups’ capacity to communicate effectively promotes “congenial participation in a common task” (Mayo, quoted in Smith 1998: 245). Hence managers could use group interactions to increase production and to maintain order. Furthermore, one of Mayo’s studies of absenteeism and labor turnover in nine aircraft companies concluded that organizations that do not know how to organize for teamwork will be at a significant post-war disadvantage to those that do (Mayo & Lombard, 1944).

As an example, Mayo’s associates, Jerome Scott and George Homans (1947), found that belonging to a work group prevented wildcat strikes during World War II. They noted that workers involved in a conflict would not strike because of their personal relationships with their coworkers.

Mayo did much to anticipate recent debates regarding the role of groups in society, as a means of controlling the worst impulses in society by making individuals responsible for the larger collective (Wilson, 1996). Two political movements, the communitarian left and the libertarian right, complained over the decline of social groups. An example of this tendency is the communitarian movement. Mayo was correct in his prediction that acquisition would lead to a decline of community (Ehrenhalt, 1995). In 1944, a famous historian wrote an article “America, a Nation of Joiners” (Schlesinger, 1944); 50 years later, a sociologist published a

**Elites.** Among other things, Mayo was criticized for his desire to develop the administrative elite of the work environment. So what? Taylor’s system featured elites as well (Bendix, 1956; Cooper, 1962). In fact, Taylor (Cooper, 1962) placed great emphasis on centralization of authority promoting bureaucracy while Mayo placed that authority on the relationship between supervisor and subordinate (Cooper, 1962). Barnard (1938), with his notion of executives, featured elites as well. Many of Mayo’s critics, including Bell (1960), envisioned a society run by disinterested, yet capable elite (Waters, 1996). Bell supported technocrats, especially because they appeared to be above ideology and seemed to work for the common good (Bell, 1960; Jumonville, 1990; Wald, 1986).

Yet, Mayo’s argument was different than Bell’s. First, the elite needed to be in business management as the majority of interactions with others occur in the workplace and individuals have a tendency to take those problems home (Mayo, 1945). Second, he focused on personal skills rather than technical skills in the belief that a manager with social skills will create harmony between management and the managed. Mayo recognized the workplace as a significant determination of quality of life. In fact his focus on relationships (please see Mayo, 1945: 118-119) requires further systematic inquiry.

*Mayo’s misunderstanding of research methods.* Bendix and Fischer (1949) offered some methodological criticism of Mayo that was later supported by other researchers who accused Mayo of misinterpretation and misanalysis of the data (Franke & Kaul, 1978; Locke, 1982; Parsons, 1974). Attempts have been made by Parsons (1974), Franke and Kaul (1978), and Levitt and List (2009) to duplicate Mayo’s findings, in which they failed to do so. In addition,
O’Connor (1999) argued that Mayo based his analysis on political beliefs that were firmly formed before he visited Hawthorne. However, critics cannot agree on what caused higher production. Some argue operant conditioning on the part of management (Parsons, 1974); goal-setting and monetary incentives (Locke & Latham, 1984); and the depression and better management (Franke & Kaul, 1978).

Gale (2004) explained that the methodological challenge of the Hawthorne Studies’ research was caused by the factory’s officials who “approached worker output as if it was a problem in engineering” (p. 445). Hence, the studies were poorly designed and academics were invited in an attempt to interpret results and rescue the project. Indeed, there are several defenses for the Hawthorne methodological approach. Firstly, scholars at the time recognized the following flaws of the study (Muldoon, 2012): the workers were not selected at random (Briefs, 1940; Moore 1947a, 1947b); the sample size was too small (Grodzins, 1951); the sample was just one group (Argyle, 1953); and the study ignored significant portions of the population (Hughes, 1946; Moore, 1947b). Therefore, more work was needed to develop some of the findings. This point was repeatedly espoused by Whitehead, Roethlisberger and Homans (Muldoon, 2012). Scholars at the time understood some of the issues with methods, but still recognized the value of the studies.

Secondly, Mayo himself did not argue that studies proved anything, noting that modern social sciences had yet to produce a body of knowledge needed to deal with changing society (Mayo, 1945). He noted that Hawthorne Studies discussion was merely the first step in developing knowledge to deal with the problems of industrial life. Homans (1949a, 1949b), Mayo’s student, pointed out that all the Hawthorne experiment demonstrated was the complexities of modern work life. Homans (1949a, 1949b) even commented that some of the
researchers believed that the studies themselves were failures. But Homans also noted that the Hawthorne Studies were really studies of light (i.e. those studies to find and develop new hypotheses), which would lead to studies of proof that would test the new hypothesis.

**Originality.** One of the major criticisms leveled at Mayo was that he was not original in his research (Wren, 1987, 2005). The field of study that we now call Human Relations was introduced by Whiting Williams (1918) who stated that it is not solely favorable wages that keep workers at their places, but also “worthwhile work, maximum responsibilities and recognition, interesting committees, absorbing contests, sincere, sympathetic managers and trustworthy friendly foremen” (Williams, 1918:8)

Although Mayo (1933, 1945) did not invent anything new but rather built on the foundation created by others coincides with Gilson (1941)’s review, who argued that the researchers should have been aware of the experiences of others. Wren (2005) has argued that it was the Harvard prestige and not academic contribution that placed Mayo at the forefront of the Human Relations movement which echoes the Bruce and Nyland (2011) statement that it was Mayo’s connections and businesses’ fear of labor that made Human Relations popular.

What are we to make of this criticism? A seasoned student of sciences would note that it is usually not the prime mover that is granted consideration for the discovery, but rather the second or third person (Stigler, 1982). There are many examples illustrating this perspective. In fact, the process is described as "Stigler’s law of eponymy" (Stigler, 1982). Many contributions are old ideas written in striking new way, as in Mayo’s work (Bendix, 1956). In management literature, we now know that Taylor did not invent scientific management, instead he borrowed many ideas for Charles Babbage (Wren & Bedeian, 2009). Yet, Taylor, like Mayo, had a gift for salesmanship and making the right connections (Stewart, 2009). Leave it to Peter Drucker
(Drucker, 1975), who was blackballed by Mayo at Harvard to conclude, “... among the great men of management there are only two pure scholars. Max Weber and Elton Mayo. In this respect, management is indeed no different from medicine or form law, where the pure scholars are commentators and codifiers rather that major originators.” Mayo was recognized because he commentated and codified the knowledge and developed a vast army of researchers to build on his analysis (Muldoon, 2012).

**Integration of Social Sciences**

The Hawthorne studies received a lot of recognition from academics because they appeared to have united the social sciences (Muldoon, 2012). In fact, Hart (1943) noted that the work rivals Gallieo’s in that it opened the opportunity for greater collaboration. Mayo argued that a true social science should consider a wide variety of fields to provide integrated responses to social phenomena. His response to homo economicus was that human activity is more complicated than maximizing utility. Yet, there is nothing to suggest that there is a psychological man or sociological man. An attempt to explain individual’s behavior can be made based on a combination of many disciplines. The more recent work in behavioral economics is an example of this, as is the theorizing and ideas of George C Homans of social exchange (1984) and the work of Steven Levitt (2005), who combined anthropology with economics in groundbreaking research in the economics of drug dealing. Management is, at its best, a field that combines several different perspectives.

**Mayo and Taylor: Friends or foes?** Taylor and Mayo have had an interesting coexistence together. If nothing else, no two men in the literature have been as cited and as misunderstood than these men. The popular literature focuses on the fact that Mayo saved workers from the throes of the autocratic scientific management by allowing them freedom to develop social
relationships at work (Muldoon, 2012). Thus it would appear that these two scholars are foes. Apparently, the Taylor society did not hold Mayo in high regard (Bruce, 2015). Yet, Taylor recognized the need for relationships and Roethlisberger (1948) had kind things to say about Taylorism and viewed Human Relations as an extension of Taylorism. Mayo (1945: 69-70) recognized (and Taylor would probably recognize) that the three persistent challenges in industrial civilization are the following:

1. "The application of science and technical skill to some material good or product.
2. The systematic ordering of operations.
3. The organization of teamwork—that is of sustained cooperation."

Taylor’s focus was more on the first two issues, with less emphasis on the second (Wren & Bedeian, 2009). Taylor dealt with the issue of the organization of teamwork through education of the workforce and through higher pay. The difference between Taylor’s and Mayo’s perspectives was over pay as a motivator. The primary assumption of Taylor was that of the rationality of a worker, namely the drive for self-improvement. Yet this concern was not the centerpiece of Taylor’s work and thus he made an assumption that a psychologist, would not have made.

Mayo ignored the first two issues listed above and developed an approach to analyze the teamwork. Mayo’s assumption that the workers were irrational precluded the fact that workers could ever totally buy into a system based on science. In addition, even if such a system existed it could not consider every single contingency. Taylor overestimated the ability of planners to plan. Only through a system that encouraged “spontaneous collaboration” could workers achieve “sustained cooperation.” Mayo was unclear what the system was, but pointed out that social skills on the part of management were a necessity in working with groups, although he did not elaborate on what those specific social skills were (Mayo, 1945; Mayo & Lombard, 1944). Yet Mayo lacked an overall structure to provide an answer to both. That answer would come from
Peter Blau and George Homans (Blau, 1964; Homans, 1961). Therefore, what Mayo sought was to extend Taylorism to handle the organization of teamwork. In fact, modern high performance work systems combine the factors of both Mayo and Taylor.

**Mayo’s Students** There are three general ways to impact development of science. First, write a seminal book that develops a theory that will define the field for a generation. Second, develop a brilliant research topic. The third way to influence the field is to produce many great students (Higham, 1960). Mayo chose the third option. In fact, Roethlisberger (1977) and Homans (1984) noted that Mayo’s greatest influence was through his relationships and teachings. Homans, Roethlisberger, Scott, George Lombard, Benjamin Selekman, Abraham Zaleznik William Foote Whyte, and Lloyd Warner were all students of Mayo. He also influenced, through his personal magnetism, Henderson and Parsons. In fact, Talcott Parsons was greatly influenced by Mayo because Mayo introduced Parsons to the work of Freud (Trahair, 1984). Mayo also had connections to work completed at both the University of Chicago and Cornell that researched work groups. In turn, Mayo’s students also produced a generation of brilliant students. Although more work is needed to empirically demonstrate this, it is safe to say that influencing professors have a major impact on a field or, in Mayo’s case, several different fields (Whyte, 1956). His students tended to settle at important places, thereby increasing his influence. In fact, the two most cited sociologists of the 1960s, Parsons and Homans were students of Mayo and that was from a field that held Mayo in low regard (Muldoon, 2015).

Mayo was a skilled mentor for two reasons. First, he had a brilliant, well-read mind. An analysis of the footnotes of Mayo’s books reveals that Mayo was an avid reader. He was able to read Janet and Durkheim in French—better than some of his critics thought he could. Second, Mayo aided brilliant but wayward students. Mayo had a real therapeutic gift, in that he
understood how people thought and how to provide them with ways to overcome their problems (Trahair, 1984). This gift, along with his knowledge base, caused people to gravitate towards him and increase his influence as a mentor (Trahair, 1984). His influence was as much personal as it was scholastic.

His two most famous students, George Homans and Fritz Roethlisberger, best demonstrate his influence. Homans, the great-great grandson of John Quincy Adams, the sixth president of the United States, and great-great-great grandson of John Adams, the second president of the United States, was born in Boston in 1910 in the locally famous medical family. Yet, his autobiography had the sense that he felt he had failed to match the greatness of his family (Homans, 1984). George Homans wanted to be a poet but he failed at that; he wanted to be a newspaper man, but did not succeed at this either (Homans, 1984). Instead, he became a great sociologist. His initial mentor, L.J. Henderson, sent him to Elton Mayo for guidance. The sociological field owes Mayo a great debt for training Homans. Mayo provided Homans with a sense of direction and, during Homans time as a Lowell Fellow, encouraged him to read widely in the social sciences—something that Mayo himself did (Homans, 1984). Homans’ research led to the establishment of Social Exchange Theory and Leader Member Exchange (LMX) Theory. Mayo’s influence on Roethlisberger was just as salient. Roethlisberger failed as a philosophy and engineering student (Gabor, 2000). Yet, Mayo provided him with a sense of direction. His influence on others was profound—a remarkable influence given that Mayo did not view himself as an academic.

Mayo’s performance as a mentor warrants a comparison with Arthur M. Schlesinger, Sr. The senior Schlesinger wrote arguably the most original dissertation of the first half of the 20th century in history (Brogan, 1969). However, later, when he became a professor of history at
Harvard, his scholarly output diminished there (Schlesinger, 2000). Nevertheless, he had a major impact on the field by producing, what has been called, the greatest collection of PhD students in history (Higham, 1983). These students were trained in social history and made notable and lasting contributions to the field, in such areas as cities, African Americans, women, immigrants, ethnic groups, and ideology in American life (Schlesinger, 1963). The field of history would be radically different if Schlesinger had not been offered the job at Harvard, because he would not have produced as many students. Similarly, it is not difficult to imagine that management would have been different if Mayo had not immigrated to the United States. For instance, Viteles noted that scholar’s interest in contextual motivation stemmed from Hawthorne (Viteles, 1953). Mayo trained the scholars who would continue the Hawthorne approach to motivation and Mayo stressed that the Hawthorne Studies be published (Smith, 1998).

**Losing a Cheer** Mayo loses a cheer because he did not produce the “big book” which defines the field and his career. His contemporaries, including Chester Barnard (Barnard, 1938), produced books that redefined their fields. Mayo failed to do so. He even failed to produce the most famous and well-read book on the Hawthorne Studies themselves. His initial fragmentary book on the Hawthorne Studies started out as a Lowell lecture. It was very well received and was considered a brilliant start of a promising new approach to management. Yet, it never blossomed into an important book. In comparison with other Lowell lectures, Barnard’s (which became the Functions of the Executive), Schumpeter’s (Capitalism, Democracy, and Socialism), or Schlesinger Jr.’s (the Pulitzer Prize winning The Age of Jackson) works, Mayo’s book appears less developed and more fragmentary than paradigm shifting.

Mayo had the unique ability to raise brilliant questions for later researchers to develop, but many critics noted that Mayo lacked follow through (Elliott, 1934; Kornhauser, 1934). This
was not an uncommon concern regarding the work of Mayo (Whyte, 1956). Nevertheless, Whyte, Homans, Warner, and even critics like Moore, would limit and redefine the original research of the Hawthorne Studies. Therefore, rather than viewing Mayo’s comments as being studies lacking substance, flawed, or overly normative, we should view Mayo’s comments as encouraging scholars to redefine their field. His influence would have been more apparent had he produced the famous “big book” on his subject or if he had developed his ideas more fully and engaged scholars to a greater extent.

If Mayo did not concern himself with scholars, then who was his main audience? Generally speaking, it was with industrial elites and managers. Industrial peace was a major concern in American life from 1933 until 1947 because of the major upheavals brought on by the depression and World War II. Mayo’s work received notice in the popular press for his advocacy. The article in Reader’s Digest (Chase, 1941) would play a key role in the popularity of Management and the Worker (Gillespie, 1991). Drucker was one of those individuals who admired Mayo’s contributions during Mayo’s life (Drucker, 1946). In short, Mayo addressed executives and other practitioners; he was less concerned with scholars or academia.

Despite being a founding father of industrial sociology (Hughes, 1958; Miller & Form, 1951) and a key contributor to motivation research (Locke & Latham, 2004; Viteles, 1953), Mayo falls significantly short as a theorist or researcher. However, he was neither a researcher nor a theorist. Mayo was a critic, someone, who generally functions as a public intellectual criticizing business practices and social science theory. If we look at Mayo’s work in this light, he appears to have made a notable contribution. It seems that his contemporaries had a notion of this and evaluated him accordingly. When Mayo died he was compared to both Dewey and Veblen (Smith, 1998). The comparison with Dewey seems farfetched, as Dewey was an
important contributor to education, liberal philosophy, and pragmatism. The comparison with Veblen seems more apt. Like Veblen, Mayo criticized American life based on acquisition. Like Veblen, Mayo lived a disorganized social life and was an outsider. And like Veblen, Mayo is now more known for his criticisms than his theories.

How do we summarize Mayo’s contributions? Mayo has been called the father of industrial sociology and organizational behavior (Roethlisberger, 1977). Such a statement is ahistorical in many ways and is backwards looking rather than being historical (Peltonen, 2015). Nor could Whiting Williams be considered the father of industrial sociology and organizational behavior. In fact, industrial topics had been a major topic since the commencement of sociology in the United States. What Mayo did do was to focus research in such a manner that the behavior at work became dominant the focus of industrial research. Mayo also demonstrated that motivation was a complex matrix of monetary and non-monetary factors. He also provided an understanding that monetary factors have their limits.

CONCLUSION

Classic contributions to social sciences offer lessons years and decades after their initial publication (Brannigan & Zwerman, 2001). Although Mayo did not create a body of knowledge nor a lasting theory and his work was fragmentary and developmental (Homans, 1949), we argue that Mayo should be considered first and foremost a critic of modern industrial life. He stimulated scholars and practitioners to develop better strategies to relationships with workers (Smith, 1974). Like many others of his generation, Mayo was concerned with the emergence of the new industrial order and how this order would displace the old world. Unlike others of his generation, he did not believe in the establishment of the New Deal broker state to guide society. The best way to describe him would be reactionary, but even then, he wanted to prepare the new
emerging elite to act and function like the old elite that he grew up with. In other words, he wanted businessmen to act more like Henry Filene than John D. Rockefeller.

Mayo was an important figure. His work on the Hawthorne Studies, namely his interpretation of the data and the general insights, continues to inform management theory and practice. According to Brannigan and Zwerman (2001), the Hawthorne Studies served as “a clue to social transformation” (p. 59) when the efficiency of technical engineering is linked to human resources. It would be inconceivable to teach a course on Organizational Behavior and not mention motivation, spontaneous behaviors, stress, and the influence of groups (Smith, 1998).

Mayo is an important figure in the establishment of these concepts. Motivation remains the most researched and debated aspect in management. Mayo was not the first scholar to think about motivation, but his contribution refined the field. No longer would scholars consider motivation to be an aspect of financial rewards alone. Belonging and other intrinsic factors play a role in determining motivation in the work place. Scholars would research issues such as fatigue and stress with a focus on social interactions due to Mayo’s influence.

This paper does not delve into how the Hawthorne Studies changed social science or Mayo’s role in the Hawthorne Studies. Smith (1998) argued that without Mayo, the Hawthorne Studies would never have seen the light of day. We agree with this assessment and that without Mayo’s criticism and support of his students, the field of management would be vastly different than it is today. Mayo’s criticism and social capital altered the field by stimulating researchers to go beyond what was previously conducted and thought. As such, Mayo warrants inclusion with Hugo Munsterberg, Taylor, and Barnard as great managerial thinkers and pioneers of applied psychology. Nevertheless, Mayo deserves to lose a cheer because he did not produce the seminal book. Hopefully, this paper will begin the reassessment of Elton Mayo.
References


Table 1
Areas of Reassessment

<table>
<thead>
<tr>
<th>Topic</th>
<th>Criticism</th>
<th>Primary Contention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Politics</td>
<td>Mayo argued in favor of the upper class.</td>
<td>While Mayo accepted certain funding, this is a misconceived notion. In fact, Mayo was considered by many as opposed to government.</td>
</tr>
<tr>
<td>Workers</td>
<td>Mayo overlooked worker radicalism.</td>
<td>Although Mayo discouraged worker radicalism and generally blamed it on poor management, he understood the nature of this phenomenon.</td>
</tr>
<tr>
<td>Advocacy</td>
<td>Mayo was more interested in spreading ideas than he was in researching them.</td>
<td>Mayo’s advocacy was in line with contemporary scholars of this time period and he attempted to put his research into practice by informing the public and management of the results.</td>
</tr>
<tr>
<td>Unions</td>
<td>Mayo was not fond of unions.</td>
<td>Mayo was skeptical of unions but this was quite common with many scholars of the time. He wrote little on unions and thus it is unclear where this criticism was founded.</td>
</tr>
<tr>
<td>Originality</td>
<td>Mayo’s ideas were not new to the field.</td>
<td>Critics finding Mayo’s ideas unoriginal are overlooking the substantial incrementalism of his work in human relations; we build on the shoulders of the giants that come before us.</td>
</tr>
<tr>
<td>Motivation</td>
<td>Increased productivity was simply the result of increased pay.</td>
<td>Mayo was an early mover on spontaneous cooperation, leader-member exchange, and job satisfaction. While compensation matters, so did his ideas on other motivators.</td>
</tr>
<tr>
<td>Groups</td>
<td>Akin to originality, Mayo added little to group research.</td>
<td>Mayo understood bounded rationality, that people often act irrationally, and that economic incentives may not always dissolve group ties.</td>
</tr>
<tr>
<td>Research Methods</td>
<td>Mayo misinterpreted and misanalysed data.</td>
<td>Some studies were designed outside of Mayo’s control. In addition, he did not make claims that these studies were evidence.</td>
</tr>
<tr>
<td>Elites</td>
<td>Mayo helped develop the administrative elite.</td>
<td>Mayo placed emphasis on supervisor and subordinate relationships and understood that employees could gain quality of life through work.</td>
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Bridging the Academic/Practitioner Gap: Building Strong Community Relationships to Build Stronger Research and Teaching

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Abstract

Both academic and industry professionals acknowledge the need for partnerships to help bridge the gap between theory and application. This professional development session on local engagement will highlight the commitments, benefits and challenges in creating such a successful partnership. As an exemplar, this session will discuss the current working relationship between University of South Florida (USF) and Tampa Bay Lightning (TBL) including a panel discussion comprised of two USF faculty and two TBL executives along with a tour of the TBL corporate offices. Members from both organizations will share their experience and advice in developing and maintaining strong local engagement.
Many academicians and industry professionals have acknowledged the need to develop partnerships between academia and corporations. Both sides have stated the importance of these relationships and the mutual benefits gained including, but not limited to, development of research, practitioners’ insights, student learning and employment. However, connecting scholars and professionals in long-term relationships can be a difficult and daunting task (King, 2013). Thus, the purpose of our local engagement session is to present a case study of a successful, industry immersion program between the University of South Florida (USF) and the Tampa Bay Lightning (TBL) and to provide best practices, challenges, and recommendations for academic and industry professionals.

The local engagement session will comprise of two components. First, a panel discussion moderated by a USF faculty will be comprised of two USF faculty, who work within TBL on a weekly basis, and two TBL executives who are instrumental in the success of the partnership. Within the discussion, we will detail the development of the partnership, the commitments of both partners, the mutual benefits for both partners, and the importance of trust. Second, a tour of Amalie Arena, where the TBL compete, and the TBL corporate offices will be provided with key remarks from the TBL leadership team and the USF students, who directly benefit from the partnership. By attending this local engagement session, attendees will be able to see the successful integration of USF within the TBL corporate offices. Depending on the National Hockey League schedule, we propose attendees visit Amalie Arena before a hockey game and potentially purchase tickets to attend the game.

**Tampa Bay Lightning**

The Tampa Bay Lightning (TBL), a professional ice hockey team located in Tampa, FL, is a member of the Atlantic Division of the Eastern Conference in the National Hockey League. TBL is a sport franchise operating under the Tampa Bay Sport and Entertainment corporation which also includes the Tampa Bay Storm and management of Amalie Arena concert and events. Currently, TBL has approximately 150 full-time employees and 200 part-time employees. While under the leadership of owner, Jeff Vinik, and CEO, Steve Griggs, TBL has experienced a transformation of the company brand within Tampa Bay. In 2016, the TBL was ranked as the No. 1 sports brand in the United States by ESPN and one of five finalist for the Sports Business Journal’s Sports Team of the Year. In 2012, USF and TBL partnered to create a graduate program that would include the blending of the classroom and the workplace across numerous corporate partners in the Tampa Bay area.
Partnership Commitments

For any partnership to thrive, each partner must commit to the endeavor. The following table provides the partnership commitments for the USF and TBL.

<table>
<thead>
<tr>
<th>University of South Florida</th>
<th>Tampa Bay Lightning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct research projects</td>
<td>Donate to the program</td>
</tr>
<tr>
<td>Provide multiple graduate student workers</td>
<td>Provide time from c-suite executives</td>
</tr>
<tr>
<td>Consult on internal research projects</td>
<td>Access to data and personnel</td>
</tr>
<tr>
<td>Leadership development programs</td>
<td>Hire students</td>
</tr>
<tr>
<td>Diversity initiatives</td>
<td>Residency/internship opportunities</td>
</tr>
<tr>
<td>Mentor executives</td>
<td>Mentorship to students and faculty</td>
</tr>
<tr>
<td>Conduct experiential learning projects</td>
<td>Assist in teaching classes</td>
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Mutual Benefits

Collaborations between academia and industry should emphasize the mutual outcomes needed for all parts to be satisfied. Conversely, when the outcomes do not match, the production of the projects are not positive (Smith & Smith, 2010). Currently, within our existing partnership, numerous beneficial outcomes are attained. For USF, they benefit through research and development of knowledge, experiential learning opportunities for students, and professional growth for faculty and students. For TBL, they benefit through faculty research knowledge, assistance with solving problems, productive student work force, and professional growth for TBL staff and executives.

Challenges to Developing Successful Partnerships

Challenges are evident on both sides of the partnership when academia and industry connect. Within the specific sport industry, the barriers associated with collaboration on research projects tend to be primarily influenced by transactional barriers (Zaharia & Kaburakis, 2016). These challenges (Weisz & Smith, 2005) include:

- The egocentric views and attitudes of faculty and industry executives
- Faculty are not rewarded for their time spent connecting with the industry
- The tenure process does not encourage faculty to engage with industry to conduct academic research collaborations
- Professionals lack connections with academia
- Professionals may not understand the inter-workings of academia

From the perspective of industry partners, Patrick et al. (2009) identified five major challenges related to work intergraded learning (WIL) between academia and industry partners including:

- Ensuring equity and access for all students (e.g., international students)
- Managing expectations and competing demands to ensure understanding and commitment by all parties
- Improving communication and coordination
- Ensuring worthwhile WIL experiences by incorporating projects into the curriculum
- Adequately resourcing WIL including workload for faculty, cost to industry partners, and flexibility of university timetables

Success while Overcoming Challenges

The challenges associated with a successful partnership between academic and industry professionals can definitely seem immense at times (King, 2013). The following tactics have provided the framework for the successful case study of USF and TBL.

The following four fundamental approaches have been the basis of the success for the partnership:

- Trust: Through completing successful smaller projects and extending the offer to help as needed, the TBL executive team and USF faculty gained incremental levels of trust. Thus, the USF faculty were subsequently asked to collaborate on larger scale projects, which enabled them to become more fully integrated into the TBL.
- Transparency/Communication: USF was able to partner with the TBL, because of the leadership of both organizations. Continuous communication and transparency at all levels of the organization influenced the success.
- Relationships: As with all great businesses and universities, the relationships between people are the factors that drive success. The USF and TBL partnership has grown and developed over the past five years based on a continuous approach that both parties are here to help each other succeed and reach their respective goals.
- Students: Bottom line, the students are at the core of the partnership. USF wants students to learn and grow professionally, and TBL wants to provide a place where this can happen in a corporate environment. The partnership provides an opportunity to develop future generations of sport industry professionals.

Overall, when academic and industry emersion programs are done correctly, trusted relationships and partnerships are built. Everyone gains a breadth and depth of knowledge and opportunities for personal and professional development.
References


THE POWER OF BAYESIAN VALIDATION IN PERSONNEL SELECTION

One of the greatest decisions discussed in economics, management, and work psychology is the allocation of organizational power and resources through the appointment of positions, titles, and compensation. Effective data-driven decisions in the placement of personnel in an organization are often accomplished through the implementation of standardized selection procedures that predict later work performance, enabling organizations to maximize personnel effectiveness. Thus, evidence that a particular selection procedure accurately predicts later performance is essential when choosing and implementing selection procedures. One of the key methods for providing validity evidence is to examine the empirical relationship between predictor (selection measure) and construct (i.e. work performance). Traditionally, this relationship of criterion-related validity has been established through local studies or meta-analyses. Bayesian methods provide a way to combine the two and have been shown to be the more accurate than frequentist inferential approaches in a majority of situations (Newman, Jacobs, & Bartram, 2007). Another added benefit of the Bayesian methodology is increased statistical power, or ability to detect a true effect, in a local study, which no longer requires the large sample size that traditional local studies need (Brannick & Hall, 2003). While the effect of sample size in other common analyses has been well documented (Kelley, 2015), very little research (despite the recognition) has studied the effect of sample size in Bayesian validation. The current research addresses this gap, seeking to investigate the utility of combining meta-analytic results with a local study via the Bayesian methodology.

Specifically this study examines the resultant "statistical power" or ability to detect a true effect when one exists that Bayesian methods offer verses the statistical power of traditional local validation studies. Secondly, by simulating some of the complexities that may arise when
local studies are derived from populations that actually have no true relationship, this study seeks to determine the smallest local sample needed to challenge a wrongly imposed meta-analytic prior. Lastly, by utilizing common constructs, analyses, and scenarios that practitioners and researchers are familiar with, this study demonstrates fundamental Bayesian principles in an applied setting, lowering some of the obstacles to the adaptation of Bayesian methods.

**Selection Test Validity**

Personnel selection is the systematic process of hiring and promoting personnel with the intention to predict future work performance. The choice of selection measures is ideally based on an understanding of the objectives for a test’s use, job information, and test validity (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education, 2014). Commonly used evidence-based selection tests include cognitive ability tests, personality tests, structured interviews, etc. (Schmidt & Hunter, 1998). The degree that a selection method is a valid predictor of work performance is determined by the data gathered that defends the various inferences demanded of a test (Lawshe, 1985, p. 237). Validity, according to the 2014 Standards for Educational and Psychological Testing, is “the degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of tests” (p. 11).

Criterion-related validity evidence is the most historical type of validity evidence (Sackett, Putka, & McCloy, 2012) and can be “defined in terms of the correlation between the actual test scores and the ‘true’ criterion measures” (Cureton, 1951, pp. 622–623). Scholars have clearly articulated that there are multiple routes to providing evidence of this predictive hypothesis (Binning & Barrett, 1989; American Educational Research Association, American Psychological Association, and National Council on Measurement in Education, 2014), which
Bayesian Validation

Can be grouped into general categories ranging from concrete to abstract (Landy, 2007). The most concrete criterion-related validity evidences are local criterion-related validation studies, which include the specific predictors used locally as well as the local job criteria (Campbell & Knapp, 2001; Sussmann & Robertson, 1986; Van Iddekinge & Ployhart, 2008). At the other end of the spectrum, more abstract evidence is meta-analytic validity generalization (VG) studies which may or may not include the specific selection measures used locally, nor the local job criteria (McDaniel, 2007; Pearlman, Schmidt, & Hunter, 1980; Schmidt & Hunter, 1977).

A Bayesian approach to validating employee selection procedures provides an empirical method of combining the strengths of validity generalization with needed evidence gained from a local study (Brannick, 2001). Recent research has demonstrated that Bayesian methods offer the highest degree of accuracy in a large array of situations (Newman et al., 2007). Bayesian statistics improve local validity estimates by incorporating information from other similar studies, yielding local validity efforts that are more accurate in that \( \hat{\rho}_i \) is closer on average to \( \rho_i \) than would be the case if the validity generalization information was ignored and \( \hat{\rho}_i \) was based solely on local study results (Murphy & Newman, 2003). In addition because information is additive, the confidence intervals for \( \hat{\rho}_i \) based on Bayesian estimates will be smaller, and thus tests of significance of the local \( r \) will be more statistically powerful (Brannick & Hall, 2003).

Specifically, Bayesian methods comprise two main inputs for information: the prior \( P(\theta) \) and the likelihood \( P(Y|\theta) \), which are mathematically combined to produce an informed probability distribution of the parameter, the posterior \( P(\theta|Y) \). A prior consists of past research, beliefs, or knowledge. Additionally, levels of certainty can be modeled in the prior, usually represented by width and height of a distribution. If one is uncertain about a particular
parameter, an uninformed prior can be used, (i.e. a flat distribution). Regardless of level of prior
knowledge, the Bayesian approach provides a formula to incorporate the prior and the likelihood:

$$ P(\theta|Y) = \frac{P(Y|\theta)P(\theta)}{P(Y)} \quad (1) $$

In terms of validity efforts, the prior is the estimated population parameter ($\rho$) and the
uncertainty of such a parameter is $\sigma_\rho$, or the standard deviation that $\rho$ exhibits. The term
“likelihood” in the Bayesian terminology represents the observed relationships garnered from a
local sample (i.e. a traditional local study). The Bayesian formula is used to mathematically
combine the population $\rho$ and $\sigma_\rho$ with the local validity estimate ($r$), weighing each based on
sample size and level of uncertainty (a larger sample size, or lower variance cause the likelihood
to be weighted higher) to produce the most accurate, current, state of knowledge, the posterior.

Bayesian methods offer a natural theoretical framework for continual validation. The
Standards for Educational Testing and Measurement (2014) state, “it is commonly observed that
the validation process never ends, as there is always additional information that can be gathered”
(p. 21) and that a sound validity argument “encompasses evidence gathered from new studies
and evidence available from earlier reported researched” (p. 21). Bayesian methods offer a
coherent, mathematical, succinct method for representing this continual integration of
information and have been identified as the best avenue to improve validity generalization
research and practice (Murphy & Newman, 2003).

Sample Size in Bayesian Estimation

It is acknowledged that a smaller sample size is required with the informed Bayesian
method due to the information of the meta-analysis imposed on the posterior validity coefficient
(Brannick, 2001; Kruschke, 2014). Newman et al. (2007) go so far as to suggest that it is rarely
optimal to use a local validation study in isolation in terms of accuracy. Brannick and Hall
(2003) discuss establishing sufficient statistical power, or the ability to detect a true effect, via the Bayesian methodology, stating that Bayes can be useful to bolster weak local empirical validation efforts, or prove if and when local validation studies are needed. But what sample size is needed when using the Bayesian framework? Brannick and Hall (2003) provided a formula that may approximate the value, but note that one should not use the formula for local samples consisting of less than \( n = 100 \) due to the inclusion of dis-attenuation methods (Bobko, 1983; Brannick & Hall, 2003). Similarly, all formulas used to garner the suggestions made by Newman et al. (2007) were based on local samples of \( n = 100 \) in all situations. Meanwhile, frequentist solutions as to what sample sizes are necessary to gain sufficient statistical power are well documented (Kelley, 2015; Kelley & Maxwell, 2003; Murphy, Myors, & Wolach, 2014). When considering the benefits of applying a meta-analytic prior correctly to a local situation, what sample size is needed? Specifically, given a population parameter of a validity coefficient gathered from meta-analysis, what local sample size is needed for a practitioner or researcher to be reasonably confident in obtaining evidence that a selection procedure is valid predictor of job performance or a similar workplace criterion?

**Research question 1.** What is the minimum sample size needed to establish criterion-related validity evidence with a common selection measure with Bayesian methods?

**Sample Size Needed to Reject a Misapplied Prior**

Given the continual nature of gathering evidence for a claim of test validity (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 2014), a reasonable subsequent question is what if a meta-analytic prior is misapplied to a local context? As practitioners, researchers, and legal authorities alike evaluate the potential strengths and weaknesses of using a Bayesian validation framework, they
will likely be skeptical of the possible misuse of meta-analysis priors in local contexts. As with any application of validity generalization as evidence, the question quickly becomes one of comparability between the local situation and the studies included in a meta-analysis: (a) that jobs are similar, (b) that predictor constructs and measurements are similar, and (c) that criterion constructs and measurements are similar (Brannick & Hall, 2003; Sakkett et al., 2012). Evidence is generally needed to obtain a link between the observed predictor measure and the latent predictor domain and similar for construct measures and latent domains (i.e., Linkage 2 and 4 in Binning & Barrett, 1989). Evidence for these relationships can include empirical analyses (e.g., CFA) and professional judgments. While these avenues of evidence are beyond the scope of the current study, a possible empirical method to prove that a local sample size was strong enough to disprove a wrongly imposed prior would be to garner a local sample size that holds enough weight to disprove a wrongfully applied meta-analytic prior. Thus, the second goal of the current study is to determine what sample size is needed to disprove a wrongly applied meta-analytic prior.

**Research question 2.** What is the minimum sample size needed to disprove a wrongfully imposed meta-analytic prior when the true local population validity coefficient is 0?

While the patterns of these relationships can be approximated by anyone with basic knowledge of the principles of Bayesian methods, the purpose of this study is to empirically demonstrate situations that an I-O practitioner or researcher may experience. For example, general rules of Bayesian statistics state that as a local study’s (likelihood) sample size increases, the relative influence of the meta-analytic prior on the posterior likelihood is reduced (due to the increased sample size, decreased sampling variance, etc.). As information is gained, past information is challenged and loses weight. Also, the wider the population variance ($\sigma_p$), the
more weight the local validation study has (Newman et al., 2007; Kruschke, 2014). While these general rules offer guidance, different selection predictors with different population variances will require different minimal samples to prove or disprove them. To address the above research questions in a manner that is useful, three common selection tools (cognitive ability, structured interviews, and conscientiousness) were simulated for each sample size offering guidance when it comes to the use and validation of these selection procedures.

**METHOD**

To estimate population validity coefficients, Kuncel, Hezlett, and Ones’ (2004) recent meta-analysis modeling Miller Analogies Test (MAT; an educational measure of cognitive ability) to job performance was used for cognitive ability ($\rho = .41; \sigma_\rho = .12$), Huffcutt and Arthur’s (1994) meta-analysis was used to model the relationship between structured interviews and job performance ($\rho = .57; \sigma_\rho = .28$), and Barrick, Mount, and Judge’s (2001) meta-analysis for conscientiousness to job performance ($\rho = .23; \sigma_\rho = .10$). Simulations were then conducted for each of the three predictors. First populations of predictor and criterion scores with relationships that mirrored those of the meta-analysis were created. To address research question 2, examining a wrongfully imposed meta-analytic prior when the true local population validity coefficient is null, local samples for each sample size were drawn with a correlation of $\hat{\rho}_l \sim \text{Normal}(0,0)$; the exact sample size was generated for each simulation, as there is no variability between the local sample and the population.

For research question 1, after a population was created for each construct, the following steps were performed for each sample size tested (5, 10, …, 100). One thousand random samples were drawn for the specific $n$, without replacement, from the population. To answer research question 2, the local sample, instead of a random draw from the larger population, involved a
sample with a 0 validity coefficient. Since the local sample has no variability, a single analysis was run for each sample size for each construct. In order to perform the Bayesian analysis, Markov Chain Monte Carlo (MCMC) sampling was performed for each local study.

**Markov Chain Monte Carlo**

The size of the parameter space of a model, which includes the joint distribution of all possible parameter values, increases exponentially as the number of parameters in a model increases. To create the full posterior distribution of a parameter, each possible joint combination of parameters must be examined. Computationally, this poses an issue: it becomes impossible to evaluate the posterior distribution of a parameter as models increase in complexity (Kruschke, 2014). Therefore, in Bayesian analysis, a method beyond simple formulas is required to approximate posterior distributions.

Markov Chain Monte Carlo (MCMC) sampling is the leading method of performing Bayesian inference due to its power in estimating the posterior distribution. The main idea is to estimate the posterior distribution through simulation: drawing thousands of samples from the posterior distribution, and then observing the distribution of the samples to make statistical inferences. Gibbs sampling was used to make the series of draws, which is based upon the idea that each sample drawn is dependent upon the samples from past iterations (the dependence of samples follows a Markov distribution; hence the name Markov Chain Monte Carlo). After a “burn-in” period, these samples converge from a random initial point to the posterior distribution of the parameter. The distribution of these observations is then used to perform the analysis. Thus there is a distribution of likely values for each parameter in a given model. The free and open source JAGS package (short for “Just Another Gibbs Sampler”) was utilized in R to perform these simulations.
The Bayesian Model

The distribution of posterior rho was modeled as a bivariate-t distribution, examining job performance and a single predictor variable. A bivariate-t distribution is advantageous over a strictly normal distribution for two reasons: it is not as restrictive and it is more robust to outliers. For research question 1, the t-distribution is advantageous because the Bayesian confidence intervals are slightly wider with the t-distribution than if it was restricted to the normal distribution. For research question 2, this method is advantageous over restricting rho to a normal distribution because, as the local study which has a rho of 0 and the prior does not, the t-distribution allows for some outliers without shifting the center of the distribution as substantially as would occur in a normal distribution. This distribution is used without any loss of information and will approximate the normal distribution if the local sample models that. Since the purpose of research question 2 is to disprove a wrongfully applied prior, using a normal distribution would accomplish this faster (at a lower n), thus the results are a more conservative estimate of the Bayesian framework. The model used was

\[(x_i, y_i) \sim \text{Bivariate } - t((\mu_x, \mu_y), \Sigma, \nu) \tag{3}\]

in which \(x_i\) is a predictor and \(y_i\) is job performance, \(\mu_x\) and \(\mu_y\) are the mean of the predictor and job performance respectively, \(\Sigma\) is the covariance matrix, and \(\nu\) is a measure of the weight of the tails of the t-distribution. The covariance matrix contains the elements

\[
\Sigma = \begin{bmatrix}
\sigma_x^2 & \rho \sigma_x \sigma_y \\
\rho \sigma_x \sigma_y & \sigma^2_y
\end{bmatrix} \tag{4}
\]

where \(\sigma^2_x\) is the variance of the predictor, \(\sigma^2_y\) is the variance of job performance, and \(\rho\) is the correlation between the two variables. Priors used in the Bayesian analyses were flat for all parameters (uninformed) except for \(\rho\) which was the value from the meta-analysis.
Using the meta-analytic priors, random samples of size $n$ were generated for each iteration, and using MCMC, these random draws are mathematically combined with our priors to simulate the posterior distribution of each parameter. MCMC was performed using two chains (with different initial values for the parameter estimates, from which eventually converge to the posterior distribution), and 10,000 iterations of the algorithm for each chain after a 5000 iteration burn-in.

**Summary Statistics Obtained from Each Local Study**

After a MCMC chain has converged to a posterior distribution, summary statistics are obtained. The following statistics were obtained from each local study: the rho, standard deviation of rho, the upper and lower 95% highest density intervals (HDI) bounds of rho, and the Gelman statistic (a measure of convergence of a MCMC chain, and by extension the validity of the posterior distribution).

To maintain a standard by which to compare the Bayesian methods with, frequentist analyses were performed on the extracted local samples as well. Frequentist analyses were calculated by taking the coefficient from a simple linear regression from the predictor to the criteria observed in the random sample. Significance testing was performed at the 0.05 level to determine if results were statistically different from 0 for the sample observed. From each sample, the rho, p-value, and upper and lower 95% CI bounds of rho were saved. After all 1,000 samples for a particular sample size were collected, the power for that sample size is approximated as the probability of finding significant results—in this study, the number of samples in which non-zero values were inferred divided by the 1,000 total samples drawn and should generally align with Kelley’s (2015) statistical power calculations.
RESULTS

To address research question 1, a total of 20,000 local studies with sample sizes ranging from 5 to 100 were conducted for each construct. Local samples were randomly pulled from the population which had both predictor and criterion scores. For research question 2, Bayesian analyses with an informed prior were wrongfully imposed on local samples with null validity coefficients with sample sizes of $n = 5$ to 200. Results indicate the sample sizes needed to validate with an informed prior and the sample size needed to disconfirm a wrongly applied prior. A summary of the specific sample sizes needed for both of these cases alongside those needed to reach the 80% threshold to detect a true effect via the frequentist methodology are displayed in Table 1.

Table 2 summarizes the results for cognitive ability, 1000 simulated local studies for each sample size. As expected, rho is more stable via the Bayesian method than with the frequentist method, with the two nearing parity as sample sizes increases. Cognitive ability is unique in its very high validity coefficient ($\rho = .41$) with a relatively low standard error ($SD\rho = .12$). Due to the strength of the prior, even the smallest sample size tested ($n = 5$) provided adequate information to detect a true effect whereas a sample of between 40 and 45 would be required to detect a true effect 80% of the time via the frequentist methodology (Kelley, 2015). Also, all Bayesian local study results at every level of sample size excluded zero from the probable values. Finally, as accuracy is another way to express the statistical power or sensitivity to detect a true effect, the root mean squared error (RMSE) of the local studies’ validity coefficients
versus the true population rho is documented. In the case of cognitive ability, the Bayesian analyses were more accurate at every level of sample size. Results indicate that by using Bayesian methods, one is able to produce valid coefficients at all sample sizes.

Insert Table 2 about here

Table 3 summarizes the results for structured interviews, 1000 simulated local studies for each sample size. Structured interviews displayed an interesting pattern due to the strength of the prior ($\rho = .57$) and the large variability of that prior ($SD\rho = .28$). Because of the large variability, or standard error, around the population validity coefficient, the influence of the prior on the posterior distribution was diminished. Compared to cognitive ability, which had a similarly strong prior but with much less standard error, posterior rho of structured interviews displayed more fluctuation than those of cognitive ability and harmonized with results obtained via the frequentist methods at a much lower sample size (i.e. within .01 $SD$ fluctuation at sample size 55). Similarly, the Bayesian precision or ability to detect a true effect equaled the statistical power that frequentist methods (less than or equal to .01) at a sample size of 60. The real strength of the Bayesian methods applied to such a strong and wide population validity coefficient is evidenced in the lower samples sizes. Specifically, using the Bayesian approach, validation evidence for structured interviews can be garnered at sample sizes as small as $n = 10$. The sensitivity to detect a true effect is much higher at small sample sizes than via the frequentist methods. Similar to the other findings, the accuracy of the informed Bayesian method is substantially greater at small sample sizes and reaches parity with the frequentist methods as sample size increases (note RMSE values in Table 3). To summarize, when validating structured
interviews with an informed prior, Bayesian methods are able to detect a true effect about 85% of the time at small sample sizes (such as \( n = 10 \)).

Table 4 summarizes the results for conscientiousness, 1000 simulated local studies for each sample size. Conscientiousness had a lower validity coefficient (\( \rho = .23 \)) than the other constructs tested but with a tight standard error (\( SD\rho = .10 \)). Consistent with the pattern of the results of the other constructs, the Bayesian methods shrunk the variability of the conscientiousness correlation coefficients. Specific to the research question, even the smallest sample size tested (\( n = 5 \)) provided adequate information to find a true effect size. Interestingly, the ability to detect a true effect via the Bayesian methods actually dips as sample size increases before increasing again with sample size. This is due to the prior having strong weight and as the sample grows it actually increases variability, but that variability lowers again as the local sample becomes more accurate with less sampling error. Also important to note is that conscientiousness results obtained via the frequentist methodology never attain a power level of .80 with sample size \( n = 100 \) or less. Using the framework of Kelley (2015) to determine the necessary sample size to detect an effect size of \( \rho = .23 \) via the frequentist methodology, a sample size of \( n = 143 \) would be required to reach the desired statistical power of .80. Finally, the accuracy of the Bayesian approach is higher than the frequentist approach at all levels (see RMSE values in Table 4).
Results from Misapplying a Prior

Research question 2 examined the sample size needed to disprove a wrongfully applied prior. To answer this question, meta-analytic priors were imposed via the Bayesian framework to local studies with a 0 validity coefficient. With a 0 validity coefficient there is no sampling error; so only one Bayesian informed local study per construct per sample size was necessary. Table 5 summarizes the results of the simulations for research question 2, which documents the sample size at which the Bayesian posterior includes zero in the highest density intervals (HDI) for each construct.

Cognitive ability, which had the strongest prior in terms of its large effect size combined with its narrow standard error, required the largest sample size of a null local study to disprove (i.e. influence the posterior enough to include zero). A sample size of \( n = 140 \) was needed to disprove the strong prior of cognitive ability. Structured interviews, which had a large validity coefficient (larger than cognitive ability) but with a likewise large standard error, allowed the local sample to have much greater impact on the posterior. When misapplying the structured interview prior to a local sample that has a null validity coefficient, the posterior was very responsive to the local sample. Structured interviews required a sample no larger than five to disprove a wrongfully applied prior. Lastly, the personality construct of conscientiousness required a sample of 45 to disprove a misapplied prior.
DISCUSSION

The current study compared Bayesian and frequentist methodologies in obtaining criterion-related validity evidence across three common predictors of employee performance. Through simulating 20,000 local studies randomly pulled from populations for each construct, the first half of the research investigated what sample size is needed to detect a true effect. The second half of the research examined the sample size needed to disprove a wrongfully applied prior in a Bayesian analysis. Results from the current investigation contribute to the literature in both specific and broad ways.

Regarding the more specific contributions, a summary of the specific sample sizes needed to both validate a selection procedure and disconfirm a wrong prior were shown in Table 1. Table 1 also includes the sample sizes needed to gain .80 statistical power with the frequentist method. When comparing these findings side by side, an interesting pattern emerges. Bayesian criterion-related validity evidence can often be established at a lower $n$ than is required with the frequentist method. Additional evidence, using the falsification framework, that a prior is not wrongfully applied, can likewise often be obtained at a smaller sample size than required to reach .80 power with traditional statistics. This pattern is evidenced in all constructs besides cognitive ability (due to the strong relationship with job performance and low standard error). The informed Bayesian methodology seems to have the largest benefits among the weaker relationships. For example, when used to validate conscientiousness the Bayesian approach provided almost double the “statistical power” than did the frequentist methods at the same $n$. Furthermore, weaker effect sizes are more typical in the psychological discipline (Steel, Kammeyer-Mueller, & Paterson, 2015), as it is rare to obtain effect sizes similar to the relationship between cognitive ability and job performance. This capacity of the Bayesian
methods to improve accuracy with a smaller sample size, especially for weaker effect sizes, has several implications for both industry and research, as well as in legal defensibility.

Using the results as benchmarks, small businesses or diverse corporate functions, which do not meet the minimum number of employees needed to prove selection procedures but that still wish to make data-informed decisions, can use the Bayesian framework to gain evidence of the validity of their selection procedures. Similarly, using the informed Bayesian framework, companies using employee affect, engagement, personality, etc. (constructs that have moderate to weak effect sizes with various outcomes) can better use these constructs to optimize for internal outcomes such as team composition, team performance, or team experience, all of which naturally have smaller sample sizes. Overall industry can benefit by using the Bayesian framework applied its people data to make more accurate data-driven decisions.

As long as the case can be made that certain prior information is relevant to the current study, the Bayesian framework offers methods that are more accurate and require much smaller sample sizes than the traditional methods (Brannick, 2001; Brannick & Hall, 2003; Zyphur, Oswald, & Rupp, 2015). Since Bayesian research is not widely embraced in the field, it is recommended to use traditional, frequentist methods side-by-side these more novel Bayesian ones. For a more thorough discussion of integration of these methods into research see the recent special issue published by Journal of Management on Bayesian statistics (Zyphur et al., 2015). Specifically, the results of the current research provide an example of what to expect when using informed Bayesian analysis on common constructs with small sample sizes.

Implications of the current results to the matter of legal defensibility are more complex. While this study is not a defensive answer to the issues faced when defending selection decisions, these results can act as a benchmark for the inclusion of Bayesian methods in future
cases. The most straightforward recommendation of using the Bayesian methods for legal defensibility would be to collect evidence as the pool of job incumbents grow. For example, if using conscientiousness as a selection tool, evidence can be provided that it is a valid predictor of job performance with a local sample as small as \( n = 5 \). Building this type of evidence (as one would also naturally cover in validity generalization) would not hurt a case involving personnel decisions. Furthermore, as the selection tool is continually utilized by a company, additional evidence of its criterion-related validity (i.e., that the informed prior was not misapplied), can be established with a sample size as small as \( n = 45 \). Finally, as the number of job incumbents selected grows, traditional criterion-related validity evidence can be established through a frequentist local study (with an 80% chance of detecting a true effect at \( n = 143 \)).

There are two common arguments against informed Bayesian analysis applied to a legal defense of selection methods. First, some have suggested that Bayesian statistics are too complicated to present in court. Second, others have argued that it is too costly to do these additional analyses. Regarding the first argument that Bayesian statistics are too complex to present in court: are frequentist methods any simpler? What does “confidence interval” actually mean in the frequentist framework? The confidence interval of a given parameter is actually the likelihood that the “true score” fell within the confidence interval if the study were repeated infinitely. Meanwhile, what most researchers thought was the confidence interval, the probability of a particular value, is actually Bayesian. Bayesian methods are more intuitive and maybe easier to explain than the frequentist assumptions (such as sampling distribution). If we have felt comfortable defending selection tests via the frequentist assumptions and methods, we can feel equally or more comfortable via the Bayesian methods. It is well known that court decisions
rarely rely upon criterion-related validity evidence only; any good defense would involve multiple avenues of validity evidence (Sackett et al., 2012).

Regarding the costs of a Bayesian analysis, the open source language R was used for all statistical analyses on computers which ran on free open source operating systems (Linux). The actual analysis used free open source Bayesian software JAGS (Plummer, 2003). Never has it been easier to use these advanced methods. Likewise, using an open source language not only facilitates replicability through its availability to everyone free of charge; it also integrates the analytic innovations of an entire community of researchers who constantly verify each other's efforts. The results of this study attempt to make Bayesian analyses less opaque and more accessible to organizational researchers, enabling us not only to intellectually stand on the shoulders of giants but to do so empirically.

**Limitations**

This study has two main limitations. The first limitation of this particular study is the reliance on a single predictor of job performance. Newman et al. (2007) utilized dual predictors of job performance. While beyond the scope of this study, multiple predictors can be incorporated in the Bayesian framework. Bayesian models are easy to code and compute, and further research would benefit from the investigation of sample size’s effect on more complex combinations of predictors and stages of selection.

The second limitation of the current study was the null local sample used to answer research question 2. Research question 2 investigated the sample size needed in a local sample with a null validity coefficient to disprove a wrongfully applied prior. The null local sample used to answer this question had a validity coefficient of 0 and a standard error of very near 0. A more realistic example would have null local samples with a 0 validity coefficient but also standard
error to more approximate sampling distribution. While beyond the scope of the current study, simulations with more realistic null local validity coefficients were actually conducted by the author. The results included in the paper were more straightforward in addressing research question 2, so these results were retained. An avenue for additional research may be the more realistic situation in which a null local study has some variability in its $r = 0$ validity coefficient.

**Conclusion**

Bayesian methods offer an empirical way to incorporate past information into the current situation. This study demonstrates the effect of applying correct and wrong priors on the validation efforts of employee selection tests. Through simulations of three common employee selection constructs, results indicated that in most cases the Bayesian framework provides precision at sample sizes that are much smaller than those needed to gain statistical power via the frequentist methodology. It is hoped that this research is one small addition to the conversation as we begin to consider the incorporation of Bayesian methods into our discipline.
REFERENCES


Table 1

Comparison of Validation Techniques

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Notes: n to Validate is the sample size needed to get 80% of local studies to exclude 0 from 95% HDI; n to Disconfirm is the null local sample size needed to disconfirm a wrongfully applied prior; n to get .80 is based on Kelley’s (2015) calculation of what sample size needed to detect an effect size of that magnitude.
Table 2

Cognitive Ability Simulation Results from 1000 Local Samples: Correctly Applied Prior

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Bayesian Posterior Results from Misapplied Priors with Null Local Studies

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NURSE RELATIONSHIPS DURING A TIME OF TRANSITION: LMX AND TURNOVER INTENT

Nurses during a time of transition: LMX and turnover intent

Abstract

Prior to, and particularly since, the passage of the Affordable Care Act in 2010 in the United States, healthcare organizations have been in a state of transition. As healthcare organizations seek to provide high quality care for patients while facing increasing costs and reimbursement pressures, health care professionals find themselves caught in the middle. This paper looks at a nurse’s intention to leave their organization through the lens of Leader Member Exchange (LMX). By using the nurse-physician team, LMX was used to predict intention to turnover. This relationship was strengthened when trust in the physician was applied as a mediator and job embeddedness as a moderator. The results found support for the hypothesized relationships, which can be used by managers and practitioners to deepen the understanding of what influences nurses to stay in their position in the face of potential turmoil.

Keywords: Nursing, Leader-Member Exchange, LMX, Intention to leave, Turnover, Merger, Team
Nurse relationships during a time of transition: LMX and turnover intent

As the Affordable Care Act of 2010 (ACA), was passed and implemented in the United States, a greater emphasis has been placed on the value of healthcare and the outcomes experienced by a patient while in care. Some healthcare organizations anticipated being unable to meet the new standards under the ACA and sought out opportunities to bring them into legal compliance. With the assistance of low interest rates, many of these organizations took this opportunity to grow their facilities into operations that could meet the standards as enacted. Growth came not only through building new facilities and hiring more staff, but also through mergers and acquisitions in a healthy merger environment. PricewaterhouseCoopers deemed 2016 the year of merger mania (Pricewaterhouse Cooper, 2015), noting that the uptick in consolidation is both a benefit and a potential worry. This focus on merging began with the insurance industry, but there is a clear move towards this reorganization in other healthcare facilities, labs, pharmaceutical firms, and etc. These new deals include not just acquisitions, but also affiliations, joint ventures, and partnerships, to further expand brand names and instill confidence in patients and their families. While it is predicted that moves such as mergers and affiliation agreements will allow for healthcare organizations to develop more flexibility, greater brand recognition, and increase the number of strengths held by an organizations; these types of deals also have the potential for turmoil within the organization if not dealt with proactively (Pricewaterhouse Cooper, 2015).

A similar merger trend was seen in the 1990s, when an estimated three out of every five hospitals experienced some type of consolidation (Baker et al., 1999). This changed the nursing environment and forced nurses and nursing executives to adapt to new expectations in the daily delivery of care while also expanding job titles and responsibilities. While mergers gave nursing
staff the potential opportunity to see a more patient focused care model, increasing opportunities for nursing innovations, and to revise the organizational culture for a more positive reshaping (Baker et al., 1999), there was also the potential for job loss, job restructure, a loss of employee autonomy, and a potential negative impact on patient care (Singleton & Nail-Hall, 1995). The potential for growth and employee concerns from the explosion of hospital mergers in the 1990s are no different than the issues experienced in the hospital environment today. When a consolidation is a possibility, nurses begin to worry about their job security, job engagement, and consistency in patient care. As hospital leadership works to create a positive organizational environment in order to strengthen the team relationship between the nurse and the physician, the positive perception held by the nurse in his or her future at the hospital will be strengthened.

Proper communication about an upcoming merger can be the cornerstone for a successful employee reaction (Schweiger & Denisi, 1991). The failure of upper administration (or a top management team) to communicate about what is expected to happen can leave an employee feeling a great deal of uncertainty about their future with the organization. This lack of information from their organization is instead replaced with interactions (or rumors) that the employee has “learned” through the grapevine (Mervis & Marks, 1985). Reliance on rumors can increase the employee’s stress and anxiety, and in some cases, lead to counterproductive behaviors. The ultimate outcome from this perceived uncertain working environment will be manifested in job dissatisfaction, low trust in the leadership and organization, and an increase in turnover and job absenteeism (Schweiger & Denisi, 1991).

A few of the factors that positively influences an employee’s decision to stay at an organization and engage in a merger is the level job satisfactions experienced, organizational commitment, and supervisor relationship (Butler, 2011). This supervisor commitment can play a
crucial role in whether or not an employee will decide to stay in an organization. Turnover in a healthcare organization can play a crippling role in the success of an employer, since the underlying disruptive nature of turnover is expensive and threatens the ability to provide quality care to patients, potentially decreasing patient safety. In a study of newly licensed nurses conducted by Kovner and colleagues (2006) indicated that, 17.3% leave their first nursing job in the first year and 33.5% leave their first job in the first two years. When new nurses were asked their most influential reason for leaving, the most consistent answer was the management (Kovner et al., 2006). The effects of the numerous hospital mergers will only continue to exacerbate the effects of management based turnover. Yet, even with this relationship between nursing turnover and management, many hospital systems do not have a plan to maintain nursing employment.

The purpose of this paper is to investigate how leader-member exchange is related to a decrease in an employee’s intent to turnover, reflected in the nurse/physician relationship. By focusing on the provider team, as when an organization is faced with a potential consolidation, expansion and other disruptions in an industry facing tremendous regulatory challenges, employee retention will be a strong resource. By looking at this overarching relationship and mitigating factors that might influence in the relationship, the hope is to offer hospital management a set of tools to better predict and handle employee behavior, while extending management theory in nursing. Hospital based nurses are an optimal workforce to study for the model tested within this study due to the nature of work and the nature of the relationships between physicians and nursing staff. Communication and trust are key elements in promoting efficient patient care within the work group formed by the nurse and physician. The physician takes on a leadership role in this particular dyad, while the nurse acts within the more traditional
employee role. This relationship is in addition to the more common nurse employee and manager relationship as researched between the staff nurse and the nurse manager. The nurse-physician relationship has been shown to strongly influence the nurse’s morale, nurse job satisfaction, and retention (Rosenstein, 2002). The teamwork relationship between these two people is an important story to understand because it can impact the level of patient care delivered (Schmalenberg & Kramer, 2009). When researchers were looking to determine what effects could have a positive impact on improving patient outcomes within the Intensive Care Unit, focusing on the nurse/physician team resulted in the strongest significant correlation, as opposed to focusing on the individuals (Dechairo-Marino, Jordan-Marsh, Traiger, & Saulo, 2001).

**Background**

**Leader-Member Exchange**

Leader Member Exchange (LMX) is found when the leader does not use one established leadership style, but instead employs various techniques with different employees. Each of these relationships formed between the leader and the employee (member) is based on the exchanges between the leader and the member. By treating each employee differently, managers create a work environment that is defined by the variety and quality within the dyadic relationships (Liden, Erdogan, Wayne, & Sparrowe, 2006; Liden, Sparrowe, & Wayne, 1997).

Within the LMX literature, there are two types of within-group relationships: low- and high-quality. Low-quality LMX relationships are based on economic or transactional exchanges between the leader and member; whereas the high-quality LMX relationships are formed around social exchange processes (Liden et al., 1997). High LMX employees receive greater benefits...
(such as growth opportunities and higher levels of support) (Bauer, Erdogan, Liden, & Wayne, 2006; Graen & Scandura, 1987; Kraimer, Wayne, & Jaworski, 2001). These high LMX employees are better integrated into the leader’s own network and organization (Sparrowe & Liden, 1997). The LMX relationship was examined from both sides, by treating the LMX agreement as a substantive variable (Matta, Scott, Koopman, & Conlon, 1995). This treatment found that employees were more likely to be engaged in their work when their perception of the LMX relationship was in agreement with their supervisor’s.

LMX has been found to predict several work-related outcomes. Cogliser and Schriesheim (2000) found that a strong LMX has been correlated to positive follower attitudes and behaviors. Organizational identification, perceived organizational support, and attitudes towards customers have been found to be all impacted by the LMX relationship experienced by the employee (Tangirala, Green, & Ramanujam, 2007). When looking within the nursing field, LMX has been found to have an impact on decreasing turnover behavior at the unit level (Portoghese, Galletta, Battistelli, & Leiter, 2015), showing that these leader relationships can offer some understanding into group level decision making. Employees in jobs with similar levels of high stressors have reported LMX mediated the role of on the job stressors when looking at job satisfaction and turnover intention (Zhang, Tsingan, & Zhang, 2013).

Based on these findings, we expect LMX to predict turnover intentions. The impact of LMX on an employee’s intention to turnover shows that LMX is negatively related to an employee’s intention to turnover (Furunes, Mykletun, Einarsen, & Glasø, 2015). Respectively, retail workers who reported a high LMX relationship had lower turnover than their low LMX counterparts (DeConinck, 2009). In other words, if an employee reports a low LMX relationship, then their connection to the organization could be weaker, impacting their overall
working experience increasing their desire to engage in job search activities. Likewise, if an employee enjoys a high LMX relationship, he or she could engage in behaviors that align with maintaining his or her current position.

_Hypothesis 1: When a high LMX relationship is experienced by an employee, there will be a negative relationship to the employee’s intention to turnover._

**Trust as a mediator**

The second relationship is the effect of LMX to the level of trust the employee has in their leader. Workplace trust has been defined many times, but these definitions contain similar components, including dependency (Li, 2007), mental and physical safety (Gambetta, 1988), and the willingness of the leader being trusted to take part in group risks with the employees (Lau & Liden, 2008; Mayer, Davis, & Schoorman, 1995). One method of encouraging an effective working environment between employees and leaders is to increase the perception of trust held by the employee. When employees trust their leaders a number of positive actions for the work environment and work group can result. The perception of trust by the employees has shown an increase in cooperation (Lau & Liden, 2008), organizational citizenship behaviors (Coleman, 1990), increased group and organizational performance (McAllister, 1995), and a reduction in the need for monitoring (Davis, Schoorman, Mayer, & Tan, 2000).

When looking at trust as an outcome variable, high LMX has been shown to have a positive relationship with the level of management directed trust an employee holds (Trybou, De Pourcq, Paeshuyse, & Gemmel, 2014). Leader trust has also been found to moderate the relationship between LMX and turnover intentions (Ertürk & Vurgun, 2015). Leader trust research is positively correlated with the confidence and trust employees have for their leader in terms of the legitimacy of the leader (Jones, James, & Bruni, 1975; Kelman, 1970; Olsen, 1968;
Sells, 1968). The more confidence can be developed through certain leader actions, such as effectiveness and consistency (Gibb, 1947; Jones et al., 1975). When looking at nurse-supervisor relationships, it was found that high quality LMX positively affects nurse trust in the supervisor. This has led to the belief that confidence and the corresponding trust in a leader is an echo of the leader’s ability to execute their knowledge and expertise in a successful and reliable manner (Jones et al., 1975). Conversely, when there are higher levels of leader abuse, individuals who have experienced this type of abuse, or even have seen peers experience the leader abuse, were less likely to develop a high-quality exchange relationship with their peers (Peng, Schaubroeck, & Li, 2014).

It is possible that employees could interpret the various leader actions, such as promotion opportunities, employee support, level of interaction, etc., as being dependent on certain factors. We propose that when an employee is a part of positive relationship with their supervisor he or she is more likely to interact in cooperative manner and this will lead to a higher level of confidence in the decisions made by the supervisor. With this foundation, an employee then develops a higher level of trust, since the confidence of the employee for the supervisor is already building. This higher level of trust will be related to a decrease in the employee’s intention to turnover. The role of trust as a mediator between LMX and intention to turnover has been seen, in partiality, through the research previously reviewed. It is the intention of this paper to fully utilize trust in the mediator role, as a means of further filling the research gap.

*Hypothesis 2: Supervisor trust mediates the relationship between an employee’s LMX and their intention to turnover.*

**Job Embeddedness as a moderator**
The moderating factor for possible impact on the relationship between LMX and supervisor trust, is the level of job embeddedness held by the employee. Job embeddedness is a construct developed by Mitchell and colleagues (2001) in an effort to explain why employees stay in a position, beyond the previously accepted measures (e.g. fit, job satisfaction, organizational commitment). This construct embodies an employee’s links to other people (in and out of the workplace setting), an employee’s perceptions of fit with their community and various levels of their organization, and what the employee believes he or she would have to sacrifice if he or she moved to a different job. Job embeddedness was found to encompass more than just combining these measures as a means of determining whether an employee will remain in his or her position (Mitchell et al., 2001). The larger effects of job embeddedness were researched by Lee and colleagues (2004), where a correlation was found between low off-the-job embeddedness and increased turnover and absences. The authors also found that low on-the-job embeddedness was correlated with organizational citizenship behavior and job performance. Gender was found to play a role in the relationship between LMX and job embeddedness. The loyalty and affect dimensions of LMX were found to positively influence job embeddedness of female (but not male) employees, while professional respect and contribution positively influenced male (but not female) employees (Collins, Burrus, & Meyer, 2014).

Previous research has shown that trust mediates the relationship between job embeddedness and work engagement (Tabak & Hendy, 2016). Trust has been found to play an even larger role on an employee’s job embeddedness than distributive justice; manager trust significantly outweighed the effect that distributive justice had on embeddedness when looking at a Turkish population. Additionally, there is a strong argument to be made for investigating job embeddedness not as the outcome variable, but as the moderating variable. The relationship
between LMX and trust could experience a moderated influence by job embeddedness, since we have seen job embeddedness and trust positively related (de Ruijter & Weesle, 2007). When an employee has a low level of embeddedness to their organization, the relationship between the LMX and trust could be weakened. An employee who does not identify as being a part of the organization, or surrounding community, or does not see a great sacrifice in leaving their position, or does not get great satisfaction out of the work done, could be less likely to express a high level of manager trust.

**Hypothesis 3:** The employee’s level of job embeddedness moderates the positive relationship between LMX and the employee’s trust in leadership in such a way that the relationship is weaker when job embeddedness is low than when it is high.

**Methods**

**Sample and Procedure**

Nurses surveyed were full time employees from nonprofit hospitals located across New England and the Southwest United States. After study approval was received from the corresponding author’s university and primary hospital’s institutional review board data were collected from nurses using online and postal mail surveys. All participants in the study entered into a drawing for a small honorarium ($100 gift card) in exchange for their time. Data were collected from the hospitals over a period of one year, with each nurse being surveyed one time. In order to meet the changes necessitated by the ACA, many hospitals in the sample have dealt with mergers, affiliation agreements, and other actions that would allow them to expand and grow. To increase power of the responses, the data from the individual hospitals were combined into one data set (Edwards, 2001). Control variables were added to the analysis to mitigate any
effects resulting from the differences across the individual data samples. A total of 700 nurses were sent the physical survey packet with a total response of 201, a 28% response rate.

Demographically, 90% of respondents were Caucasian, 7% were Hispanic, and 3% identified as other ethnicities. Of the respondents, 93% were female and 79% were over the age of 41. Respondents reported working in nursing for between 1-45 years, with an average number of 18 years. The average number of years in a nurse’s current position within their current organization was 7.5. The majority of the respondents held Associate’s degrees (58%), with 35% completing a Bachelor’s degree, while the remaining respondents (7%) obtained a Master’s degree in Nursing.

Measures

**LMX.** Using the LMX7 measure developed by Scandura and Graen (1984), LMX was assessed. Adaptations from Liden, Wayne, and Stillwell (1993) were utilized to measure the quality of the relationship using a seven point Likert scale, ranging from *strongly agree* to *strongly disagree* for all of the items. It includes seven questions such as, “Do you know where you stand with the physician? Do you usually know how satisfied the physician is with what you do?” (α = 0.895).

**Job Embeddedness.** Crossley and colleagues (2007) global measure of job embeddedness was utilized. The seven question survey allows for focus on an area which the employee might consider to be more impactful than other (Crossley et al., 2007). It includes questions such as, “I’m too caught up in this organization to leave.” The respondents utilized a 7 point Likert scale, ranging from *strongly agree* to *strongly disagree* for their answers (α = 0.909).
Leader Trust. Leader trust was divided into two separate survey sections: cognitive and affective. Combined, both sets of questions come from Hansen et al. (2002) and have a total of eight questions. The former includes questions such as “I used a business-like approach to determine if I could trust other members.” The later portion of leader trust looks at questions like, “My sense of intuition tells me that other members can be trusted.” The respondents utilized a 7 point Likert scale, ranging from strongly agree to strongly disagree for their answers ($\alpha = 0.981$).

Intentions of Turnover. The final section of the survey utilized four questions from Tett and Meyer (1993) assessing the desire of an employee to leave their current position. This survey includes questions like “I often think of quitting this job.” The respondents utilized a 7 point Likert scale, ranging from strongly agree to strongly disagree for their answers ($\alpha = 0.928$).

Controls. A number of items are controlled for within this study. Age, ethnicity, gender, degree, years in career, and years in current position are the demographic controls for the statistical analysis.

Data Analysis

The data received from the returned surveys was analyzed using SPSS. The moderating mediator effect was analyzed using Baron and Kenny (1986) and Muller, Judd, and Yzerbyt’s (2005) updated response to Baron and Kenny’s moderating mediating research. The relationships between the outcome variables and the dependent variable were examined as both direct and moderators, in order to thoroughly understand the relationships.

Results
Table 1 shows the means, standard deviations, and correlations for all of the individual variables in this study. Intention to turnover is significantly related to LMX. Intention to turnover and job embeddedness was also significantly related to trust. Job embeddedness was also significantly related to intention to turnover.

Insert Table 1 About Here

Tests of Hypotheses

Hypothesis 1 holds that a high level of LMX experienced by an employee has a positive correlation to decrease in an employee’s intention to turnover. Table 2 shows that turnover intention is negatively related to an employee’s LMX ($p \leq .001$). As hypothesized, when an employee experiences a high LMX relationship with their supervisor the employee’s intention to turnover decreases, Hypothesis 1 is supported.

Insert Table 2 About Here

Hypothesis 2 holds that an employee’s trust in their supervisor will mediate the relationship between LMX and the employee’s intention to turnover. Using the methodology as described by Muller, Judd, and Yzerbyt’s (2005) to determine mediation. By verifying the significance of the outcome variable, the treatment effect of the mediating variable, the effect of the mediator on the outcome variable, and finally comparing the direct effects from the treatment variable to the overall treatment to see if the treatment variable effects were smaller, it was determined that trust is significant as a mediator for intention to turnover at the $p \leq .001$ level.
The negative directionality of this outcome shows that as an employee’s trust in the supervisor increases the employee’s intention to turnover decreases, so that Hypothesis 2 is supported through analysis as seen in Table 3.

Hypothesis 3 holds that the nurse’s level of job embeddedness moderates the positive relationship between LMX and the nurse’s trust in the supervisor, in such a way that the relationship is weaker when job embeddedness is low than when it is high. Job embeddedness is significantly and negatively related to the relationship between LMX and supervisor trust at the $p \leq .05$ level. This outcome shows that as an employee’s level of job embeddedness decreases there will be a decreased level in the employee’s trust in the supervisor, therefore, Hypothesis 3 is supported.

Discussion

This study looks to deepen the understanding of what can be done to decrease a nurse’s intention to turnover in the face of rapid industry change brought on by regulatory and legislative change. The ACA has continued to foster an environment of hospital mergers, acquisitions, affiliation agreements, and other disruptive actions that can affect an employee’s sense of job security. By expanding the roles that job embeddedness and leader trust play in LMX, this paper has continued to fortify the manager’s understanding of factors correlated to employee turnover.
intention. First, this study demonstrated that a nurse’s intention to leave a position was also negatively correlated to a high LMX (Hypothesis 1), which lends support to previous studies (Kammeyer-Mueller & Wanberg, 2003). Addressing the question of; “What can management do retain nursing staff during a hospital merger?” this paper demonstrates that employees who have a high LMX relationship with their doctors are less likely to engage in turnover intentions. Developing these types of relationships among staff could have the potential to decrease an employee’s likelihood of exploring other employment opportunities.

Secondly, trust in the leader was a strong mediator between the nurse’s intention to turnover and LMX (Hypothesis 2). When a nurse has a higher level of trust in their leader, there is a decreased likelihood in the employee engaging in turnover behavior. Management in a healthcare organization might be able to decrease employee turnover in the face of merger activity by working to increase the trust a nurse has within and between in the physician leaders. By strengthening a positive and supportive organizational culture to support trust between the leaders of various professional employee groups, specifically, nurses and physicians, the nurse employee may be less likely to look for other employment opportunities as they feel secure in their present position.

Thirdly, the application of job embeddedness as a moderator between the LMX and leader trust relationship showed strong results. The use of job embeddedness as a moderator was supported by the results (Hypothesis 3). Since the trust a nurse has in their leader can have an effect on the intention to turnover, it is important to also understand what can influence this individual relationship. The data shows that the level of job embeddedness a nurse has in the organization is correlated to the level of trust in the leader. When a nurse has a low level of job embeddedness, there is a correlated decrease in the level of trust experienced, so that if a nurse is
not invested in the position, the organization, or the community, the level of trust will be reflective of this lack of embeddedness. If an organization is preparing to engage in merger activity and looking for methods to decrease the turnover of the nursing staff, taking steps to increase the level of nurse’s job embeddedness could result in an increase in the leader trust experienced by the nurse in the physician.

The contributions found through this work have added another layer to the development of the job embeddedness and leader trust constructs. Job embeddedness is a newly developing theory and the use of it as a moderator in this study adds to the depth of knowledge of this construct. Leader trust has not been utilized as a mediator in this type of relationship among highly trained professionals. This study expands the knowledge of how LMX can influence a person’s embeddedness to an organization and community and how intention to turnover is influenced changed by a nurse’s level of trust in their leader.

These results indicate the complexity of the relationships between the surveyed variables and the intricacy of the relationships nurses may have with the physician they work closest with and hospital system in which they are employed. The use of leader trust is particularly important within a healthcare environment as the end point of the care provided is the patient being served. People’s lives are at stake and wrong actions can have devastating consequences. As such, the nurse’s perception of the relationship could affect how well the nurse and the doctor deliver necessary patient care. When a nurse feels trust in their leader, it could further benefit the team and the patients who receive care. Job embeddedness is a relatively new construct and still in the beginning stages of investigation. This study demonstrates when an employee has a low level of embeddedness; there is a correlation to a decrease in the trust in the leader, when LMX is taken into consideration.
Managerial implications for this study are clear, especially when considering what can be done to influence an employee to stay at an organization during a time of merger activity. Additional benefits can be realized through the knowledge acquired by firms in terms of how the relationships between coworkers have far reaching impacts, influences that are much greater than previously expected. Expanded knowledge of the roles that job embeddedness and leader trust play on the larger working environment ought to influence how employers view these relationships and lead to actions to improve the relationships between employees and supervisors. As such, hospitals can use the results from the study when determining how to form their workgroups and nurse/physician pairings. Successful pairings within these groups could have larger impacts on the success of the hospital, quality of care delivered, and satisfaction of the patients being cared for by the providers.

**Limitations**

There are three particular limitations within this study, which all revolve around the data sample. The survey data was gathered at only one time interval, so the lack of a longitudinal study could impact the reliability of the data gathered. Since the respondents are not connected only one hospital, we were not able to gather information from a supervisory level or from another third party about the employee’s performance. Questions and responses regarding the employee’s intentions to leave their current position could be used to determine the likelihood of job abandonment. All of the facilities in this study faced some changes in their organization structure; however, not all nurse roles are immediately impacted in a merger or affiliation agreement.

This study is dependent on strictly survey data from the perceived perspective of one employee. The nature of the data gathered forces this to be the situation, but that does not make
it any less of a limitation. There is the innate concern of self-serving bias and retrospective lenses within these types of questions. Unfortunately, there is no control that can rectify this limitation and it must simply be accepted as part of the design.

**Future Research**

This study lends itself to several opportunities for future research. Some of the limitations listed previously can be corrected within future studies. Ideally, organizations would be willing to administer this study again in future years to establish multiple data points for longitudinal data. Multiple administrations of the study would also capture a better picture of the volatility in the health care industry and future merger activity in organizations. This change would also provide an opportunity to extend the sample to include the nursing supervisors and managers within the same organization.

Aside from correcting for the limitations, this line of research could be expanded by comparing the intention to turnover with actual employee turnover. This would be of interest to determine if there is a difference between the intention and the actuality. Future research could also focus on the differences between hospitals who are actively engaging in consolidation activity and who have experienced it previously, by doing so it could further pinpoint the correlations between teamwork based actions and the outcomes.

Finally, instead of only looking at job embeddedness through the eyes of a moderator, researchers could examine if these constructs are operationalized as mediators (full or partial). Theoretically, an intermediary relationship between these individual constructs and the outcomes of trust and turnover may be revealed.

**Implications for Practitioners**
Given the need, motivated in part by requirements of the Affordable Care Act and policies established by the Centers for Medicare and Medicaid Services, healthcare facilities have been placed under increasing pressure to deliver high quality patient care and related services. One of the ways that organizations can control how patient care is delivered is through maintaining consistent nursing staff. To hire and train a nurse, organizations spend an average of $36,000 to $48,000 to replace each bedside nurse, according to a 2013 study by Nursing Solutions, Inc. (NSI Nursing Solutions, 2013). Each time an organization can avoid spending extra on hiring costs, there are more funds that can be directed to improving patient services and providing additional training for physicians, nurses and other staff members. With reports of healthcare expenditures expected to exceed $3 trillion, or $10,345 per person, in 2016 (Alonso-Zaldivar, 2016), hiring costs are built into the fees charged patients and their insurance companies. As healthcare facilities can reduce their “unnecessary” expenses, compounded by voluntary turnover, by creating a better work environment for employees, slowly the cost of care for all Americans will be impacted.

Conclusion

This study examined a critical relationship in hospital organizations: the relationship between a nurse and their supervisor. As changes in the healthcare sectors show no signs of slowing down, organizations must implement initiatives to help employee’s deal with transformations in the work environment. By examining the nurse’s intention to leave or voluntarily turnover, in part as influenced by organization connections and job search activity, organizational leadership can work to build a positive and supportive organizational culture. Ultimately, as organizations work to help improve relationships between the professional nurse and physician staff, healthcare outcomes will improve for patients.
References


Figure 1.
Proposed Model

Leader-Member Exchange
(nurse/physician dyad)

Leader Trust

Turnover Intention

Job Embeddedness
Table 1.
Means, standard deviations, and correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMX</td>
<td>4.096</td>
<td>1.204</td>
<td>.406**</td>
<td>.444**</td>
<td>-.124</td>
<td></td>
</tr>
<tr>
<td>Job Embeddedness</td>
<td>4.188</td>
<td>1.020</td>
<td>.406**</td>
<td>1.</td>
<td>.188</td>
<td>-.587**</td>
</tr>
<tr>
<td>Trust</td>
<td>4.755</td>
<td>1.281</td>
<td>.444**</td>
<td>.188</td>
<td>1.</td>
<td>-.251*</td>
</tr>
<tr>
<td>Intention to Turnover</td>
<td>2.740</td>
<td>1.576</td>
<td>-.124</td>
<td>-.587**</td>
<td>-.251*</td>
<td>1.</td>
</tr>
</tbody>
</table>

n=136 for all variables
The entries are standardized regression coefficients when all variables are entered into the equation
*p ≤.05 Two-tailed tests
**p ≤.01 Two-tailed tests

Table 2.
Effects of LMX

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Job Embeddedness</th>
<th>Trust</th>
<th>Intention to Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMX</td>
<td>-.857***</td>
<td>.179***</td>
<td>.018***</td>
</tr>
</tbody>
</table>

n=136 for all variables
The entries are standardized regression coefficients when all variables are entered into the equation
***p ≤.001 Two-tailed tests
Table 3.
Mediating effects of trust on intention to turnover

<table>
<thead>
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<th>Predictors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LMX</td>
<td>-.857***</td>
</tr>
<tr>
<td>Intention to turnover</td>
<td>.179***</td>
</tr>
<tr>
<td>Trust</td>
<td>.018***</td>
</tr>
</tbody>
</table>

Trust mediator for Intention to Turnover - .199*

n=136 for all variables  
*p≤.05 Two-tailed tests  
***p≤.001 Two-tailed tests

Table 4.
Moderating effects of job embeddedness on leader trust

<table>
<thead>
<tr>
<th>Predictors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LMX</td>
<td>-.857***</td>
</tr>
<tr>
<td>Intention to turnover</td>
<td>.179***</td>
</tr>
<tr>
<td>Trust</td>
<td>.018***</td>
</tr>
</tbody>
</table>

Job Embeddedness x LMX .140***

n=136 for all variables  
***p≤.001 Two-tailed tests
ABSTRACT

This paper provides a review of past meta-analyses of transformational leadership (TFL) and leader-member exchange relationship (LMX), and compares their similarities and relationships with common related constructs. The reviews of meta-analyses suggested that LMX and TFL are correlated highly and follow the same pattern with common variables, which suggests that LMX and TFL might not be distinct, or at least might share a large degree of similarity. To investigate whether differential effects exist between the two theoretical perspectives, we conducted incremental validity and meta-analytic structural equation modeling (MASEM), which is a technique that integrates meta-analysis and structural equation modeling. The results of the analyses showed that, in most cases, TFL and LMX share a large degree of similarity and these findings suggest that researchers need to be careful to capture the components of TFL that do explain above and beyond LMX without concluding that these two constructs are either completely different or totally redundant. The empirical findings of this paper encourage researchers to think again about TFL and the ways in which it has been defined and measured.

Keywords: transformational leadership; leader-member exchange relationship; MASEM
LMX and Transformational Leadership: A Critical Review and Assessment

Constructs, at the heart of social science, connect operational studies to theory, and thus, the quality of research depends on the quality of its core constructs (Cole, Walter, Bedeian, & O’Boyle, 2012). Two constructs are considered distinct if they are theoretically and empirically different (Le, Schmidt, Harter, & Lauver, 2010), while redundant constructs have similar definitions and correlate substantially (Le et al., 2010). The proliferation of constructs is a major issue in the fields of social science and organizational behavior, and many redundant constructs are similar from both theoretical and empirical perspectives.

One of the areas that includes competing theories is leadership, and there have been attempts to determine whether different leadership theories are in fact distinct (e.g., Banks, McCauley, Gardner, & Guler, 2015). Two well-known theories in leadership are transformational leadership (TFL) and leader-member exchange (LMX), and many authors have highlighted the similarities between them (Gerstner & Day, 1997). There also is empirical evidence that supports the interrelationship of LMX and TFL. For example, Basu and Green (1997) found a large, significant correlation between TFL and LMX ($r = .87$), and factor analysis could not distinguish LMX from intellectual stimulation and individualized consideration, two dimensions of TFL. In another study by Howell and Hall-Merenda (1999), there was no significant path between TFL and performance when LMX was included in the model. Further, Basu (1991) conducted a factor analysis of LMX and four TFL dimensions, and could not find distinction between LMX and TFL. On the other hand, some studies have indicated that LMX and TFL are distinct. For example, Wang et al. (2005) found a significant and large correlation between LMX and TFL ($r = .80$), and proposed a model in which LMX mediates the relationship between TFL and organizational citizenship behaviors (OCBs) and performance. They also conducted analyses to show the distinctiveness of TFL and LMX,
which will be discussed in detail in the next section. These opposing points of view of LMX and TFL are the focus of this study.

**CONSTRUCT OVERLAP**

Two constructs are distinct if they meet the following two requirements: 1) they should not be highly correlated, and 2) they should not demonstrate the identical relationship patterns with other variables (Schmidt et al., 2013; Le et al., 2010). The constructs should not be highly correlated because this indicates common variance between them (Le et al., 2010). Further, two distinct constructs should not be highly correlated because different constructs must show different patterns with other common constructs in the relevant nomological network. However, highly correlated constructs are more likely to show the same pattern with other variables, which means they cannot be differentiated based on the nomological network and will be considered redundant (Le et al., 2010). Testing these requirements might be challenging, because individual studies are subject to various issues that affect the reliability of findings. First, individual studies are subject to measurement error that affects results. Second, individual studies might use different scales to measure the constructs intended. However, each scale has its own characteristics that contribute to the variance of the true score, such as sampling-based factors or methodological factors (Le et al., 2010). A construct might have different measures with different features that affect the score measured, and therefore, scores might differ from those measured in another way (Le et al., 2010). Third, individual studies usually have limited sample sizes that reduce their statistical power (Hunter & Schmidt, 2004). For example, Basu and Green (1997) found a large and significant correlation between LMX and TFL. They claimed that the reason LMX and TFL are correlated so highly, and the reason that factor analysis did not distinguish between them was attributable to artifacts in the method or measurement and/or the error related to common methods.
Therefore, a method is needed that addresses the concerns that individual studies face when they test for construct redundancy (Le et al., 2010). Meta-analysis is a powerful tool that integrates findings of individual studies and helps researchers address such artifacts and obtain more reliable results. If Basu and Green’s (1997) justification in failing to find a distinction between LMX and TFL is valid, meta-analysis is a way to test this without concern for specific artifacts. Meta-analysis can be used to compare theories and check theory proliferation (Leavitt, Mitchell, & Peterson, 2010). It helps researchers compile research findings into one accumulated effect size (Hunter & Schmidt, 2004). However, meta-analysis has limitations. Meta-analysis method helps researchers to test the magnitude and direction of bivariate correlations, but cannot compare different models with multiple predictors and outcomes (Bergh et al., 2016). Further, as meta-analysis is based on bivariate correlations, it cannot help researchers test for potential mediators, because mediation needs at last three variables (Bergh et al., 2016). Meta-analytic structural equation modeling (MASEM), which integrates meta-analysis and structural equation modeling, is a technique that helps researchers take advantage of the strengths of meta-analysis while avoiding its limitations. MASEM provide researchers with necessary tools to employ the accumulated findings of meta-analyses to compare theorized models (Bergh et al., 2016).

Therefore, in this paper, we used MASEM to integrate previous meta-analytical findings about LMX and TFL to obtain more conclusive empirical findings about their distinctiveness. Such conclusive results allow researchers greater confidence in the power and reliability of, as well as the ability to generalize the findings. This sort of integration and findings might be valuable for moving our understanding of leadership forward. If the results of the current paper support the notion that TFL and LMX are not distinct, researchers need to look for reasons other than artifacts alone.

**LMX AND TRANSFORMATIONAL LEADERSHIP**
As discussed, some studies have claimed that LMX and TFL are distinct constructs (Wang et al., 2005). For example, Wang et al. (2005) found a high correlation between LMX and TFL ($r = .80$), and proposed a model in which LMX mediates the relationship between TFL, and OCB and performance. However, we believe there are some limitations in the study that might affect the ability to generalize their findings. First, Wang et al., (2005) used the LMX-MDM (Liden and Maslyn, 1998) as the scale to measure LMX. However, according to Dulebohn, Wu, and Liao (2016), LMX-MDM has received less attention in the field, and only 14% of LMX studies used LMX-MDM, while the majority of studies have used the unidimensional LMX-7 (Graen et al., 1982). We believe our study, which considers different studies with different LMX scales, might provide more generalizable and conclusive results.

Second, there is a similar concern in measuring TFL. Wang et al. (2005) used the 23-item TFL scale (Chen & Farh, 1999), while according to Dulebohn et al. (2017), the majority of studies has used Bass and colleagues’ scales to measure transformational leadership. Specifically, Chen and Farh (1999) developed a scale for Chinese organizations, which might raise the question whether their findings can be generalized to the U.S. context. Moreover, their scale found six dimensions for TFL in contrast to the four dimensions offered by Bass. Third, Wang et al. (2005) used an aggregation approach to test multilevel studies, which is not a good approach, as aggregation leads to 1) loss of power, 2) loss of information regarding within-unit variation, and 3) reduces the sample size drastically (Preacher, Zyphur, & Zhang, 2010). Finally, in the measurement model analysis, the model in which LMX and TFL were two distinct factors ($CFI = .92$, $TLI = .91$) show better but close fit to the model in which TFL and LMX were combined into one factor ($CFI = .89$, $TLI = .87$). Although none of these two models meet the cut-off (0.95) recommended by Hu & Bentler (1999), such close fit indices might indicate similarities between the two constructs.
Other studies that support the distinctiveness of LMX and TFL include similar concerns regarding measurement scales. For example, Howell and Hall-Merenda (1999) used the four-item LMX scale developed by Graen and Schiemann (1978), which limits the ability to generalize the findings, particularly as LMX measurement instruments have changed continually over time, and different studies have used different scales (Gerstner & Day, 1997; Graen & Uhl-Bein, 1995). The LMX-7 scale (Graen, Novak, & Sommerkamp, 1982) is the LMX measure used most frequently by far (James H. Dulebohn et al., 2017). Therefore, individual studies that support distinctiveness or similarity have certain biases that might affect their reliability and the ability to generalize their findings. One of the advantages of this paper is that we rely on the findings of previous meta-analyses, in which different studies used different scales to measure LMX, TFL, and their related constructs. Drawing on these findings, we conducted incremental validity and MASEM, and compared different models with alternative structural networks, which gives more confidence regarding reliability and the ability to generalize findings. Thus, this study makes several contributions to literature. First, we reviewed the literature to identify previous meta-analyses of TFL, LMX, and their work-related constructs, and investigated the relationship between these two types of leadership and common sets of variables, including performance, OCB, deviance, satisfaction and commitment, trust, and personality factors. The summary findings provided us with initial indications of the similarities between LMX and TFL. Second, we addressed the concern for integration of LMX and TFL empirically. To identify potential redundancy, we used previous meta-analyses of TFL and LMX, and assessed incremental validity to determine whether TFL adds explanatory value beyond that provided by LMX. If the two constructs were distinct, we would expect to see a significant difference in incremental validity. Third, we conducted a meta-analytic SEM to compare alternative models of LMX and TFL. MASEM extends meta-analysis by allowing researchers to control for other
variables in the model, and its degree of fit. MASEM helps researchers test models within a chain relationship, test for mediation, and compare different models (Bergh et al., 2016). Therefore, we tested three different models of TFL and LMX with multiple common variables, and compared their fit indices.

**LMX**

LMX is defined as “quality of exchange between a leader and follower” (Schriesheim, Castro, & Cogliser, 1999, p.76). In this definition, leaders and followers are not the principal interest in LMX theory; instead, the main focus is the relationship between them (Schriesheim et al., 1999). Previous studies have found that a high-quality exchange relationship will positively affect the entire workplace (Krishnan, 2005). It has been shown that high levels of LMX leads to positive effects such as increased subordinate satisfaction, organizational commitment, performance, and role clarity (Graen et al., 1982; Dansereau et al., 1982; Schriesheim, Castro, & Cogliser, 1999). LMX is established based on the social exchange relationship between the leader and follower (Asgari, Silong, Ahmad, & Sama, 2009). The quality of such relationship affects the way leader treats each employee. A high-quality LMX involves mutual respect, support, and loyalty that enhances levels of interpersonal attraction and bidirectional influence (Asgari et al., 2009).

However, the nature of social exchange in high-quality LMX is that no obligation is specified, and there is no standard against which favors and contribution are measured (Asgari et al., 2009). In a high-quality relationship, leaders do not specifically tell followers what to do, and therefore LMX cannot specifically be considered an exchange relationship (Krishnan, 2005). Thus, high quality LMX does not have the nature of an exchange per se, and instead, is based to a greater degree on the exchange of values between leader and follower (Graen & Uhl-Bein, 1995). In fact, some research has claimed that LMX is transformational rather than transactional (Gerstner & Day, 1997; Schriesheim et al., 1999).
For example, Gerstner and Day (1997) argued “TFL is conceptually similar to the process of developing a unique exchange relationship that is central to LMX” (p. 838).

**Transformational Leadership**

Transformational leader motivates followers to perform beyond what they are expected to (Bass, 1985). It seems that TFL, similar to LMX, is based on the relationship between leader and follower. TFL includes four characteristics: charismatic leadership or idealized influence, inspirational leadership or motivation, intellectual stimulation, and individualized consideration. Through these, transformational leaders influence followers to go beyond expectations (Krishnan, 2005). TFL focuses on followers who “continually adjust their behavior to the level to which the follower has been developed” (Avolio & Bass, 1995, p. 207). Transformational leaders motivate followers, engage them in shared meaning, stimulate them, and most importantly, give personal attention to each employee. Followers develop faith in the leader’s competence and trust, and are proud to be associated with him or her (Krishnan, 2005). All of these behaviors require a quality relationship between the leader and follower, and the absence of such a relationship leads to ineffective leadership.

Moreover, transformational leaders engage with followers in such a way that both try to raise level of morality and motivation (Lowe, Kreoeck, & Sivasubramaniam, 1996). Such engagement and mutual assistance indicate implicitly that there is an ongoing high-quality relationship between leader and follower, and, in its absence, TFL would be ineffective. This has been discussed, to the extent that LMX constitutes mutual respect and trust, and is oriented to transformation (Gerstner & Day, 1997). Therefore, it may be said that TFL is, by nature, a high-quality dyadic relationship (Gerstner & Day, 1997). In fact, four behavioral dimensions of TFL, including idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, emphasize the exchange relationship. Basu and Green (1997) argued that individual consideration would satisfy followers’ social need,
which typically involves human interaction, acceptance, and empathy that are related to a greater extent to the LMX domain. Further, according to Seltzer and Bass (1990), both the leader’s charisma and individualized consideration are dyadic in nature, and motivate followers to behave in certain ways (such as investing extra effort), and in return, reinforce the relationship between the follower and leader (Asgari et al., 2009). In fact, TFL uses relational tactics to induce the perception of a high-quality relationship in followers, and in return, their perception creates a climate of support and safety, such that followers not only excel in their performance, but care for the success of others around them (Shropshire & Kadlec, 2012).

Many scholars have claimed that TFL constitutes an exchange relationship. For example, Deluga (1992) believed that TFL is an exchange relationship. He (1992) noted that “transformational leaders may foster the formation of high quality relationships and a sense of a common fate with individual subordinates” (p. 245), and favorable outcomes related to TFL result from the high-quality dyadic relationship between leader and follower (Asgari et al., 2009). TFL is believed to be built on this relationship (Avolio, Sosik, Jung, & Berson, 2003), and its underlying concept is developing a relationship with the follower, which is the cornerstone of LMX (Gerstner & Day, 1997).

A further indication that TFL is based on the relationship may be found by examining TFL training workshops. Such training focuses on teaching leaders to maintain a high-quality relationship with their followers by 1) talking with followers about their problems, 2) listening to their concerns, 3) not imposing their perspective as the leader, and 4) sharing goals and experiences (Gerstner & Day, 1997). These skills help leaders influence their followers by arousing feelings of personal identification (Kark, Shamir, & Chen, 2003). In this paper, we empirically investigate whether TFL and LMX should be considered truly distinct.
METHODOLOGY

We conducted a computer-based search of the meta-analyses about LMX and TFL up to 2017 using keywords such as "leader-member exchange", "LMX", "transformational leadership", "charismatic leadership", "charisma" and "meta-analysis" using PsycINFO and Google Scholar databases. Numerous meta-analyses have been conducted on TFL and LMX. Integrating their results provides us with an excellent sample size and power. For the purpose of our study, we limited our search to just meta-analyses conducted about TFL and LMX.

The common work-related constructs between TFL and LMX are categorized into three general classes of variables: 1) attitudinal, 2) behavioral, and 3) personality. Work-related attitudes include satisfaction, commitment, trust, and motivation. Behavioral outcomes include task performance, counterproductive performance, and citizenship behaviors. Common personality factors related to both LMX and TFL are limited to agreeableness and extraversion. We took several other steps in building the final effect size to reach a single effect size, and make it possible to compare LMX and TFL. First, for studies in which there were multiple effect sizes of a principal construct, we followed Hoch et al.’s (2016) approach, and calculated the average of the correlations. For example, in studies that reported the dimensions of TFL, but not a measure overall (e.g., Bycio, Hackett, & Allen, 1995), we averaged the correlations across the dimensions. Second, for those meta-analyses that reported multiple outcomes (e.g. Meyer et al. (2002) reported three types of commitment related to TFL including affective, normative, and continuance) we constructed equally weighted composite measures for such constructs (Hunter & Schmidt, 2004). Third, transformational leadership theory suggests that TFL could affect performance at the group and organizational levels (Bass, 1985; Conger & Kanungo, 1998; Wang et al., 2011). Therefore, studies that reported the correlation between TFL and team/organizational performance were included. Summaries of the results are shown in Tables 1-4.
ANALYSES

The summary of findings in Table 1 shows that the correlations between LMX and TFL found in five different meta-analyses with different sample sizes were relatively high, ranging from 0.69 to 0.74. Such high correlations are the first indication that LMX and TFL might be similar, calling into question whether they are, in fact, two different constructs.

The second step in checking for the distinction between LMX and TFL is to assess the correlations between LMX, TFL, and work-related outcomes and personality. The summary of findings in Tables 2 and 3 shows that both the effect sizes of LMX and TFL are similar in magnitude and direction to common work-related variables and personality, which again suggests that TFL and LMX might be similar. Thus, the review of previous meta-analyses of LMX and TFL meet Schmidt et al. (2013) and Le et al.’s (2010) requirements in providing initial indications that LMX and TFL might be similar constructs, or at least significantly overlap with each other. However, we took two other steps, assessing incremental validity and conducting MASEM, to confirm these initial clues that TFL and LMX might be indistinguishable.

Incremental Validity

Incremental validity is an appropriate method to check whether two constructs are distinct (Hunsley & Meyer, 2003). If TFL is a different construct, it should add significant variance in the outcome variable beyond that of LMX. To assess whether TFL explains variance beyond LMX, we conducted a series of hierarchical regressions to determine the variance in the criterion explained by TFL and then to assess the incremental variance explained by LMX. First, we estimated the variance in the criterion measure explained by TFL and LMX individually (e.g., the variance in job satisfaction explained by TFL). Next,
we estimated a model that included both TFL and LMX using the same criterion measure. Then, following the approach of Dulebohn et al. (2017), we measured the ratio of the variance of TFL. As the results in Table 5 show, TFL contributed an average of 4.67% of the variance in the outcomes beyond what LMX contributed in six criterion variables including satisfaction (0%), OCB (4%), commitment (4%), trust (5%), job performance (6%), and workplace deviance (9%). These results show that the contribution of TFL above and beyond LMX is not monumental, however, there is still some degree of contribution. Thus, although it cannot be concluded these two constructs are completely different, it would be safe to draw the conclusion that TFL and LMX might have a great overlap with each other, at least in these six criterion variables. The interesting finding, however, is the result of incremental validity about motivation that shows TFL contributes 67% more variance than LMX. This indicates that motivation, as one of the aspects of transformational leadership might be completely unique to TFL, while the other three dimensions of TFL might have great overlap with LMX. These initial findings encourage researchers to be cautious to capture the components of TFL that do explain above and beyond LMX without falling into the trap that these two constructs are either completely different or totally redundant.

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Insert Table 5 about here

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**MASEM**

Meta-Analytic Structural Equation Modeling (MASEM) is a technique that integrates meta-analysis (MA) and structural equation modeling (SEM) to take advantage of the strengths of both techniques to build a strong model (Landis, 2013). Meta-analysis has its own drawback as it cannot evaluate alternative or complementary theoretical models, and therefore some questions leave unanswered (Bergh et al., 2016). As MASEM integrates bivariate correlations from different individual studies, it has substantial statistical power (Cheung & Chan, 2005). The principal advantage of using MASEM is that it helps
researchers construct a group of variables, test models not tested before, and obtain more reliable results (Viswesvaran & Ones, 1995). Thus, MASEM provides researchers with findings that cannot be obtained by either meta-analysis or SEM alone (Bergh et al., 2016). MASEM also can maximize external validity (Shadish, Cook, & Campbell, 2002; Bergh et al., 2016).

In this study, we conducted several MASEMs using Mplus 7.4 (Muthén & Muthén, 2010) to test different models of LMX and TFL in which all variables were included in the model. The personality variables, extraversion and agreeableness, were included as antecedents. Extraversion is described as being sociable, talkative, cheerful, active, energetic, outgoing, and enthusiastic (Costa, Terracciano & McCrae, 2001; McCrae & John, 1992). Leaders who are highly extraverted are proactive (Sung & Choi, 2009), socially confident (Taggar, 2002), seek opportunities for positive social interaction, and followers find them to be effective leaders (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012). Agreeableness, on the other hand, manifests in behaviors such as empathy, cooperativeness, altruism, and caring (Graziano & Eisenberg, 1997; Digman, 1990). Leaders who are high in agreeableness are more social, and have better interactions with their followers, who find them to be more approachable and warm (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012). Therefore, both agreeableness and extraversion could be predictors of both LMX and TFL.

LMX and TFL show the same pattern of relationship with a common set of outcomes, including performance, OCB, and satisfaction. There is a positive relationship between LMX and performance. Leaders able to create high-quality LMX relationships increase followers’ ability and motivation to perform their jobs at a higher level (Martin et al., 2016). Similarly, TFL leads to more efficient job performance in several ways, including 1) linking tasks to organizational vision (Bono & Judge, 2003), 2) enhancing followers’ self-efficacy (Shamir, House, & Arthur, 1993), and 3) coaching and providing necessary support for followers
(Howell & Hall-Merenda, 1999; Wang, Oh, Courtright, & Colbert, 2011). On the other hand, OCB are those behaviors that are not part of prescribed job roles, but serves the organizations and benefit it (Organ & Ryan, 1995). There is a positive relationship between LMX and OCB, because followers feel obligated to reciprocate the favorable treatment they receive from their leader, not simply by performing their tasks, but also by exceeding requirements (Martin et al., 2016). Similarly, transformational leaders increase followers’ social identification and motivate them to engage in OCB (Wang et al., 2011). Lastly, high-quality LMX relationships between followers and leader are characterized by a high level of affect and liking, both of which lead to high levels of satisfaction among followers (Dulebohn et al., 2012; Martin et al., 2016). Similarly, TFL leads to increased satisfaction because it produces positive outcomes for followers (Gottfredson & Aguinis, 2016).

We searched for previous meta-analyses that reported the correlation required between desirable factors to build the meta-analytic correlation matrix (See Table 6). As can be seen, different studies have different sample sizes, so we calculated the harmonic mean as the best estimate of sample size for MASEM (Dulebohn et al., 2017; Landis, 2013). We conducted several structural equation models to compare their fit indices. We first constructed models with LMX and TFL separately, and then we constructed a model in which LMX mediated the relationship between TFL and outcomes, a model proposed by Wang et al. (2005). The fit indices for the different models are reported in Table 7. CFI and TLI are relatively independent of sample size (Fan, Thompson, and Wang, 1999; Marsh, Balla, and McDonald, 1988). The fit indices for each model demonstrate that the model 2 with LMX alone (*CFI* = .96, *TLI* = .90) fit the data better than the model 1 with TFL alone (*CFI* = .94, *TLI* = .86). The fit indices in the model 2 (*CFI* = .96, *TLI* = .90), and those in the model 3 in which LMX mediated the relationship between TFL and outcomes (*CFI* = .96, *TLI* = .93) are very similar, both of them show good fit to the data. The harmonic sample size between model 2
(N = 4559) and model 3 (N = 4950) is close enough to check for Bayesian information
criterion (BIC) and principle of parsimony, which encourage researchers to have simpler
model that fit the data. BIC show that model 2 is more parsimonious and desirable model
compare to model 3 (Kass & Raftery, 1995).

The MASEM results confirm the previous incremental validity analyses. Based on
incremental analyses, TFL contributes a range from 0% to 6% for satisfaction, OCB and job
performance beyond LMX. Similarly, in the MASEM models, which included these three
variables, the TFL model (Model 1) does not show good fit compare to LMX model (Model
2). We expect to find similar results using models with the other three variables of trust,
deviance and commitment, and researchers are encouraged to test alternative models with
these three variables and interpret the results considering the current incremental validity.
However, we predict different patterns when the alternative models include motivation.

 Hedgehogs & broadcast

 Insert Tables 6 & 7 about here

 DISCUSSION

 Previous individual studies of LMX and TFL are subject to some biases that might
affect their accuracy and the ability to generalize results. Therefore, it is difficult to draw a
firm conclusion about the relationship between LMX and TFL, particularly because both are
well-known leadership theories and Recent meta-analyses on LMX and TFL, together with
new techniques that allow us to integrate their findings, provided us with the tools necessary
to test whether LMX and TFL are redundant or distinct constructs.

 Reviewing previous meta-analyses of studies of TFL and LMX showed that the two
are highly correlated constructs. Further, in reviewing meta-analyses of LMX and TFL, we
found that these constructs demonstrate similar patterns of relationships with common
outcomes. Building on these primary indications, and previous meta-analyses of studies of
TFL and LMX, we conducted incremental analysis and MASEM to suggest that TFL and LMX might be similar, or overlap with one another to a large extent degree. The incremental validity analyses showed that TFL does not significantly add value beyond LMX in six criterion variables, but it significantly contributes to motivation. Thus, our findings showed that it is possible that the some positive effects of TFL are simply by-products of LMX.

Further, we conducted MASEM to compare different theorized models that cannot be compared with meta-analysis alone (Bergh et al., 2016). The comparisons of different models with MASEM showed the model with LMX alone had fit indices similar to those of LMX as a mediator of the relationship between TFL and performance. However, the model with LMX alone show the better parsimony fit indices, which might make it more desirable in the leadership literature. Thus, it could be suggested that LMX provides the best and most parsimonious model of leadership in our alternative tested models.

These findings might seem provoking and it might spur conversations, in particular from proponents of TFL. However, we believe these kinds of conversations and dialogue would help the literature to flourish and polish what we know and what we do not know about leadership theories. Furthermore, these conclusions make more sense when we review the literature and see that TFL is based on a dyadic relationship between leader and follower. Traditional leadership theories have tried to explain leadership by focusing on the characteristics of the leader, the situation, or the interaction between them (Gerstner & Day, 1997). Specifically, a large body of literature focused on leaders has shown that leader behaviors are related to followers’ outcomes and organizational effectiveness, which includes perspectives such as transformational leadership (e.g., Bass, 1985) and charismatic leadership (Howell & Hall-Merenda, 1999). The second approach focuses on the relationship between leader and follower, and the leader’s effectiveness is associated with the quality of this relationship, which is described according to certain characteristics, such as mutual respect.
and trust. The best example of this approach is LMX theory (Graen & Uhl-Bien, 1995). Although these two approaches seem different, the first considers the essentials of the second approach implicitly. Leadership is a relationship between leaders and followers (Krishnan, 2005), and the leadership domain extends beyond the leader alone to include followers and the dyadic relationship between the two (Graen & Uhl-Bein, 1995). On the other side, LMX differs from other leadership theories (such as TFL), as it focuses on the dyadic relationship between leader and follower (Gerstner & Day, 1997). However, any dyadic relationship reflects the existence of two entities, without which the relationship does not make sense (Dansereau, Yammarino, & Markham, 1995). This suggests that although LMX focuses on the relationship between leader and follower, such a relationship requires both actors and cannot exist independent of them (Dansereau et al., 1995). Leader behavior and follower outcomes in themselves define the relationship between the two (Howell & Hall-Merenda, 1999). According to House and Aditya (1997), “it is almost tautological to say that good or effective leadership consists in part of good relationships between leaders and followers” (p.431). Further, the specifications of high quality LMX, such as trust, mutual respect, and openness, are among the specific behaviors a transformational leader is expected to demonstrate (Antonakis, Bendahan, Jacquart, & Lavile, 2014). Therefore, the first approach includes the second, or the second encompasses the first. This similarity between the two approaches has led researchers to attempt to integrate them and consider both leader behaviors and the leader’s relationship with followers simultaneously (Howell & Hall-Merenda, 1999). There also have been theoretical attempts to integrate TFL and LMX (e.g., Graen & Uhl-Bien, 1995; Gerstner & Day, 1997). However, this question can be empirically addressed, which was the main goal of this paper.

**IMPLICATIONS**

The findings of this study showed that high correlation between LMX and TFL might
not be attributed to study artifacts alone. In fact, the underlying mechanism of TFL is the quality of the leader’s relationship with followers, such that TFL might not add value above and beyond LMX in some cases, or at least show great extent of overlap. This paper is the preliminary step in rethinking TFL, and these empirical findings should encourage researchers to reconsider TFL, revise its domain and content, or change the way in which it is measured. Meta-analyses and MASEM provided us with resources to test the model with high statistical power and without the biases individual studies face. Thus, researchers are encouraged to utilize this methodology and replicate these findings with different models, different antecedents, and outcomes.

CONCLUSION

The similarities between LMX and TFL raise the question whether they are two different constructs. This suspicion is not new, and some other researchers have stated their concerns about the issue (e.g., Basu, 1991). Further, there have been calls for the theoretical integration of LMX and TFL (Howell & Hall-Merenda, 1999), or even abandoning transformational leadership theory to help the field to move forward (van Knippenberg & Sitkin, 2013). The goal of this paper was to test empirically whether LMX and TFL are two different constructs. To do so, we relied on findings from previous meta-analyses. Meta-analysis provides researchers with results that are more reliable, and using them as input helps produce results that can be generalized. We took several steps to test the distinction between LMX and TFL. We followed Le et al.’s (2010) recommendations to show that they are correlated highly and exhibit the same pattern with common variables. Further, we followed Hunsley and Meyer’s (2003) recommendation and conducted incremental analyses to demonstrate the extant TFL contributes value beyond LMX. Finally, we followed Viswesvaran and Ones’ (1995) approach and conducted several MASEMs to compare alternative models.
In this paper, we proposed that the underlying mechanisms in TFL and LMX might be essentially the same, and TFL might be nothing but the quality of the relationship between leader and follower. Thus, transformational leaders need to build high-quality relationships with followers, without which it is ineffective. That might be the reason that TFL does add minimal contribution above and beyond LMX. However, there might be other reasons for our findings. One of the main issues is the way in which researchers operationalize TFL and LMX, which means that the extant to which different measurement scales capture the same thing. For example, Basu et al. (1997) argued that items that measure consideration, a dimension of TFL, are similar to items in LMX. In fact, scholars are usually successful in defining new theoretical constructs, but they often fail when they want to measure such distinctiveness (Tepper & Henle, 2011). Redundant constructs simply “muddy the construct waters” (Rynes, Giluk, & Brown, 2007, p. 993), and constrain parsimony in theory and knowledge (Sober, 1981). That might be true for TFL and LMX, which means the way TFL is measured is similar to the way LMX is measured. Another possible explanation of our findings is the way in which these constructs are defined. Ambiguous definitions of LMX, and those that change over time might have contributed to our findings. However, as LePine, Erez, and Johnson (2002) noted, when a construct seems to be defined ambiguously, it is possible “…to examine empirical relationships in an effort to infer construct meaning post hoc” (p.55).

TFL and LMX are two well-known theories in the leadership literature. However, they show many similarities that have led scholars to wonder whether they differ. This study is just an initial step to provide researchers with a new and creative look at the long-standing question of whether transformational leadership and LMX are actually different things. This paper tries to encourage researchers in the leadership field to look at TFL and LMX construct overlap with respect to current measures and theoretical conceptualization. This paper is a
preliminary step for researchers to think again about TFL and the ways in which it has been defined and measured. The insights derived from this study will help researchers to re-examine the extent to which TFL accurately explain and predict claimed outcomes in the workplace.
REFERENCES


Krishnan, V. R. (2005). Leader-member exchange, transformational leadership, and value


<table>
<thead>
<tr>
<th>Study</th>
<th>k</th>
<th>N</th>
<th>$\bar{r}$</th>
<th>$r_c$</th>
<th>95% Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dulebohn et al., 2017</td>
<td>18</td>
<td>5088</td>
<td>.65</td>
<td>.73</td>
<td>.61 - .84</td>
</tr>
<tr>
<td>Hoch et al., 2016</td>
<td>20</td>
<td>4591</td>
<td>.64</td>
<td>.71</td>
<td>.63 - .80</td>
</tr>
<tr>
<td>Dulebohn et al., 2012</td>
<td>20</td>
<td>5451</td>
<td>.66</td>
<td>.73</td>
<td>.64 - .81</td>
</tr>
<tr>
<td>Rockstuhl et al., 2012 (Study 1)</td>
<td>18</td>
<td>4561</td>
<td>.65</td>
<td>.74</td>
<td>.64 - .84</td>
</tr>
<tr>
<td>Rockstuhl et al., 2012 (Study 2)</td>
<td>9</td>
<td>2247</td>
<td>.55</td>
<td>.69</td>
<td>.50 - .88</td>
</tr>
</tbody>
</table>

Notes: n= sample size; k= number of correlations; $\bar{r}$= weighted average correlation; $r_c$= weighted average correlation corrected for measuring error
<table>
<thead>
<tr>
<th>Study</th>
<th>$\bar{r}$ (TFL)</th>
<th>$\bar{r}$ (LMX)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agreeableness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bono &amp; Judge, 2004</td>
<td>.14</td>
<td>-</td>
</tr>
<tr>
<td>Dulebohn et al., 2012</td>
<td>-</td>
<td>.18</td>
</tr>
<tr>
<td><strong>Extraversion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bono &amp; Judge, 2004</td>
<td>.24</td>
<td>-</td>
</tr>
<tr>
<td>Dulebohn et al., 2012</td>
<td>-</td>
<td>.18</td>
</tr>
</tbody>
</table>

Notes: $\bar{r}_c$ = weighted average correlation corrected for measuring error
### Table 3
Correlations between LMX/TFL and Behavioral Outcomes

<table>
<thead>
<tr>
<th>Study</th>
<th>$r_c$ (TFL)</th>
<th>$r_c$ (LMX)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoch et al., 2016</td>
<td>.27</td>
<td>-</td>
</tr>
<tr>
<td>Wang et al., 2011</td>
<td>.21</td>
<td>-</td>
</tr>
<tr>
<td>Stewart, 2006 (team performance)</td>
<td>.33</td>
<td>-</td>
</tr>
<tr>
<td>Judge &amp; Piccolo, 2004 (group performance)</td>
<td>.26</td>
<td>-</td>
</tr>
<tr>
<td>DeGroot, Kiker, &amp; Cross, 2000 (charismatic)</td>
<td>.45</td>
<td>-</td>
</tr>
<tr>
<td>Dulebohn et al., 2017</td>
<td>-</td>
<td>.36</td>
</tr>
<tr>
<td>Martin et al., 2016</td>
<td>-</td>
<td>.30</td>
</tr>
<tr>
<td>Dulebohn et al., 2012</td>
<td>-</td>
<td>.34</td>
</tr>
<tr>
<td>Rockstuhl, et al., 2012 (horizontal individualism)</td>
<td>-</td>
<td>.30</td>
</tr>
<tr>
<td>Rockstuhl et al., 2012 (vertical collectivism)</td>
<td>-</td>
<td>.29</td>
</tr>
<tr>
<td>Gerstner &amp; Day, 1997 (leader rating)</td>
<td>-</td>
<td>.55</td>
</tr>
<tr>
<td>Gerstner &amp; Day, 1997 (member rating)</td>
<td>-</td>
<td>.30</td>
</tr>
<tr>
<td><strong>OCB</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoch et al., 2016</td>
<td>.28</td>
<td>-</td>
</tr>
<tr>
<td>Wang et al., 2011</td>
<td>.30</td>
<td>-</td>
</tr>
<tr>
<td>Dulebohn et al., 2017</td>
<td>-</td>
<td>.38</td>
</tr>
<tr>
<td>Martin et al., 2016</td>
<td>-</td>
<td>.34</td>
</tr>
<tr>
<td>Dulebohn et al., 2012</td>
<td>-</td>
<td>.39</td>
</tr>
<tr>
<td>Rockstuhl et al., 2012 (horizontal individualism)</td>
<td>-</td>
<td>.30</td>
</tr>
<tr>
<td>Rockstuhl et al., 2012 (vertical collectivism)</td>
<td>-</td>
<td>.25</td>
</tr>
<tr>
<td>Ilies, Nahrgang, &amp; Morgeson, 2007</td>
<td>-</td>
<td>.37</td>
</tr>
<tr>
<td><strong>Deviance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoch et al., 2016</td>
<td>-.23</td>
<td>-</td>
</tr>
<tr>
<td>Martin et al., 2016</td>
<td>-</td>
<td>-.24</td>
</tr>
</tbody>
</table>

Note: $r_c$ = weighted average correlation corrected for measuring error; OCB= Organizational Citizenship Behavior
### Table 4
Correlations between LMX/TFL and Attitudinal Outcomes

<table>
<thead>
<tr>
<th>Study</th>
<th>$r_c$ (TFL)</th>
<th>$r_c$ (LMX)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Satisfaction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoch et al., 2016</td>
<td>.42</td>
<td>-</td>
</tr>
<tr>
<td>Judge &amp; Piccolo, 2004</td>
<td>.58</td>
<td>-</td>
</tr>
<tr>
<td>Dumdum, Lowe, &amp; Avolio, 2002</td>
<td>.40</td>
<td>-</td>
</tr>
<tr>
<td>DeGroot et al., 2000 (charismatic)</td>
<td>.77</td>
<td>-</td>
</tr>
<tr>
<td>Dulebohn et al., 2017</td>
<td>-</td>
<td>.50</td>
</tr>
<tr>
<td>Martin et al., 2016</td>
<td>-</td>
<td>.61</td>
</tr>
<tr>
<td>Dulebohn et al., 2012</td>
<td>-</td>
<td>.49</td>
</tr>
<tr>
<td>Ruckstuhl et al., 2012 (horizontal individualism)</td>
<td>-</td>
<td>.55</td>
</tr>
<tr>
<td>Ruckstuhl et al., 2012 (vertical collectivism)</td>
<td>-</td>
<td>.45</td>
</tr>
<tr>
<td>Kinicki, et al., 2002</td>
<td>-</td>
<td>.51</td>
</tr>
<tr>
<td>Gerstner &amp; Day, 1997</td>
<td>-</td>
<td>.50</td>
</tr>
<tr>
<td><strong>Commitment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoch et al., 2016</td>
<td>.43</td>
<td>-</td>
</tr>
<tr>
<td>Meyer et al., 2002</td>
<td>.27</td>
<td>-</td>
</tr>
<tr>
<td>Bycio et al., 1995</td>
<td>.28</td>
<td>-</td>
</tr>
<tr>
<td>DeGroot et al., 2000 (charismatic)</td>
<td>.43</td>
<td>-</td>
</tr>
<tr>
<td>Dulebohn et al., 2017</td>
<td>-</td>
<td>.48</td>
</tr>
<tr>
<td>Martin et al., 2016</td>
<td>-</td>
<td>.49</td>
</tr>
<tr>
<td>Dulebohn et al., 2012</td>
<td>-</td>
<td>.47</td>
</tr>
<tr>
<td>Gerstner &amp; Day, 1997</td>
<td>-</td>
<td>.42</td>
</tr>
<tr>
<td><strong>Trust</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoch et al., 2016</td>
<td>.65</td>
<td>-</td>
</tr>
<tr>
<td>Dirks &amp; Ferrin, 2002</td>
<td>.79</td>
<td>-</td>
</tr>
<tr>
<td>Dulebohn et al., 2017</td>
<td>-</td>
<td>.73</td>
</tr>
<tr>
<td>Martin et al., 2016</td>
<td>-</td>
<td>.65</td>
</tr>
<tr>
<td>Ruckstuhl et al., 2012 (horizontal individualism)</td>
<td>-</td>
<td>.72</td>
</tr>
<tr>
<td>Ruckstuhl et al., 2012 (vertical collectivism)</td>
<td>-</td>
<td>.52</td>
</tr>
<tr>
<td>Dirks &amp; Ferin, 2002</td>
<td>-</td>
<td>.77</td>
</tr>
<tr>
<td><strong>Motivation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judge &amp; Piccolo, 2004</td>
<td>.53</td>
<td>-</td>
</tr>
<tr>
<td>Martin et al., 2016</td>
<td>-</td>
<td>.31</td>
</tr>
</tbody>
</table>

Note: $r_c$ = weighted average correlation corrected for measuring error
## Table 5

Incremental Variance Explained by TFL beyond LMX

<table>
<thead>
<tr>
<th></th>
<th>$R^2$ (TFL)</th>
<th>$R^2$ (LMX)</th>
<th>$R^2$ (TFL &amp; LMX)</th>
<th>$\Delta R^2$/Total $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>.176</td>
<td>.372</td>
<td>.373</td>
<td>0%</td>
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<tr>
<td>Commitment</td>
<td>.185</td>
<td>.240</td>
<td>.251</td>
<td>4%</td>
</tr>
<tr>
<td>OCB</td>
<td>.090</td>
<td>.116</td>
<td>.121</td>
<td>4%</td>
</tr>
<tr>
<td>Trust</td>
<td>.423</td>
<td>.533</td>
<td>.562</td>
<td>5%</td>
</tr>
<tr>
<td>Performance</td>
<td>.073</td>
<td>.090</td>
<td>.096</td>
<td>6%</td>
</tr>
<tr>
<td>Deviance</td>
<td>.053</td>
<td>.058</td>
<td>.064</td>
<td>9%</td>
</tr>
<tr>
<td>Motivation</td>
<td>.281</td>
<td>.096</td>
<td>.294</td>
<td>67%</td>
</tr>
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</table>

Note: Meta-analyses used for TFL are: a= Hoch et al. (2016); b= Wang et al. (2011); c= Judge & Piccolo (2004)
Note: Meta-analyses used for TFL are d= Martin et al. (2016); e= Dulebohn et al. (2017)
OCB= Organizational Citizenship Behavior
| 1 - Agreeableness | 1.00 |
| 2 - Extraversion ($\bar{r}$, $\bar{r}_e$) | .18, .26 |
| $K$, $N$ | ??, 144117$^a$ |
| CI | ?? |
| 3 - TFL ($\bar{r}$, $\bar{r}_e$) | .10, .14$^b$ |
| $K$, $N$ | 18, 3916 |
| CI | .06-.21 |
| 4 - LMX ($\bar{r}$, $\bar{r}_e$) | .16, .18$^c$ |
| $K$, $N$ | 4, 859 |
| CI | .11-.27 |
| 5 - Performance ($\bar{r}$, $\bar{r}_e$) | .04, .07$^d$ |
| $K$, $N$ | 112, 17520 |
| CI | ?? |
| 6 - OCB ($\bar{r}$, $\bar{r}_e$) | .11, .14$^e$ |
| $K$, $N$ | 47, 10308 |
| CI | .15-.21 |
| 7 - Satisfaction ($\bar{r}$, $\bar{r}_e$) | .13, .17$^f$ |
| $K$, $N$ | 38, 11856 |
| CI | .12-.22 |

TFL=Transformational Leadership; LMX= Leader-Member Exchange; OCB= Organizational Citizenship Behavior; ??= not reported

K= Number of Correlations; N= Sample Size; CI= Confidence Interval

$^a$= Van Der Linden & Bakker, 2010; $^b$= Bono & Judge, 2004; $^c$= Dulebohn et al., 2012; $^d$= Barrick & Mount, 1991

$^e$= Chiaburu et al., 2011; $^f$= Judge et al., 2002; $^g$= Dulebohn et al., 2017; $^h$= Hoch et al., 2016; $^i$= Wang et al., 2011

$^j$= Martin et al., 2016; $^k$= Podsakof et al., 2009; $^l$= Brown & Peterson, 1993; $^m$= Lepine et al., 2002
Table 7  
Results of MASEM for Performance, OCB, and Satisfaction

<table>
<thead>
<tr>
<th>Model</th>
<th>Pathway</th>
<th>$\chi^2$(df)</th>
<th>CFI</th>
<th>TLI</th>
<th>SRMR</th>
<th>RMSEA</th>
<th>BIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1:</td>
<td>AGR/EXT $\rightarrow$ TFL $\rightarrow$ Outcomes</td>
<td>511.855 (6)**</td>
<td>.94</td>
<td>.86</td>
<td>.05</td>
<td>.09</td>
<td>100643.32</td>
</tr>
<tr>
<td>Model 2:</td>
<td>AGR/EXT $\rightarrow$ LMX $\rightarrow$ Outcomes</td>
<td>239.529 (6)**</td>
<td>.96</td>
<td>.90</td>
<td>.04</td>
<td>.09</td>
<td>46777.45</td>
</tr>
<tr>
<td>Model 3:</td>
<td>AGR/EXT $\rightarrow$ TFL $\rightarrow$ LMX $\rightarrow$ Outcomes</td>
<td>392.894 (11)**</td>
<td>.96</td>
<td>.93</td>
<td>.05</td>
<td>.08</td>
<td>61011.10</td>
</tr>
</tbody>
</table>

AGR= Agreeableness; EXT= Extraversion
Outcomes are performance, organizational citizenship behavior (OCB) and satisfaction
CFI= Comparative Fit Index; TLI= Tucker Lewis Index; SRMR= Standardized Root Mean Square Residual; RMSEA= Root Mean Square Error of Approximation; BIC= Bayesian Information Criterion
Harmonic Sample Size (model 1)= 9559
Harmonic Sample Size (model 2)= 4559
Harmonic Sample Size (model 3)= 4950
** $p<0.01$
Title: Teaching 😊 and Teaching ☺: Applying a Positive Approach to Management Education

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***The organizer has received signed statements from all intended participants agreeing to participate in the entire symposium.***
Title: Teaching 😊 and Teaching 😊: Applying a Positive Approach to Management Education

Abstract

This workshop is designed to provide experiential methods to advance the positive development of future business managers and leaders (our students). The workshop uses a round table design with a facilitator at each table. Participants will select different roundtables to attend during the workshop. In this format each facilitator presents to four different groups of participants over the 90 minute workshop. The facilitator at each round table provides an innovative means of developing positive course outcomes. Sample topics include: AI in the Classroom: How to Claim the Higher Ground; Getting Students to Volunteer for Learning; Developing Effective Leaders: Leveraging Strengths to Engage the Millennial Student, and The Live Case: Hope is Not a Strategy. The workshop facilitators will share handouts and materials so participants can easily implement the experiential exercises when they return their home institution.
Workshop Overview: Track 9 Professional Development Institute Session

This PDI is proposed as an Innovative Teaching and Management Education workshop serving those SMA members with a broad interest in innovative sessions designed to enhance the education and learning about course/student management topics. The workshop is intended to foster the sharing of innovative teaching tools and practices on appreciative inquiry and other positive instructional methods. During the PDI each participant will be provided with at least four new ideas for the development of positive teaching and learning approaches. Members will attend because of their interest in finding ways to engage students with positive organizational behavior, in developing additional competencies, and the possibility of reinventing a course or just finding a little idea for improving an aspect of a course.

PDI’s Rationale:

As a sometimes consultant, it is not uncommon to hear managers declare that as long as their firm has problems they have job security. This can hardly be disputed. However, we believe it is a limited view of “seeking the problems” that does not allow them to reach far enough and thereby restricts the potential of managers and leaders from accomplishing what they set out to in the beginning “feel/attain success.” We are not advocating for the denial of problems in organizational life; clearly, there are many. However, what and where is the potential for perspective change? How might we expand and challenge this thinking that is ripe with a deficit orientation. Perhaps this is a lens so transparent that managers/leaders and even students remain unaware of it, which maintains its power to distort their very perspective in unknown ways?

The evolving and emerging reality of today’s business climate is rich, complex and borderless (Friedman, 2005). Yesterday’s tools that attempt to resolve problems in pursuit of re-
establishing some sense of equilibrium and the status quo are inadequate to address this new reality. Instead, it will be necessary for firms and their members to imagine and create nimbler forms of organization that are more responsive to the ever increasing ambiguity that will prevail. This requires less reliance on established management practices and greater focus on novel approaches that can be mobilized to address this complexity. Positive organizational management ideas and their focus on strengths (Luthans, 2001, 2002a, b) are keenly suited to address this reality. Luthans (2002b) discussed core psychological factors such as confidence, hope and resiliency as central to this movement and central to its effectiveness. These state-like traits and those who embody them are more focused on creating what works and is desirable; not simply rearranging what is given. Bushe (2007) declared them as “generative” in that they are oriented toward generating the desired future and not working from an established playing field, incrementally shifting the extant set of factors in an effort to reconfigure yesterday’s reality.

To the extent that the limited and deficit orientation described above is a result of managers’ training and education we have the opportunity to make a difference by teaching management from a more holistic frame. Instead of seeking only to resolve problems and eliminate organizations’ deficits in operations and functions, thereby only achieving neutral position of zero, how might we facilitate learning that addresses management/leadership as a profession that aspires to great heights? Changing the conversation in the classroom to one that inspires students to dream big for themselves, their careers, their organizations, their families is an opportunity to create something that does not yet exist and that extends well beyond the taken-for-granted limitations to which we have grown accustomed. Higher education occupies a unique niche and opportunity given that we often meet these students before they have been deeply exposed to the traditional norms of thinking resident in many organizations. It is an
opportunity to plant the seed of an alternate frame of thinking that challenges the dominant paradigm and opens up possibilities in what they may ultimately consider. Indeed, it plants the seed of hope for what could be, rather than the hurdle of what is.

To this end we are proposing a set of roundtables where scholars can discuss and describe their activities, exercises, and perspectives on the positive organizational management and strengths based teaching frame. Our intent is to expand the opportunities as well as the consideration of students/aspiring managers to achieve what they truly desire as students in their learning and plant the seed of possibility for what they may accomplish, unshackled from traditional ways of learning and doing as they matriculate through to their careers.

This session will provide a number of round tables where various positive organizational behavior topics can be discussed as practiced by the roundtable scholars. These will range across the full gamut including positive organizational behavior (Bakker & Schaufeli, 2008), appreciative inquiry (Neville, 2008; O’Connor & Yballe, 2007), strengths based (Hodges & Clifton, 2004; Luthans, 2002a, b) and positive organizational pedagogy (Yballe & O’Connor, 2000). Classroom topics and activities will be discussed in a dialogic format that will then be available for attendees to take back to their classrooms. These will reframe current issues and reveal new opportunities for faculty to introduce ideas to their students that will challenge the typical and dominant approach so present in classrooms and boardrooms.

**Learning outcomes for PDI:**

We have four learning outcomes for the PDI:

1) to share experiential activities that connect positive instructional methods with developing individuals
2) to facilitate dialogue between faculty members interested in using positive methods in their classroom
3) to inspire faculty members to be intentional in applying positive processes to effectively
4) to build a community of positive management educators that inspires, instead of requires, the development of individuals through positive, uplifting practices

Design

The proposed PDI will begin with a short welcome and introduction by the organizer. The topic for this introduction will address what we as management educators do best and how this aligns with our critical activities as educators. The central part of the PDI is the roundtable design with each workshop participant choosing, at different times, one of the four roundtables to participate in during the PDI. Each roundtable session will be 15 minutes long. Attendees will rotate among the four roundtables every 15 minutes, each roundtable will be led by a faculty member who will share a particular perspective and tried-and-true practices that he or she use to enhance positive instruction methodologies. The roundtable leaders will share handouts and materials to facilitate transfer of learning and ease of use for participants. The PDI will wrap up with a discussion of themes and observations from the roundtables lead by the organizer, and an exploration of future possibilities for learning how to use and benefit from the positive exercises that were shared. Thus, the total time requested is 90 minutes.

Roundtable Leaders

The set of roundtable leaders represent a diverse and highly skilled set of teachers who are enthusiastic and well-prepared to share their teaching innovations related to the positive
instruction methods and techniques. Each roundtable leader has provided a title and focus for their roundtable presentation in the following section.

References


AI in the classroom: How to claim the higher ground

Thomas A. Conklin Georgia State University

Tim O. Peterson North Dakota State University

How many times have you wished you had a way to open your courses that invited full participation and engagement from your students? Perhaps you have grown tired of the usual set of proscriptions? No cheating, no chewing gum, raise your hand, no talking. These tired injunctions have long ago lost their appeal yet many have nothing to replace them with. Well, now is your chance to learn about a new and novel way to dialogue with your students that invites them to imagine how they and you might create peak learning experiences over the term.

Using appreciative inquiry (AI) (Cooperrider & Srivastva, 1987) it is possible to facilitate a meaningful conversation around peak learning experiences students have had. This can then be used as the platform for imagining how they and you can live and learn together and foster the creation of these moments in your classroom.

Appreciative inquiry (Cooperrider & Srivastva, 1987) is a process of organizational change and transformation grounded in positive psychology (Seligman, Steen, Park and Peterson, 2005) and social constructionist thought (Berger & Luckmann, 1966). The central notion of AI turns on the idea of the Pygmalion effect (Livingston, 1969) which in essence says what we expect is what we usually experience. In recent years AI has become a widely used method of creating organizational futures that are desired by all stakeholders. AI has been applied, researched and documented as a transformational approach for developing leadership capacity in organizations (Kierein & Gold, 2000; Ludema, Whitney, Mohr, & Griffin, 2003; Bushe & Kassam, 2005). In addition it has been useful for engaging participants in a collective
process of re-framing and generating possible futures in a rich variety of domains including organization structure (Cooperrider & Whitney, 2001; Ludema, Whitney, Mohr & Griffin, 2003; Cooperrider & Avital, 2004), personal relationships (Stavros & Torres, 2005; Kelm, 2005; McNamee & Gergen, 1999), adult education (Lander, 2002), and diversity enhancement (Fry, Barrett, Seiling, & Whitney, 2002). Further use of AI has found solid footing in higher education (Neilsen, Winter, & Saatcioglu, 2005; Neville, 2008; O’Connor & Yballe, 2007; Yballe & O’Connor, 2000; Yballe & O’Connor, 2004).

In this session participants will learn the fundamentals of AI and how it is used in this in-class exercise (Conklin, 2009). We will review the 4-D process (Mann, 2001) and how that aids in directing the in-class conversation in appreciative ways which helps avoid the all-too-common culture of complaint so popular in organizational experience. The AI exercise results in a set of ideals co-created by you and your students that can serve as a benchmark of sorts against which you and the students can gauge your experience. This can serve as a platform for discussing class processes and practices over the term that are or are not helping to generate the desired future state identified at the beginning of the semester. Participants will be provided with slides that they can use to facilitate the method when they return to their classrooms.

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Getting Students to Volunteer for Learning by Using the Theory of Planned Behavior
In the Classroom

Nathan Hartman Illinois State University

Today’s classroom is characterized by an increasingly short-term focus and this has changed the nature of the relationships faculty have with their students. While students obviously have the intention to participate in their development their actual attitudes and norms for development are often not very effective. Frankly, students’ attitudes and learning norms are often much less effective than even experience faculty have hoped for in the classroom. Ultimately, faculty find themselves competing in the classroom with distractions like technology, for example. These types of distractions can easily transport students out of the classroom, especially those students’ skeptical about the possibility that another course assignment will spark an interest that eventually grows into a transformative learning experience. Yet, faculty know many educational experiences often enhance learning (Kolb & Kolb, 2005).

The quest for faculty is on how to raise students’ awareness and help them be mindful as they try to disengage from automatic thought patterns, ingrained negative attitudes about school assignments, and predetermined expectations of how to develop their critical thinking skills (Carlson, 2013). By so doing students may strike upon salient and meaningful elements of the learning that take on significance for them, which may be ideas soon needed as they are pursuing an education related to their intended careers. Self-directed opportunities that are positive and engaging allow students the most ownership in learning. Grant (2008) suggested engaging experiences result in higher levels of persistence, performance and productivity. It can occur when the students feel naturally drawn, or pulled, toward completing their work. The decision to expend effort is based on personal enjoyment, self-determined, and autonomy (Kehr, 2004). Prosocially motivated, students can be particularly outcome focused and they see the task as a
means to reach their overarching goal of benefiting others.

Given the latitude of freedom, students can be encouraged and respond enthusiastically when they believe have the need to do coursework. In this session participants will discuss how the theory of planned behavior can be used in to facilitate better attitudes and motivation toward students voluntarily engaging in learning activities. Hurtz and Williams (2009) suggested separating learners from negative past learning experiences and providing a supportive environment are antecedents to engaging participation. I will review activities I developed over several iterations that I have found to be successful. Generally, these have included engaging students in behaviors that naturally prevent them from using technology during classroom debriefs or making students accountable for sharing their learning through conversations rather than scripted presentations. I will also discuss how a simple concept like sharing what was learned from a team project perpetuated the discourse of learning in a course well beyond course requirements. Given this, I will show how student control over participation and higher voluntariness related to improved participation, stronger intentions to participate and better learning experiences. This has been a welcome change to the classroom climate and one I believe leads to more sustainable learning; that which stays with the student long after the course has ended, I hope!

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Developing Effective Leaders: Leveraging Strengths to Engage the Millennial Student

Patricia Lanier; University of Louisiana at Lafayette

Luthans (2002) defines positive organizational behavior (POB) as “the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today’s workplace” (p. 59). The psychological capacities - or psychological capital as Luthans and his colleagues now refer to it - are comprised of confidence and self-efficacy to tackle the goal or challenge, optimism or belief in one’s ability to succeed or perform well, hope as perseverance to achieve performance goals, and resiliency to bounce back or redirect one’s energy to achieve success (Luthans, Avolio, Avey & Norman, 2007). Yet in the classroom educators frequently intersect with the cultural artifacts where these students have received rewards for effort (i.e., everyone gets a trophy) without regard to results, which for many may have brought about in them a false sense of accomplishment. Similarly, popular thinking in the practice of manager development has shifted to developing strengths, (i.e., utilizing the StrengthsFinder assessment focusing on talents and strengths), but educators do find difficulty with engaging students that look in the mirror and already find a pristine record of accomplishments.

The trend of encouraging students to take control of their development is prevalent in academia. While empowering, this trend collides with the literature on hubristic pride (Carver & Johnson, 2010; Humphrey, 2013) informing this session. As contrasted with other generations, “Millennials” have heightened levels of self-esteem and narcissism overall, as well as a lower perceived need for maintaining a developmental focus (Deal, Altmand, & Rogelberg, 2010). The inference from a lower developmental focus is reduced engagement with coursework and the
high levels of self-efficacy among these as yet unproven young leaders confirms to them that development is likely unnecessary. Consequently, this may be a “fatal flaw” that educators have to gently address, as the millennials’ inflated regard for their actual abilities prevents these students from sincerely engaging in developmental activities.

This session proposes tips on how to allow students to focus on strengths, while still engaging students in a course and coursework. Ideas on capturing an understanding of who these students are and how they choose to invest their time, talents, and resources are also provided. Tsai and Tai’s (2003) research suggested this group is more likely to engage fully in coursework if the instructor signals the importance of the activities specific learning goal rather than offering students the opportunity to voluntary reflect on the developmental implication of their effort.

Participants will learn the basic tenets of student engagement and successful assignments used to develop students. These tips have been utilized in an upper division elective business courses, but these techniques can be applied to multiple learning environments including undergraduate, graduate and executive education programs.

References


The Live Case: Hope is Not a Strategy

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Too often, even (and sometimes, especially) highly intelligent students think strategic management is simply intuitive, or they fail to see the larger picture, choosing instead to focus on immediate numbers or small things they can control and to “hope for the best” (Martin, 2004). Students may tend to think success is based on happenstance because they see only anecdotal evidence, rather than what is countered by reality. “Luck and circumstance can explain why some companies are blessed with initial, short-lived success. But only a well-crafted, well-executed, constantly evolving strategy can explain why an elite set of companies somehow manages to rise to the top and stay there, year after year, pleasing their customer, shareholders, and other stakeholders alike in the process” (Thompson, Peteraf, Gamble, & Strickland, 2014).

Clearly, manipulating numbers and “hoping” are not sufficient ingredients for successful performance. Instead, we have scientific inquiry, which tells us that effective strategic management includes crafting a business model that creates value.

It is important students learn that truly effective strategic management includes creating value for the firm and its stakeholders and that deliberate focus on a value – price – cost framework leads to both value creation and attractive outcomes. In a free-form interaction between players (suppliers, firms, and buyers), adding value to all stakeholders is accomplished through the notion of cooperative game theory (Brandenburger & Stuart, 2015). A firm wants to create value for itself, but to ensure survival, it must do so without crushing its suppliers or depleting its buyers. In this context, and to have positive added value, the firm must enjoy a “favorable asymmetry” between itself and other firms. Four ways to for this favorable asymmetry to arise are: 1) A firm increases a buyer’s willingness to pay – making its product or service more appealing; 2) A firm
decreases the opportunity cost of its suppliers for providing resources to the firm – reducing the suppliers’ cost of doing business with the firm, etc. (“value-managed partnerships”); or, if the supply is human assets, the firm can offer non-salary benefits other firms cannot; 3) The firm can lower the buyers’ willingness to pay for other firms’ products – through negative advertising or creation of switching costs; and 4) The firm can raise the opportunity cost to suppliers of providing resources to other firms – through influencing perceptions or creating switching costs.

To that end, I have found another kind of classroom ‘value proposition’ in offering students the opportunity to test the strategic effectiveness of a value - price - cost framework in an experiential way that makes them responsible for planning, implementation and results. The simulation, or “live case,” I have used most frequently is Glo-Bus, an online, PC-based exercise in which student teams (called “co-managers”) run a digital camera company in head-to-head competition with companies run by other class members (Karriker & Aaron, 2014). Throughout the course and the simulation, I encourage students to pursue success in context of a value - price - cost framework, or the customer value proposition, in relationship with financial and operational details. For example, company co-managers have multiple decision screens in which to achieve an effective balance between the customer value proposition and the profit formula. This practice is where they sometimes get lost in the trees of numbers, and I am always calling their focus back to the strategic forest of enhancing the firm’s image and perceived value.

Student-team “reveal” comments tell us what they have learned about the importance of not only a deliberate strategy, but also of one that takes the market into account as it creates value for stakeholders:
“What we [learned] is that these are the daily decisions that managers need to make, and it can be confusing and complicated. Having a strategy is extremely important for information these decisions, at least providing a framework for them.”

“Overall, we learned that business strategy is constantly evolving to meet the demands of the economic environment and competitors in the marketplace. It is important to have a well-established business strategy from the beginning, but understand that this strategy will need to be adjusted.”

This roundtable session will provide a brief overview of the simulation I use, along with ideas for how such activities may be contextualized in the course schedule and deliverables. Additionally, we will discuss, and perhaps brainstorm regarding, supporting activities that may enhance and/or reinforce student learning in the live-case format.

References


LAW FIRM REPUTATION SIGNALING OF PERCEIVED VALUE
OF INITIAL PUBLIC OFFERINGS

ABSTRACT

Business leaders may seek to use the reputation of prestigious law firms to enhance the perceived value of initial public offerings (IPO). Companies may fail to maximize IPO proceeds due to underpricing of their stock offering, since subsequent investors must determine the value of companies in the absence of complete information. We investigate the direct and moderating effect on perceived value that is linked to the prestigious law firms and their nation of domicile. Our findings suggest that the additional expenses that business leaders incur in hiring prestigious law firms may not translate to greater IPO financial benefits.

Key Words: Signaling Theory; Initial Public Offerings (IPOs); Strategic Leadership
INTRODUCTION

When stocks are first issued on an exchange, the challenge for the underwriter is to set an initial price that will induce investors to purchase the stock, but not forgo the opportunity to maximize profits. Underwriters set a price that is not so high that investors will choose to purchase the stock, but not lower than what the market is willing to bear otherwise “equilibrium underpricing,” is achieved, then the underwriting investment banks (IBs) will not leave money on the table in the IPO (Gilson & Kraakman, 1984). Thus, determining means by which to minimizing this underpricing amount is of critical importance to the investment banks and the firms they underwrite in order to maximize profits.

During an IPO, investors are usually looking for signals of quality like reputational intermediaries, which is a proxy for that of the issuing company (Connelly, Certo, Ireland, & Reutzel, 2011; Sanders & Boivie, 2004). There has been a large body of literature that looks to the prestige of the investment bank as a signal of quality of the underlying company. Top-ranked investment banks tend to have a greater influence on pricing than those banks that do not enjoy a comparatively high level of prestige (Carter & Manaster, 1990; Higgins & Gulati, 2003; Krishnan, Ivanov, & Masulis, 2011). Auditor prestige has also been investigated as a signal of quality (Balvers, McDonald, & Miller, 1988; Beatty, 1989). However, the prestige of law firms that represent the issuing firm and the bank managing the IPO has received limited attention beyond a general analysis and with a view more on post issue performance (see e.g., Barondes, Nyce, & Sanger, 2007). In another study involving law firm prestige, Beatty & Welch (1996) ultimately did not find a statistically significant relationship of law firm reputation and IPO underpricing.
This paper attempts to shed additional light on the effect of law firm prestige on the underpricing of IPOs. More precisely, the research question is twofold. Does the prestige of legal counsel that is located in the United States, is an international firm, or is a combined effort of U.S. and international law firms have an effect on IPO underpricing? Further, does law firm prestige also act as a moderator of the influence of underwriting investment bank reputation on IPO underpricing?

This is an important consideration because it will affect whether companies’ leaders will be incentivized to select more prestigious legal representation when commencing an IPO in the United States. Investment banks will have a similar interest in that they either explicitly select the legal counsel that is to be engaged in the IPO process or passively accept the choice of law firm made by the IPO Company that they are underwriting. Further, this analysis will address an important gap in the literature regarding the nationality of the representing law firm on international IPO underpricing.

Thus, to answer the question, we shall investigate the first-offer IPOs that were initiated by international companies in United States exchange. The nationality of the law firms that represent the company that is the subject of the IPO (i.e., “Issuer Law Firm”) or the managing investment bank that is underwriting the IPO (i.e., “Manager Law Firm”) is specifically taken into consideration. Unlike Beatty and Welch’s 1996 study, we find that the inclusion of law firm nationality as well as a separate determination of manager and issuer law firms does result in statistically significant relationships between law firm prestige and underpricing.

We find that the prestige of issuer law firms have a marginally significant direct effect on IPO underpricing only when at least one of the law firms is domiciled in the United States. However, regardless of the country of origin, the prestige of the law firms representing the issuing
company has a moderating influence on the underpricing of the IPO. Interestingly, this is a curvilinear relationship as which will be analyzed in greater detail in the results portion of the paper. The prestige of manager law firms has a direct negative effect on underpricing regardless of whether the law firms are only from one country or if firms from multiple countries are engaged to represent the investment banks. However, the prestige of the managing law firms does not have an interactive moderating effect on the prestige of investment banks on underpricing.

This paper provides a unique contribution to existing literature in four important ways. First, we incorporate a novel means of determining law firm prestige in addition to more traditional methodologies. Second, we include the nationality of the law firms that represent the issuer or manager, and the subsequent reputational influence on underpricing of the IPO. Third, we expand on existing research on the effect of investment bank prestige on underpricing to include the influence of prestigious law firms as reputational intermediaries as a potential moderating effect. Finally, we find evidence that the combined influence of law firm prestige and that of investment banks present a net curvilinear relationship that has not been identified in prior literature relating to the influence on IPO pricing and the associated reputational intermediaries.

THEORY DEVELOPMENT AND LITERATURE REVIEW

IPO Process

Firms that seek to offer shares of stock on the open market have to make several critical decisions regarding who will provide services to facilitate the process. An initial public offering (IPO) requires an investment bank to underwrite the value of the shares and provide investors with the opportunity to purchase shares so as to provide assets to the firm. Accounting firms are also
engaged to ensure the financial oversight of relevant valuations and transactions. In all cases, it is incumbent on all parties to the transaction to ensure that legal and regulatory compliance associated with the stock exchange on which the shares will be listed is followed. Law firms are engaged to provide the necessary legal support to the firm that is issuing the stock and the investment bank(s) that will underwrite the stock offering.

When investment banks agree to underwrite an IPO, they anticipate a level of profitability that will allow them to induce large investors to provide capital to the issuing firm. The investment bank will take the risk that the stock to be issued will not generate the capital sought by the issuing firm because there is insufficient interest as an opportunity for financial growth. Conversely, when there is a comparatively higher level of interest in investment, the IB will reap the benefits of higher stock prices that large investors are willing to pay.

Large investors that invest in the IPO shares will then offer these shares to the open market, thus allowing for purchasing opportunities by all other potential investors. The price that the shares are sold on the market presents a similar challenge to the large investors to that of the issuing firm. Selling the shares at too low of a price will leave potential profits unrealized. Offer the shares at too high of a price will cause outside investors to fail to purchase the stock, driving the price of the stock down in early trading. A price that is reached at the end of the first day of trading that is lower than the initial offering price will signal potential weaknesses of the issuing firm, since it indicates an overconfidence in the future potential value of the newly-listed firm.

Avoiding a closing price on the first day of trading induces investment banks to set a price that is more likely to be lower than it could have been to maximize profits. The setting of an initial offering price that is lower than the close price of the share on the exchange on the first day of trading is known as “underpricing”. A large spread between the initial price and the closing price
indicates a comparatively large spread of lost opportunity for profits to the issuing firm and the underwriting investment bank. Accordingly, it is of the utmost importance to all parties associated in the offering of a stock on an exchange that underpricing be minimized to the extent possible.

Businesses that are not publicly held do not have the obligation to provide detailed information regarding their business practices, strategy, leadership, and prospects for profitability as those that are listed on stock exchanges. Accordingly, there is an asymmetry of information among potential investors. According to Beatty & Ritter (1986), market participants can be separated into two distinct groups: those that are informed and those that are uninformed. The investment banks and accounting firms that engage with the issuing firms have access to highly detailed information prior to issuance of an IPO and comprise the “informed” investors. The resulting asymmetry of information is a considerable influence on resulting underpricing of the IPO (Cohen & Dean, 2005). On balance, outside investors do not enjoy this opportunity to review the financial prospects of the firm and remain relatively uninformed.

Reputational Intermediaries to Signal Value and Reduce Underpricing

The reputation of the parties to the transaction provides key signals to the soundness of the issuing firm. Investment banks that are the highest ranked in the industry demonstrate a level of confidence in the offering as compared to smaller or relatively unknown firms (Carter, Dark & Singh, 1998; Carter & Manaster, 1990; Certo, 2003; Gulati, & Higgins, 2003; Krishnan, Ivanov, & Masulis; Loureiro, 2010; Megginson & Weiss, 1991; Titman and Trueman, 1986). Investors are logically able to discern that a well-established investment bank would undertake the effort
and risk associated with bringing an issuing firm to market if it was sufficiently certain that the issuing firm was of high quality (Hambrick & Pollock, 2008).

The prestige of auditors involved in the transaction also signal the investment potential of an IPO (Beatty, 1989). Auditors have perhaps the most intimate understanding of the current and past financial details surrounding firms’ operations. They know all facets of cash flow, profits, balance sheets, and related trends exhibited by the firm prior to being offered for sale. Outside investors can anticipate that more prestigious auditors are able to provide a level of service to the issuer and banks to ensure a full understanding of the financial status of the offering (Balvers, McDonald, & Miller, 1988; Michaely & Shaw, 1995; Weber, & Willenborg, 2003). Drawing from the assumption that auditor size is a surrogate for audit quality, other studies report the presence of a large auditor is associated with less IPO underpricing (Beatty, 1989; Datar, Feltham, & Hughes, 1991).

**Value of Law Firm Prestige**

For each party of the IPO process, legal counsel is closely intertwined with all transactions. The issuing firm must comply with all of the legal and regulatory requirements of an IPO. These requirements include proper filing of necessary documentation for the Securities Exchange Commission (SEC), state incorporation filings, and contractual obligations among all parties. The investment banks must adhere to these legal requirements as well, since their obligations are necessarily intertwined with those of the offering firm. The issuing firm must rely on the capabilities of their legal representation to not only ensure compliance, but also protect its interests in relationship to the investment banks and all other outside parties (Krishnan & Masulis, 2011).
Similarly, investment banks rely on legal counsel to safeguard its interests against competing goals of all other parties.

Due to the relative lack of information that is inherent with a first issue IPO of foreign companies in United States markets, IBs and subsequent investors will seek to look beyond the financial reporting of the firms they underwrite in order to set an offering price (Bell, Moore, & Al-Shammari, 2008). The prestige of the law firms representing both the issuing firm as well as that of the firms they select to facilitate compliance for their own interest will provide a signal of quality of the issuer (Barondes, Nyce, & Sanger, 2007; Gilson & Kraakman, 1984; Schwarcz, 2007).

Law firms that represent issuers or managers in the IPO process may solely reside in the United States or in the foreign country where the issuing firm is domiciled. When more than one law firm is representing the issuer firm, and at least one firm is located in the United States while the other(s) are located outside of the United States, there is a greater propensity for conflicts of interest and divergent expertise, even though all firms are charged with representing the issuer. IBs may be unable to determine the level of prestige of each firm in creating value. If all firms work in concert with each other and have complementary expertise, then the value of the mixed law firms is enhanced.

However, law firms with higher levels of prestige would have a greater capability to exert their capabilities to disrupt the IPO process if it is they determine that it is in their clients’ best interest to do so (Choi & Gulati, 2004; Okamoto, 1995). If the law firms fail to agree in legal matters, duplicate efforts, engage in practices that are in their own best interests, or otherwise hinder the IPO process, then there would be a greater risk to the IB and investors that the value cannot be accurately ascertained.
Decision of First-Issue IPOs to List on United States Stock Exchanges

An issuing firm is not required to be domiciled in the United States in order to be listed on the New York Stock Exchange (NYSE), NASDAQ, the NYSE Amex Equities Exchange, or over-the-counter (OTC) trading. This paper recognizes the challenges associated with acquiring sufficient knowledge to make the decision to invest when a non-U.S. firm that has never been listed on any exchange anywhere in the world initiates an IPO on a U.S. exchange. Since investors in U.S. stock markets are not able to acquire information from foreign firms as readily as those that are domestically domiciled, and then there is a greater reliance on other signals of quality, including the reputation of parties to the IPO transaction.

Investors may be more inclined to infer legitimacy of firms that are able to satisfy the requirements of U.S. exchanges as well. International firms are more likely to undertake the additional effort to list on U.S. exchanges in order to reveal value and to demonstrate the potential of greater profits than would be achieved by listing in their own country (Blass & Yafeh, 2000; Carter, Dark, & Singh, 1998; Hasan & Waisman, 2010; Pagano, Roell, & Zechner, 2001).

Foreign firms that cross-list in the U.S. and undertake IPOs are more likely to employ reputable underwriters if the firms come from countries with poor shareholder protection. The additional monitoring provided by reputable underwriters may help overcome the skepticism of U.S. investors, and partially explains the higher valuation these firms obtain after the offering (Bruner, Chaplinsky, & Ramchand, 2004).

HYPOTHESES
Relationship of prestige of issuer law firm to IPO underpricing

The prestige of the firms provide signals to the investment banks in setting an offering price and to investors who will seek to buy the offered shares on U.S. markets. Where there are law firms that are located in only one country, there will be some degree of uncertainty whether the law firms will fully understand the nuances of each issuer’s originating country. Law firms that are located in the United States may have a high level of expertise in matters relating to domestic stock exchanges, but lack a full understanding of those legal issues associated with foreign countries. Conversely, law firms that are located in countries outside of the United States may not have a level of expertise required for compliance with U.S. exchanges. These “foreign” firms may therefore engender a degree of risk that is equivalent to that of U.S. firms in that there may be deficiencies in capabilities.

Further, the issuer firms are engaged to zealously represent the financial interests of the issuer, and may therefore act in a manner that is detrimental to the IBs. Coupled with the potential for reduced expertise, this possibility exacerbates the level of risk inherent in a transaction. Due to this uncertainty, IBs may be inclined to set an issuing price that is lower than is required to generate sufficient interest in the IPO by investors. An alternative reason for potential underpricing is that investors may subscribe a greater level of confidence in those issuing law firms that are representing IPO companies from the same region as the investors. For example, investors may interpret the choice of a law firm from the United States as a signal of value because the issuer would not be able to attract a prestigious firm if it was not a good investment opportunity. By over allocating value to issuers’ stock, higher stock prices than were anticipated by IBs resulting in
underpricing. With larger transactions that are anticipated to generate a comparatively higher level of investment proceeds, the exposure to potential loss by IBs is higher as well. To mitigate risk, the IBs may set a price that is relatively lower than would be set in a comparatively lower investment. Firms that multiple law firms from both the United States and foreign nations (i.e., mixed) involved in a transaction will increase uncertainly, since it will not necessarily be apparent whether it is a complementary relationship with greater potential for proceeds in the IPO increases the benefits of collaboration by prestigious firms. Thus,

_Hypothesis 1: The prestige of U.S. law firms (H1a), Foreign law firms (H1b), or Mixed law firms (H1c) representing Issuer companies will increase IPO underpricing._

Manager law firms that represent investment banks will necessarily have a much closer relationship to the IB than that of the issuer law firm. Manager law firms have the role of seeking to promote the best interests of their IB clients and ensure compliance to insulate them from potential liability. Since the IBs will select the firms with whom they engage, they are able to more accurately determine the expertise of these law firms. Since there is less asymmetry of information as to competence, there is a lower risk to the IBs associated with uncertainty.

Higher prestige manager law firms will decrease the information asymmetry that the IB will have in setting the IPO initial price. Accordingly, a price that is more closely related to that which future investors will pay can be set. This will be the case regardless of whether the law firms are solely from the United States, countries outside of the U.S., or are a mix of law firms from multiple countries. Thus,
Hypothesis 2: The prestige of U.S. law firms (H2a), Foreign law firms (H2b), or Mixed law firms (H2c) representing Manager IBs will decrease IPO underpricing.

Existing literature has generally found that the prestige of investment banks affects underpricing such that as the prestige of IBs increases, the degree of underpricing decreases (Krishnan, Ivanov, & Masulis, 2011; Carter & Manaster, 1990). IBs that have a greater market share of IPOs (i.e., more prestigious) are more likely to have experience in managing the risks associated with underwriting first-issue foreign offerings on U.S. exchanges. As such, IBs will have the potential to incorporate their knowledge of these IPO transactions in setting a more appropriate offering price that will conform to the investors’ expectation of value. Highly prestigious IBs have the resources and experience to manage IPOs. In addition, prestigious law firms that represent the issuer company will have the skill and expertise to cooperate with these IBs. Both the IB and the issuer law firms can also afford to devote resources to ensure that concerns that may arise in the closing of the IPO can be addressed prior to the final offering, and can stimulate the sharing of information to set an appropriate offering price. This ability to facilitate the public offering will increase the overall signal of value of the company that is engaged in the IPO process. Moreover, despite the mixed signals associated with multiple firms from differing nations, IBs that have more experience in first-issue IPOs are more able to discern whether these multiple law firms are able to pool resources to complement each other’s capabilities. Accordingly, there will be a propensity to increase the combined negative effect on underpricing. Thus,
Hypothesis 3: The prestige of U.S. law firms (H3a), Foreign law firms (H3b), or Mixed law firms (H3c) representing the Issuer company will positively moderate the reduction of IPO underpricing resulting from the prestige of the underwriting Investment Bank.

Higher prestige IBs will have more experience in the benefits of relying on manager law firms, and will use their resources to increase the benefits of this reliance for larger IPO deals. With this combined level of prestige between the manager law firm and IB, then underpricing will be reduced. Information asymmetry is at its minimal level with respect to this relationship, regardless of the countries in which the manager law firms are domiciled. Thus,

Hypothesis 4: The prestige of U.S. law firms (H4a), Foreign law firms (H4b), or Mixed law firms (H4c) representing the Manager IBs will positively moderate the reduction of IPO underpricing resulting from the prestige of the underwriting Investment Bank.

The research model and associated hypotheses are set forth in Figure 1.

[[Insert Figure 1 about here]]

DATA & ANALYSIS

Sample and Descriptive Statistics

The data used in this paper were obtained from the Securities Data Corporation (SDC) Global New Issues database. Only those firms that have never issued stock on any exchange
throughout the world and initiated IPOs in the United States for their first offering were selected. The time period investigated encompassed IPO between the years 1989 to 2008. Only firms that were domiciled outside of the U.S. but chose to list on the NYSE, NASDAQ, or AMEX were considered. These data included firms located in Canada and Mexico. Closing stock prices on the first day of trading following the IPO on the U.S. exchange was obtained from the SDC database and confirmed using stock price data from the Center for Research in Security Prices (CRSP) and Bloomberg financial information databases.

The law firms that represented the issuer or manager in each IPO transaction were coded as “U.S.”, “Foreign”, or “Mixed.” In preparing the SDC data, “Issuer Lawyer Contact Nation” and “Manager Lawyer Contact Nation” fields were the primary determinant of nationality of the law firms. Law firms were coded as “U.S.” if no foreign firms were listed. The firms were coded as “Foreign” if no U.S. firms were listed “foreign.” If a U.S. firm was listed as the issuer lawyer, and a foreign firm was listed as manager lawyer (or vice versa), then the law firms were coded as “Mixed.” Nationality of law firms was confirmed using the Martindale.com website, which lists country of domicile for virtually all law firms throughout the world. Further, internet sites for the listed law firms were reviewed to confirm nationality of domicile.

The sole dependent variable for this analysis is the percentage that the IPO was underpriced by the IB. In order to calculate this variable, the price of the IPO stock when issued is subtracted from the price at the close of the first day of trading following the issuing of the IPO stock.

**Measuring Prestige**
Researchers have long used market shares and league-table rankings to identify top-tier financial intermediaries and have equated top-tier ranking with reputation. The reputation of law firms that are engaged to represent the issuing firm and the managing bank for the IPO may be measured in a variety of ways. Investment bank prestige has been measured as a ratio of the market share of IPOs underwritten by each bank to all issues in a given time (Megginson & Weiss, 1991). We follow this methodology of measuring IB prestige using the market share of each transaction relative to the total volume of all first-issue IPOs.

Alternatively, the level of prestige may be indicated by outside evaluation of industry prestige. Investment banks have national rankings that can signal prestige (Carter & Manaster, 1990). In addition, auditing firms may be assigned a level of prestige by being classified in the “big eight” (Balvers, McDonald, & Miller, 1988). A dummy variable is then used such that highly ranked firms are accorded the value of one, while all others are valued at zero.

This paper evaluates prestige of law firms using both methods. First, the market share of all transactions in which the law firm provides legal counsel was calculated by dividing the sum of proceeds relating to each firms’ IPO transactions by all first-issue IPO transactions that occurred in the twenty-year time period used in this sample. Second, we assigned prestige to each law firm using the *AMLaw 100*, which ranks national law firms by revenue. This publication has been maintaining this list since 1987, which is prior to the time period of the present sample. A dummy variable was included in the analysis such that firms appearing on the *AMLaw 100* were coded as being prestigious. It should be noted that all analyses that we conducted using both measures of prestige yielded similar results, with a higher level of measurable variance using the ratio method of calculating prestige.
We included controls relating to the proceeds of the IPO (logged), the year the IPO was finalized, and the industry by SIC code. We also controlled for the geographic region of the issuer company. In accordance with the SDC database, the originating nations of the issuing companies were combined into regions: (1) Asia Pacific (including China and Japan), Australia (including New Zealand), and North America (Canada), Caribbean, Europe, and Latin America (including Mexico), and South America. Canada had the highest number of first-issue IPOs, as was also found in a study by Hasan & Waisman (2010).

ANALYSIS AND DISCUSSION

IPO offer prices, share prices at close, and underpricing percentage were Winsorized to mitigate the effect of outliers. In so doing, penny stock transactions were excluded from the sample. A total of 587 first-offer IPO transactions were concluded in the 1998-2008 time period reported by the SDC database. There were 210 IPOs on the New York Stock Exchange (NYSE), 341 on NASDAQ, 22 on the American Stock Exchange, and the remaining 14 IPOs in the final data set were first sold Over the Counter (OTC). Of these transactions, 502 indicated the investment bank that was involved in the transaction. Summary statistics, including the prestige of law firms by national domicile are set forth in Table 1 and Table 2.

[[Insert Table 1 & Table 2 about here]]

It has been contended that the choice of law firms for all transactions is either directly made by the IBs, or is at least subject to passive approval (Balvers, McDonald, & Miller, 1988). Further,
prestigious entities may tend to be involved in transactions associated with the magnitude of the IPO in terms of the number of shares or anticipated proceeds. In order to address these considerations, we investigated the extent to which there could be correlation among the prestige of the law firms, investment banks, and associated IPO transactions. As is set forth in Table 3, all of these variables have low levels of correlation.

[[Insert Table 3 about here]]

In that all variables were continuous rather than count variables, we followed the ordinary least squares (OLS) methodology similarly utilized in analyses of reputational intermediaries’ effect on IPO underpricing (Barondes, et al. 2007); Iyengar & Zampelli (2008); Kroll, Walters, & Lee AMJ 2007). We included squared terms for the prestige of issuer law firms, manager law firms, and investment banks to investigate whether the influence, if any, was curvilinear. The sole dependent variable for all analyses is the percent of underpricing that occurs in IPO transactions. The results of the regressions for all hypotheses are set forth in Tables 4 & 5.

[[Insert Table 4 & Table 5 about here]]

Tests of Hypotheses H1 & H2

There is a negative influence, albeit marginally significant, on IPO underpricing for transactions where at least one law firm representing the issuer company is domiciled in the United
States. The influence is opposite of what was anticipated, suggesting that prestige of the issuer law firm is enough of a signal of company value to the market for IPO shares.

Thus, hypotheses H1a and H1c are not supported. Issuer companies that engage law firms that are solely domiciled outside of the United States reflect an influence that is also negatively signed, but is not statistically significant. As such, hypothesis H1b is not supported. The squared term of issuer law firm prestige has the opposite sign than that of the direct relationship, but none of these values achieved significance.

As was anticipated, hypotheses H2a, H2b, and H2c all achieve support with respect to the linear relationship between manager law firm prestige and subsequent IPO underpricing. This level of influence suggests that the initial offering price is set more closely to the finalized value of the market, so the underpricing of the IPO is reduced. The squared term of the manager law firm prestige is also significant, and indicates that higher level of managerial prestige has the potential to cause the market to misinterpret the value of the company. Interpretation of the overall influence of law firm prestige so as to incorporate both the linear and curvilinear effect is circumspect, since the significance of the relationship is removed in the fully saturated model (Model 9) that includes all of the potential influences on IPO underpricing that we investigate.

Tests of Hypotheses H3 & H4

All of the regression models present a negative and significant linear relationship between investment bank prestige and IPO underpricing, which is in line with existing research (Krishnan,
Ivanov, & Masulis, 2011; Carter & Manaster, 1990). The interaction between the levels of prestige for law firms representing the issuer companies and the IBs involved in the IPO yields interesting results. Regardless of the domicile country of the issuer law firm, the prestige of the representing firms has a positive and significant moderating linear effect on underpricing. Thus, hypotheses H3a, H3b, and H3c all receive support. This suggests that the prestige of the issuer law firm increases the impact that the investment bank has on how the market perceives the overall value of the underlying company. There is no statistically significant moderating relationship of the prestige of manager law firms on the impact of IB prestige of underpricing, so H4a, H4b, and H4c are not supported.

**Combined Effect of Curvilinear Relationship**

In that the squared terms for both issuer law firm and investment bank prestige are positive and significant for all models, further analysis of this combined effect is warranted. An incremental increase in prestige of the investment banks that underwrite IPOs is empirically shown to result in a declining level of IPO underpricing. However, the squared term of IB prestige indicates that underpricing can potentially increase. Figure 2 superimposes both the linear and curvilinear influence of IB prestige on IPO underpricing.

[[Insert Figure 2 about here]]

We incorporated the moderating influence of issuer law firm prestige in the attempt to reconcile these competing influences. We utilized the fully saturated regression set forth in Model
4, and used fitted values to determine the overall trend. As set forth in Figure 3, we found that there was an overall curvilinear effect.

Accordingly, this relationship suggests that low prestige law firms and investment banks will result in greater uncertainty, and there will be a resulting increase in IPO underpricing. Interestingly, when there are highly prestigious issuer law firms and investment banks, underpricing is also comparatively high. In keeping with prior research, the overall result of the foreign firms seeking to be listed on U.S. markets will be that there will be some degree of underpricing, irrespective of the prestige of the associated transacting parties (Francis, Hasan, & Li, 2001; Zaheer, 1995).

**CONCLUSION**

The present analysis suggests that the prestige of law firms does matter with respect to IPO underpricing. Highly prestigious law firms that represent the manager investment banks will signal a higher level of quality of the IPO, and will therefore reduce underpricing. However, the issuer law firms that have higher prestige have the potential to actually increase underpricing due to increased levels of uncertainty. Accordingly, managers of firms will benefit from recognizing the level of prestige and the nationality of the firms when determining what firms should be engaged in the IPO process.
The present analysis opens the door to several opportunities for further research. First, we found that the prestige of the issuer and manager law firms, as well as that of investment banks, was not correlated. However, additional analysis would help in discerning whether investment banks influence the prestige attained by law firms that represent both the issuer companies and the managing underwriters. It is also plausible that law firms may have some influence on the prestige of other firms, as well as on that of investment banks. Second, incorporating additional reputational intermediaries in the analysis, such as accountancy firms (Iyengar & Zampelli, 2008), may provide further insight into the influence of law firm prestige. Third, the proceeds of IPO transactions could be tested as an independent variable along with an interactive effect rather than as a control variable. Finally, and perhaps of greatest immediate interest for managerial considerations, more research is required to determine the reasoning and implications of the net overall curvilinear influence of issuer law firm prestige and investment bank prestige on underpricing.

One could surmise that the market may perceive that more expensive and experienced firms were required to be engaged by the issuer company to manage potential concerns that would potentially cause the IPO to fail. This finding is of critical importance to companies who are undergoing the IPO process, in that incurring the costs to hire more prestigious law firms may ultimately result in lower IPO proceeds due to underpricing.

Management literature relating to reputational intermediaries suggests that organizational leaders should determine whether the incremental costs of engaging expensive and/or dominant consultative partnerships are necessary. Any decision made by management, so long as it is deemed to be rational and not based on managerial self-interest, will seek to maximize the benefits to the organization and its stakeholders. Maximizing the profit potential of listing on a stock
market and acquiring capital is a critical goal of the IPO process. Engaging prestigious law firms may only serve to increase transaction costs in terms of actual resources expended on using these firms and the potential for unnecessary delays in completing the IPO due to increased layers of bureaucracy. More notably, this study suggests that international companies listing on a stock exchange differing from that of their own country may be detrimental to the maximization of IPO proceeds if the prestige of the firm does not correspond with the nationality of the issuer or underwriting bank. Thus, it behooves managers of companies that are engaging in an IPO to take measures to signal the market value so as to avoid setting an offering price too low and suffer the opportunity cost of underpricing the stock.
WORKS CITED


H1: The prestige of U.S. law firms (H1a), Foreign law firms (H1b), or Mixed law firms (H1c) representing Issuer companies will increase IPO underpricing. (NOT supported)

H2: The prestige of U.S. law firms (H2a), Foreign law firms (H2b), or Mixed law firms (H2c) representing Manager IBs will decrease IPO underpricing. (Supported)

H3: The prestige of U.S. law firms (H3a), Foreign law firms (H3b), or Mixed law firms (H3c) representing the Issuer company will positively moderate the reduction of IPO underpricing resulting from the prestige of the underwriting Investment Bank. (Supported, with a net curvilinear effect)

H4: The prestige of U.S. law firms (H4a), Foreign law firms (H4b), or Mixed law firms (H4c) representing the Manager IBs will positively moderate the reduction of IPO underpricing resulting from the prestige of the underwriting Investment Bank. (NOT supported)
Table 1: Summary Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issuer Law Firm Prestige (% IPO market share)</td>
<td>587</td>
<td>2.32</td>
<td>3.41</td>
<td>0.002</td>
<td>10.63</td>
</tr>
<tr>
<td>Manager Law Firm Prestige (% IPO market share)</td>
<td>587</td>
<td>2.85</td>
<td>3.29</td>
<td>0.004</td>
<td>9.70</td>
</tr>
<tr>
<td>Investment Bank Prestige (% IPO market share)</td>
<td>502</td>
<td>5.78</td>
<td>7.31</td>
<td>0.003</td>
<td>21.87</td>
</tr>
<tr>
<td>IPO Offer Price ($US)</td>
<td>587</td>
<td>14.43</td>
<td>6.53</td>
<td>3.00</td>
<td>47.45</td>
</tr>
<tr>
<td>Closing Price following IPO ($US)</td>
<td>587</td>
<td>16.07</td>
<td>8.41</td>
<td>1.87</td>
<td>71.00</td>
</tr>
<tr>
<td>Underpricing (Offer - Closing Price) ($US)</td>
<td>587</td>
<td>1.64</td>
<td>4.58</td>
<td>-29.51</td>
<td>39.50</td>
</tr>
<tr>
<td>Underpricing (%)</td>
<td>587</td>
<td>11.47</td>
<td>26.18</td>
<td>-89.61</td>
<td>162.83</td>
</tr>
<tr>
<td>Shares in IPO (millions)</td>
<td>587</td>
<td>8.81</td>
<td>14.60</td>
<td>0.33</td>
<td>225.22</td>
</tr>
<tr>
<td>IPO Proceeds (millions $US)</td>
<td>587</td>
<td>148.69</td>
<td>263.83</td>
<td>1.40</td>
<td>3,018.70</td>
</tr>
</tbody>
</table>

Table 2: Law Firm Nationality & Prestige Designation

<table>
<thead>
<tr>
<th>Law Firm Nationality</th>
<th>Total</th>
<th>Issuer Law Firm</th>
<th>Manager Law Firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>282</td>
<td>72</td>
<td>110</td>
</tr>
<tr>
<td>Foreign</td>
<td>220</td>
<td>59</td>
<td>95</td>
</tr>
<tr>
<td>Mixed</td>
<td>85</td>
<td>24</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>587</td>
<td>155</td>
<td>240</td>
</tr>
</tbody>
</table>

Table 3: Correlations

<table>
<thead>
<tr>
<th></th>
<th>Issuer Law Firm Prestige</th>
<th>Manager Law Firm Prestige</th>
<th>Investment Bank Prestige</th>
<th>Underpricing (%)</th>
<th>IPO Proceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issuer Law Firm Prestige</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager Law Firm Prestige</td>
<td>0.242***</td>
<td>1.000</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Investment Bank Prestige</td>
<td>0.104*</td>
<td>0.077+</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underpricing (%)</td>
<td>-0.055</td>
<td>-0.055</td>
<td>-0.040</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>IPO Proceeds</td>
<td>0.264***</td>
<td>0.196***</td>
<td>-0.021</td>
<td>-0.040</td>
<td>1.000</td>
</tr>
</tbody>
</table>

+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001
Figure 2: Linear and Curvilinear Influence of IB Prestige on IPO Underpricing

![Graph showing linear and curvilinear influence of IB prestige on IPO underpricing.]

Figure 3: Combined Influence of Issuer Law Firm & IB Prestige on IPO Underpricing

![Graph showing combined influence of issuer law firm and IB prestige on IPO underpricing.]

STUDENT IMPRESSION MANAGEMENT IN THE CLASSROOM

ABSTRACT

With the growing shift from lecture-style teaching methods to interactive and experiential group exercises, instructors need to know more about their students, such as their desired impressions, to adequately engage and support students’ social interactions. This study addresses this need by providing an overall understanding of the types of images that are important for students to project when interacting with others in a classroom. After a concise review of impression management literature and grounding our reasoning in the cybernetic theory (Bozeman & Kacmar, 1997) this study offers a glimpse of the positive impressions students desire to project in front of their peers and professors and the negative impressions students aim to avoid. With a two-part survey based on 269 responses, we measured students’ ranking of specific images and the effort level they exerted towards achieving or avoiding them. We offer suggestions of how these findings can be integrated into teaching for improved student learning and experiences.

Keywords: Impression Management, management education, value analysis
STUDENT IMPRESSION MANAGEMENT IN THE CLASSROOM

What do we know about self-impressions that students strive to attain in class? How do they want to be perceived by their peers? Or, by their professors? These questions about the role of students’ self-images in a classroom are largely unanswered in the current literature of impression management (Bolino, Long, Turnley, 2016). Impression management, which was anchored in self-presentation by Goffman (1973), involves a process of creating, maintaining or avoiding a desired image (Rosenfeld et al, 1995; Bozeman & Kacmar, 1997). The trend for impression management studies, continues to be heavily tied into the interview process (e.g., Adkins, Russell, & Werbel, 1994; Wilhelmy, Kleinmann, König, Melchers, & Truxillo, 2016; Roulin, Bangerter, & Levashina, 2014) and more recently into online interactions (Rosenberg & Egbert, 2011). Searches in pedagogical publications provided a scant number of studies that examined students’ impression management in the classroom (e.g., Becker-Lindenthal, 2015; Rui & Stefanone, 2013) most of which predominantly focused on online education. This paper hopes to set down the path of examining and leveraging potential effects of impression management in face-to-face classrooms and emphasize the need for understanding the role of students’ self-presentation in learning.

With a growing shift in teaching methods from lecture-style to interactive and experiential group exercises due to the onslaught of case analysis, group projects, advancing technology, and flipped classroom methods in college education, instructors need to have a deeper understanding of their student body, such as their desired impressions, to adequately engage and support students in classroom interactions. In fact, colleges do not provide professors with any information about students’ individual characteristics, such as personality, attitudes, experiences, strengths, values, expectations, learning styles, or goals. Having this information
would enable professors to more precisely understand student expectations and structure more individualized and optimized teaching methods to enhance students’ learning. Today, not only do most instructors build their course outline ahead of students’ registration, they primarily rely on their intuition and selective prior experience to craft courses with little regard for the characteristics and differences of their particular students. Once the course starts, few instructors ask students about their expectations in the course (Spiegel, 2012) and even less may inquire about their impression management and how they want to be perceived in class.

**Purpose**

Although it may not yet be feasible to gather and provide faculty with all the particular information about enrolled students, this study aims to provide at least a general insight of what impressions and self-presentations (Goffman, 1973) are important to students when interacting in a classroom. After a concise review of impression management literature and grounding the thought process in the cybernetic theory (See Appendix A) this study offers a glimpse of the positive impressions students desire to project in front of their peers and professors and the negative impressions students aim to avoid projecting in front of their peers and professors. With a pilot and a survey based on total of 239 responses, we measured students’ ranking of specific images and the effort level they exerted in their impression management. We offer suggestions for integrating these findings into teaching for improved student learning experiences.

**RESEARCH METHODOLOGY**

**Test Pilot**

To identify what impressions are important for students, we first used an open-ended questionnaire pilot administered to thirty undergraduate sophomore students in the Northeast of the U.S. for extra credit (see Table 1). They were asked to list the top five positive impressions
they wanted for their peers and professors to have of them. We also inquired about the negative impressions they wanted to avoid projecting to their peers and professors. Together, responses from the four types of questions were grouped on the basis of synonyms provided by the Oxford dictionary shown in Table 2. Words that appeared most in the open-ended section were used to anchor its category. The top five categories for each question were selected for further inquiry in the final survey.

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Insert Table 1 and 2 about here

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**Population and Survey Design**

For the final survey, we asked 239 students enrolled in marketing courses and participating in the Marketing lab for extra credit. The racial background of respondents included 68% White, 14% Asian, 12% Hispanic and 6% other where 63% were women. The average grade point average (GPA) was 3.42 out of 4.0 with standard deviation of 0.32. The following GPA distribution contained 13% students with less than 3.0; 19% between 3.1 and 3.3; 27% between 3.4 and 3.5; 29% between 3.6 and 3.7; and 12% above 3.8.

The final survey listed the five top impressions from the open-ended questionnaire and asked participants to rank the impressions in the order that best reflects how important it is that their peers or professors believe them to be the listed item. This process was repeated for the impressions that students most wanted to avoid. The second section of the survey asked participants to indicate how much energy and effort they were willing to exert in order to be perceived by peers and professors, as each of the listed items. Again, we asked about impressions that participants desired to avoid. The level of effort exerted to attain or avoid these images was
measured on a five point Likert scale, with one being the least amount of effort and energy, and five being the most.

**DATA ANALYSIS**

We first calculated the average rankings for all impressions displayed in Table 3. We identified top two images per target group. For peers, students showed that they want to be perceived as reliable with average rank of 2.53 and friendly with 2.68. For professors, students most valued being seen as hard-working which had an average rank of 1.93 and intelligent with a rank of 2.60. On the other hand, while they wanted to avoid being seen by peers as annoying with an average rank 2.35 and unreliable with 2.86, students revealed that they most wanted to avoid being perceived by professors as disrespectful with 2.13 and unmotivated with 2.86.

A few interesting findings can be drawn. Intelligence or avoiding being seen as *dumb* is not the top image that students are concerned with in the academic environment. While the perception of being unreliable serves as the second most avoided negative image by average rank for peer targets, it is the least avoided negative image when targeting professors. Avoiding being seen as unreliable by other peer students was more important than by professors.

To ensure the validity of our instrument and understand the relationship between desired images and effort, we compared average ranking and effort level for the five impressions in each section shown in Table 3. The results revealed on overall congruence in the average effort levels given to positive impressions and their average rank of desirability. Both positive peer and professor impressions aligned: the impression with the highest rank was also given the highest average effort level. For example, with the lowest average rank of 1.99 the hard-working image was also top ranked of all positive impressions toward professors and was given most effort with the average of 4.26.
A slight misalignment occurred for negative impressions with the *unreliable* image targeting both peers and professors alike. With an average rank of 2.86, unreliability was the second most avoided image in the eyes of peers and jumped to number one as the top average effort of 3.98. Interestingly, students showed top preference for not being seen as annoying according to the rank average but yet admitted to exerting most effort towards not being seen as unreliable. Unreliability also moved up to the fourth spot over *lazy* in the top negative images projected towards professors with an average effort level of 3.99. Our findings suggest that avoiding this particular image takes relatively more energy than other negative impression. While validating the measurement instrument, this overall alignment also supports the cybernetic theory about motives that the more individuals want to attain an image the harder they will try to work for it.

On average students were willing to expend a greater amount of effort on managing the positive impressions presented to their professors than their peers based on an overall average effort of 3.70 toward peers and 3.86 toward professors. The same holds for managing negative impressions with 3.69 toward peers and 4.07 toward professors. In summary, students claimed to spend more energy on managing self-impressions when targeting professors than peers and exerted even more effort on avoiding making negative impressions in front of professors.

Using ANOVA in SPSS, we found that GPA was positively related to the effort levels students devoted towards impression management suggesting that students with a higher GPA use more impression management than students with a lower GPA. Specifically, 15 out of 20
items measuring effort levels turned out to be statistically different (p<.10) among students with various GPAs. Also, gender was associated with effort levels such that women indicated a higher willingness to manage desired impressions in a school environment. In support, 14 out of 20 effort level response items were statistically different (p<.05) between men and women.

Insert Table 4 and 5 about here

IMPLICATIONS FOR TEACHING

The above findings leave us with a number of important implications for teaching and pedagogical research. Evidence found in the alignment between average ranking of most items and effort (see Table 3) suggests all selected images are actionable and embrace some form of effort. Integrating Rokeach’s value research (Rokeach, 1968; Braithwaite & Law, 1985) which determined two types of values that people hold: instrumental (actively pursued) vs terminal values (static end-state) into impression management we compared value types to students’ desired impressions. Images that students yearn to project are primarily instrumental in nature. With the exception of intelligence, where one can argue that it carries a certain static or terminal quality, all other attributes are considered instrumental and imply an ongoing activity and effort as part of the image formation. The finding of instrumental value-type images among students informs impression management research (Leary and Kowalski, 1990) and apply it to education. It also offers a practical application for management professors to ask students about their instrumental values, which can shed light into students’ self-presentation motives in class.

Overall, we entice professors to consider impression management motives, goals, and effort levels in observing and supporting students’ interactions in a classroom. Suggestions
include creating a suitable environment for students to easily attain their desired image goals in order to lessen reliance on impression management tactics and thus enhance their overall experience in class. Professors should design class activities that emphasize reliability among students especially in the first part of the semester when first impressions are easily formed. Introductory group projects with small and easy interdependent activities that require students to be dependent on each other could foster a sense of mutual reliability.

With regard to the peer impression of being friendly, team activities provide ample opportunities for students to display friendliness. However, caution should be exercised here. Working on being seen as friendly may result in students exhibiting excessive agreeableness which has been positively associated with ingratiation tactics (Bourdage, Wiltshire, & Lee, 2015). Being too agreeable may hinder teammates from discussing important controversial task-related issues and undermine ultimate group decisions. Professors should design and grade group activities that allow students to display friendliness without jeopardizing group outcomes. On the other hand, professors should also teach students how to portray friendliness while being assertive in contributing on debatable issues. For example, negotiation exercises could be graded on both the end result and attained perception of friendliness.

A study of supervisors and subordinates found that witnessing ingratiation can increase one’s positive perception of people involved (Foulk & Long, 2016; Wayne, Kacmar, & Ferris, 1995). As such, faculty should be aware not to fall prey to this bias when observing students interacting with each other in class.

We found that students mostly want to be perceived as hard-working by professors, even more so than as intelligent. Therefore, in order to increase student experience and satisfaction, they should be given opportunities to demonstrate working ethics to professors. We suggest
assigning relatively small and easy tasks in a way that faculty can notice and evaluating students not only on knowledge or correctness but also on their effort.

In addition, one of the reasons students participate in extra credit assignments is to be recognized for their effort by professors (Pynes, 2014). We recommend that extra credit participation should be studied as a viable impression management tactic aimed at cultivating students’ hard working image in the eyes of their professors. Chiaburu, Stoverink, Li, and Zhang (2013) found that extraverts engage more in citizenship behaviors when motivated by impression management. Students also may participate more in extra credit assignments when motivated to appear as hard-working.

Surprisingly, being annoying was the most rated attribute that students avoid in their interactions with peers. In other words, being sensitive to others and following acceptable social norms prevents one from being seen as annoying. In team projects, it is important to establish early on social norms of communication, goals, and expectations. Team charters can be used to explicitly outline norm expectations for teammate interactions. Professors should also emphasize cultural differences among students that can affect social norms, behaviors, and the perceptions of being annoying.

Lastly, the most avoided negative impression involves the lack of respect toward professors. Students may not express their opinions or contradict professors when fearing to be regarded as disrespectful. For students who avoid disrespect above all other impressions, it is imperative to explicitly encourage challenging knowledge-based arguments for the sake of learning. It is also important for faculty to have discussions about disrespect towards each other and how both groups attribute respect.
This study was designed with the intent of learning what impressions are most valued by students, and what perceptions about themselves they fear most. We hope that the data would lead to a more effective teaching and grading styles that align educational goals and criteria with desired student impressions. Although the study has a number of limitations (e.g., self-reported data) it embarks on a new path of the importance of impression management and student social interactions on learning for future researchers and instructors. We also strongly advocate professors to demand evidence-based information about students from their institutions to help them apply more effective teaching methods for enhanced student learning experience and satisfaction.
REFERENCES


APPENDIX

APPENDIX A: Cybernetic Model of Impression Management

The theoretical reasoning for applying impression management into a classroom is grounded in the cybernetic theory (Bozeman & Kacmar, 1997). Cybernetic systems have three primary parts: a reference standard or goal, feedback, and a comparator. The comparator is the means by which a comparison is made between the feedback and the reference standard.

Environmental feedback is processed by the system or individual using a comparator in order to detect discrepancies between the reference standard and the feedback. There are three possible outcomes to this process: zero discrepancies, in which the system or individual does not have to perform corrective measures. Negative discrepancies, where the system or individual is not reaching their reference standard and corrective measures are needed in order to minimize these discrepancies, or the reference standard must be changed to reflect the feedback. Positive discrepancies, where the system or individual is exceeding the reference standard, in this case the discrepancies might be corrected, tolerated, or incorporated into the reference standard depending on the environment.

Impression management motivation can be understood as a function of perceived discrepancies between feedback received from the target and the reference goal. If individuals feel that their image, such as being friendly, is being properly conveyed to those around them, then there is no need for them to take any corrective actions. When their image is being improperly conveyed, they will make corrective adjustments through the use of impression management tactics to try to alleviate the discrepancies. For example, when students sense that they are not being seen as intelligent in a class, they may start an in-class discussion on a topic with which they are familiar with the intent of displaying their intelligence. To them this choice is preferable to starting a discussion on a topic that they are unfamiliar with, even though this would actually increase their understanding overall. Such action is considered hypercriticism, a type of indirect impression management strategy (Gibson & Oberlander, 2008).

Individuals may select different referents or identity goals for different situations. In the classroom, the two different reference standards for students are typically peers and professors. A student might want to emphasize a different impression towards students than professors. Impression management is a prevalent and vital component of social life including the classroom. Students will actively pursue their desired images when driven by the perceived discrepancy motives explained by the cybernetic model above. Understanding students’ motivation to attain desired identities in a class may give leverage to teachers looking to provide a more effective learning experience. Next, we describe our research methodology and data analysis.
Table 1  
Test Pilot Survey Format

Please answer the following questions for a pilot research survey on impression management in the classroom.

1. Please list and rank the top 5 attributes that best reflect how important it is that your peers see you as.
   1. ___________ 2. ___________ 3. ___________ 4. ___________ 5. ___________

2. Please list and rank the top 5 attributes that best reflect how important it is that your professors see you as.
   1. ___________ 2. ___________ 3. ___________ 4. ___________ 5. ___________

3. Please list and rank the top 5 attributes that you are afraid of being perceived as by your peers.
   1. ___________ 2. ___________ 3. ___________ 4. ___________ 5. ___________

4. Please list and rank the top 5 attributes that you are afraid of being perceived as by your professors.
   1. ___________ 2. ___________ 3. ___________ 4. ___________ 5. ___________
## Table 2
### Test Pilot Impression Count* and Categories

<table>
<thead>
<tr>
<th>Positive Peer Impressions</th>
<th>Positive Professor Impressions</th>
<th>Negative Peer Impressions</th>
<th>Negative Peer Impressions</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTELLIGENT: Intelligent (7), Smart (5), Wise</td>
<td>INTELLIGENT: Intelligent (8), Smart (5), Analytical, Knowledgeable, Logical, Wise</td>
<td>DUMB: Dumb (12)</td>
<td>DUMB: Dumb (8), Careless (4), Ignorant (2), Illogical (2), Unprofessional (2), Foolish</td>
</tr>
<tr>
<td>FRIENDLY: Friendly (7), Agreeable (3), Outgoing (3), Helpful (2), Kind (2), Approachable, Caring, Empathetic, Easy-going, Good-Friend, Nice, Understanding</td>
<td>FRIENDLY: Friendly (3), Kind (3), Agreeable (2), Communicative (2), Nice (2), Open (2), Outgoing (2), Caring, Compassionate, Extroverted, Personable</td>
<td>MEAN: Mean (6), Rude (5), Aggressive (2), Angry (2), Abrasive, Conceited, Intimidating, Nasty, Unfriendly</td>
<td>DISRESPECTFUL: Disrespectful (4), Rude (3), Mean (3), Selfish (2), Aggressive (2), Disruptive (2), Grumpy, Moody, Angry, Abrasive, Disagreement, Jaded</td>
</tr>
<tr>
<td>FUNNY: Funny (10)</td>
<td>ORGANIZED: Organized (6)</td>
<td>ANNOYING: Annoying (2), Unprofessional (2), Silly (2), Lackadaisical, Nuisance, Weird</td>
<td>UNMOTIVATED: Unmotivated (4), Uninterested (4), Unengaged (3), Bored (2), Irresponsible (2), Aloof, Disorganized, Unorganized, Tired</td>
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Table 3
Students’ Desired Positive and Negative Impressions

N=237

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<td>Intelligent: 4.10</td>
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<tr>
<td>Hard-working</td>
<td>Hard-working: 3.22</td>
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<td>Funny</td>
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<td>Friendly: 3.40</td>
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<th>Negative Impressions</th>
<th>Negative Peer Impressions</th>
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<td>Unreliable: 2.86</td>
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<tr>
<td>Mean</td>
<td>Dumb: 2.97</td>
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<td>Unreliable</td>
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<td>Lazy</td>
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<table>
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<th>Negative Professor Impressions</th>
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<tr>
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</tr>
<tr>
<td>Dumb</td>
</tr>
<tr>
<td>Unmotivated</td>
</tr>
<tr>
<td>Lazy</td>
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<tr>
<td>Unreliable</td>
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<th>Negative Professor Impressions</th>
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<td>Disrespectful</td>
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<td>Dumb</td>
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<td>Unmotivated</td>
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<tr>
<td>Lazy</td>
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<td>Unreliable</td>
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### Table 4

**GPA Differences**

Tests of Between-Subjects Effects

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<tr>
<th>Source GPA Dependent Variable</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<td>5. Pos_Hardworking_Peer_Effort</td>
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<td>1.525</td>
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<td>17</td>
<td>1.670</td>
<td>1.079</td>
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<tr>
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<td>1.349</td>
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### Table 5

**Gender Differences**

Tests of Between-Subjects Effects

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<tr>
<th>Source</th>
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<td></td>
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<td>5.</td>
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<td>6.</td>
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ENTREPRENEURIAL EXPERIENCE, ENTREPRENEURIAL MOTIVATION, AND CHOICE OF EXIT STRATEGIES

INTRODUCTION

Entrepreneurial exit is a relatively new stream in entrepreneurship research and is still developing. The research concentrates on entrepreneurial intentions to exit, exit strategies and execution, teams in exit, and exit relation to failure (Wennberg & DeTienne, 2014). One of the key research papers on entrepreneurial intentions and motivations to start a venture with exit strategy is offered by DeTienne (2010), which suggests that most entrepreneurs have an exit strategy when founding the firm, and that the initial strategy has impact on the eventual exit. Specifically, findings reveal that the vast majority of entrepreneurs exit following their exit strategy (DeTienne & Cardon, 2012; Wennberg & DeTienne, 2014) and therefore examining entrepreneurial motivation can offer good understanding of the exit process and outcomes.

The relationship between entrepreneurial motivation and choice of exit strategies has been examined previously examined, but received only partial support (DeTienne, McKelvie, & Chandler, 2014). Specifically, while the relationship between extrinsic motivation and choice of exit by IPO or acquisition (harvest strategies) was proposed, it was not supported (DeTienne & Chandler, 2010; DeTienne et al., 2014). The relationship between financial motivation and entrepreneurship, specifically growth and innovative entrepreneurship, was previously proposed by Hessels, Van Gelderen, and Thurik (2008b) but was not supported. Interestingly, Corman, Perles, and Vancini (1988) found that extrinsic motivation has little influence on entrepreneurial intentions of high-tech entrepreneurs, and that high-tech entrepreneurs were motivated primarily by intrinsic motivational factors and not by financial motivation or necessity. One interesting notion about the Corman et al. (1988) research is that it was conducted in Boston area, and the
majority of the examined entrepreneurs had scientific experience and generally did not possess much entrepreneurial experience.

The findings of Corman et al. (1988), combined with the rational, yet unsupported, assumption that financial motivation is related to entrepreneurial activity and to choice of exit strategies may suggest that there may be different types of entrepreneurs, with different sets of values and goals. One interesting notion that supports the need for differentiating entrepreneurs is that “research seeking to theorize exit should consider the distinction between lifestyle entrepreneurship and growth-oriented entrepreneurs” (Wennberg and Detienne 2014; p.11).

Indeed, prior research in the field of entrepreneurship has examined differences between managers end entrepreneurs, but not between different entrepreneurs or between entrepreneurs with different experience. The findings of this stream of research clearly showed that managers and entrepreneurs have different attributes, experience, and motivations (Birley & Norburn, 1987; Busenitz & Barney, 1997; Stewart & Roth, 2007; Zaratiegui & Rabade, 2005).

Additionally, Oakey (2003) examines the managerial aspect of technical entrepreneurship, emphasizing that many high-tech entrepreneurs are technical entrepreneurs with scientific experience; lack managerial and business skills; and approach managing the venture, including exit decision, in a way that may be different from the way an experienced manager or business person would have approached.

In this paper we also focus on exit strategies and address the gaps in current literature. We consider both motivational factors (i.e., goals and intentions of entrepreneurs) as well as the characteristics of the entrepreneurs. Specifically, we build on considerable evidence which suggests that in the context of entrepreneurship – experience matters. We apply the tenets of institutional theory and social construction theory (Berger & Luckmann, 1967) to develop a
model in which entrepreneurial experience moderates the relationships between motivation exit strategy preference.

By introducing entrepreneurial experience as a moderator, I will address DeTienne et al. (2014) call for future research on the opportunities for moderating effects on the relationship between motivation and choice of exit strategies; and Wennberg and DeTienne (2014) call for future research on the role of “intentions and emotions” on entrepreneurial exit. Thus, the main contribution of this paper is the examination of the moderating effect that entrepreneurial experience has on the relationship between motivation and choice of exit strategies.

ENTREPRENEURIAL MOTIVATION

Research on entrepreneurial motivation examines the factors that increase motivation to engage in entrepreneurial behavior. Although research conclusions were mostly consistent, suggesting that different financial aspects on multiple levels increased entrepreneurial motivation, some researchers presented contradicting findings. For example, Corman et al. (1988) study of high-tech entrepreneurs in the Boston region and found that the main motivational factors to start a new venture were more intrinsic factors. Specifically, entrepreneurs in that sample desired to conduct research and development, have freedom to decide what to research and develop, create an environment which allows pursuing their interests, “implementation of their ideas is essential to their self-satisfaction” (Corman, Perles et al. 1988; p.39). Further, “it is widely agreed that money is not the primary motivator for high-tech entrepreneur activity” (Corman et al., 1988). Another interesting point was that “the high technology entrepreneur obviously has a very strong need to remain in the midst of research and development activity” (Corman, Perles et al. 1988; p.37).
On the other hand, Hessels et al. (2008b) suggested that there would be a positive relationship between motivation for increased wealth for the entrepreneur and engagement in innovative entrepreneurship, but found no support for this hypotheses. Hessels, van Gelderen, and Thurik (2008a) also found that entrepreneurs’ motivation was related to the entrepreneurial outcomes.

Furthermore, while much of the research on entrepreneurial motivation was conducted on the individual level, several researchers integrated contextual factors on different levels of analysis and were able to show that the context in which motivation was examined had an effect on the examined outcomes. For example, when examining factors on the country level, entrepreneurship was found to be negatively related with the level of social security. The rationale is that when the security is low, people start businesses, and that the motives are financial, necessity (Peterson, 1995) and risk-avoidance (Hessels et al., 2008a, b). One interesting notion common to these findings is that institutional and economic factors affected entrepreneurial motivation by increasing the importance of financial rewards for entrepreneurial success. Although some research were able to connect financial motivation with entrepreneurial activity, some research settings produced contradicting results.

**MOTIVATION AND EXIT STRATEGY**

The stream of research examining exit strategy of entrepreneurs is constantly developing, and research relating entrepreneurial motivation with exit strategies is limited (Wennberg & DeTienne, 2014). Entrepreneurial exit is defined as “the process by which the founders of privately held firms leave the firms they helped to create” (DeTienne, 2010: p.203). DeTienne (2010) argued that entrepreneurial exit is an important and overlooked aspect of entrepreneurial research, and presented examination of the process and factors that may influence an exit.
Although one reason for the determination to exit was proposed to be the desire to harvest the business for financial gain, no clear connection was established between entrepreneurial motivation and the actual exit. Continuing this stream of research, DeTienne and Chandler (2010) proposed the link between motivation and exit strategies in such a way that extrinsically motivated entrepreneurs would be more likely to choose IPO and acquisition strategies, while intrinsically motivated entrepreneurs would be more likely to choose independent sale.

Research on entrepreneurial exit differentiates between three main types of exit strategies. Harvest exit strategy refers to the process when the firm is either acquired by another company or proceeds to an IPO, and the founder leaves and receives high financial compensation. This is viewed as the more profitable exit strategy, and riskier. Stewardship exit strategy refers to the process when the share of ownership held by the entrepreneur is sold to a private person, family member, or employee. Viewed as less financially rewarding but also less risky. Voluntary Cessation is basically a liquidation of the company (DeTienne et al., 2014).

When examining the role of entrepreneurial motivation with regards to exit strategies, DeTienne and Chandler (2010) advanced the research on the drivers of entrepreneurship beyond economic incentives and distinguished between intrinsic and extrinsic entrepreneurial motivation, suggesting that these may be related to entrepreneurial exit. However, because extrinsic motivation is viewed as the desire to reach financial gains, such motivation will be related to exit strategies that offer higher returns, specifically IPOs and acquisitions.

In their later work, DeTienne and Cardon (2012) examined what factors may be associated with the choice of exit strategies, but did not examine motivation. Only later DeTienne et al. (2014) added motivation into examination, and followed the previously
presented rationale, relating extrinsic motivation with IPOs and acquisition exits, jointly viewed
as harvest strategies. However, in their empirical analyses, the related hypotheses were not
supported.

**ENTREPRENEURIAL EXPERIENCE**

Although much entrepreneurship research that has set out to determine differences
between, or unique characteristics of, entrepreneurs has been less than successful. However, one
attribute of entrepreneurs has clearly and consistently differentiated them – entrepreneurial
experience. Experienced entrepreneurs have been consistently identified as different when
compared to inexperienced entrepreneurs. For example, experienced entrepreneurs have been
found to exhibit enhanced opportunity identification skills, opportunity evaluation abilities, and
entrepreneurial performance (Gruber et al., 2012; Marvel, 2011; Shane, 2000; Ucbasaran et al.
2009; Ucbasaran et al., 2008).

The widespread implications of entrepreneurial experience are perhaps most clear in the
cognition-based entrepreneurship research stream. For example, the findings of which largely
suggest that previous entrepreneurial experience influences an individual’s cognitive profile and
has direct, positive implications in the context of entrepreneurship (Westhead et al., 2009). This
stream of research has important implications for the manner in which entrepreneurial experience
is likely to potentially influence the preferred exit strategy. Specifically, finding in cognition
research, taken a whole, finding suggest that experienced process, evaluate, and make decisions
and come to different conclusions when compared to inexperienced entrepreneurs, or
entrepreneurs that have experience other than entrepreneurship (e.g., technology or scientific
experience. In following section, we explain how this unique and valuable prior experience in
founding a business has an intervening role in the motivation – exit relationship.
THEORETICAL DEVELOPMENT

As stated earlier, the main goal of this paper is extending the research on the relationship between different types of motivation and exit strategies, and integrated entrepreneurial experience as a moderating variable to these relationships. While research on entrepreneurial motivation typically examined either motivation to start a venture or motivation to choose an exit strategy, we consider both jointly because motivation to start a venture does not simply change once the venture is created. Furthermore, exit strategy is formulated relatively early in the venture life cycle and is closely related to the resulted exit in later stages of the firm (DeTienne, 2010; DeTienne & Chandler, 2010). Thus, entrepreneurial motivation to start the firm and to select an exit strategy will also indicate the eventual exit because the new venture is created with a goal or a purpose to satisfy the motivation, and thus the end-game, the exit, as represented by the exit strategy.

In the development of the propositions we concentrate on two factors: motivation and entrepreneurial experience. Motivation refers to the motivation of the founder of the firm. We consider three distinctive types of entrepreneurial motivation: (1) motivation for high financial reward, (2), and motivation for intellectual achievement/freedom (3) motivation for power (includes power over others and over self – autonomy). Entrepreneurial experience refers explicitly to prior experience in founding, managing, or operating a business in which they were also a primary owner.

The rationale for entrepreneurial experience was delineated above. However, it is also worth specific that our inclusion of experience also follows prior research that emphasized that entrepreneurs with scientific and technological experience (but not entrepreneurial experience) engage in high-tech entrepreneurship mostly due to intrinsic motivational factors (Corman et al.,
1988), while other streams of research related innovative, and thus riskier, types of ventures with extrinsic motivational factors (Hessels et al., 2008b). Thus, we propose that viewing entrepreneurial experience as context will advance our understanding in the role of different types of motivation to start a business and choose an exit strategy.

In terms of theoretical underpinning, entrepreneurial experience we draw from multiple perspectives which inform our theorizing about how entrepreneurial experience influences exit preference. First, Salancik and Pfeffer (1978) presented the notion that environments may influence the individual’s motivation through processes of social construction. Generally speaking, the environment, through its norms and values can influence individuals through the process of social construction and institutionalization (Berger & Luckmann, 1967). Specifically, as individuals are embedded in their environments, their perceptions and values change because of the influence of the environment. Environments and institutions also shape individual’s identity, including the perception of self and the perception of self with relation to the environment (Clegg, Hardy, Lawrence, & Nord, 2006). Furthermore, Latham and Pinder (2005) suggest that motivation is in part an interaction between the individual and environment. More specifically, there is an understanding that the environment, whether it is national culture, organizational settings, or general fit, all may have effect on the individual’s motivation.

Following this rationale, we argue that the prior entrepreneurial experience should be viewed as an important factor in entrepreneurial motivation research. Entrepreneurial experience represents the context of the environment in which the entrepreneurs’ values and priorities, and thus motivational aspects are constructed. Because of the processes of social construction and institutionalization, entrepreneurs who were embedded in different environments will also have different values and, as a result, this influence the way in which their choices become enacted.
Entrepreneurial and management experience should be classified based on the length of embeddedness in that environment. Following the social construction theory and institutional perspectives on identity construction (Clegg et al., 2006; Lawrence, Suddaby, & Leca, 2011) I propose to classify entrepreneurial experience by estimating the influence an institutional environment had on her or him, using years of exposure as a proxy for estimation.

We apply similar rationale and examine the relationship between each of the three types of motivation and the likelihood of choosing each of the three exit strategies. Thus, we explain and develop nine propositions in total. Each proposition also includes the moderating effect that entrepreneurial experience has on each of the nine relationships. Our overarching theoretical model is presented below in Figure 1.

Insert Figures 1 and 2 about here

First, we consider motivation for financial gain. Prior research has showed that this is positively related to entrepreneurial activity in starting businesses (Hessels et al., 2008a, b; Peterson, 1995). On the other hand, motivation for financial gain was not related to innovative entrepreneurship (Corman et al., 1988; Hessels et al., 2008a, b). Nevertheless, it was also assumed to be positively related with choosing harvest strategies (DeTienne & Chandler, 2010; DeTienne et al., 2014).

As prior research suggests, we propose that motivation for financial gain will be positively related with harvest strategies, and that this motivation is more dominant among entrepreneurs possessing experience, where they learned to prioritize and value financial gains.
On the other hand, entrepreneurs without entrepreneurial experience likely played developmental roles in organizations learning to put lower value on financial gains. Because the different types of entrepreneurs were embedded in different environments and institutions, they will also have different values and thus different ways of enacting their choices of strategy. Therefore, we argue that:

*Proposition 1:* Motivation for financial gain will be positively related with the likelihood to choose harvest strategy, and moderated by entrepreneurial experience, such that the relationship will be stronger for entrepreneurs with entrepreneurial experience.

*Proposition 2:* Motivation for financial gain will be negatively related with the likelihood to choose stewardship strategy, and moderated by entrepreneurial experience, such that the relationship will be stronger for entrepreneurs with entrepreneurial experience.

*Proposition 3:* Motivation for financial gain will be negatively related with the likelihood to choose voluntary cessation strategy, and moderated by entrepreneurial experience, such that the relationship will be stronger for entrepreneurs with entrepreneurial experience.

Next, we consider the motivation for intellectual achievement and intellectual freedom. We transition away from examining motivation for achievement in general and motivation for autonomy. The rationale for this transition is that motivation for achievement, also referred to as intrinsic motivation (DeTienne & Chandler, 2010; DeTienne et al., 2014), is somewhat general, and different individuals will have different achievement in mind. Therefore, achievement may be intellectual, financial, or social, but when viewing intellectual motivation, we concentrate on only one form of achievement.
Additionally, research indicated that the motivation for autonomy is an important factor for entrepreneurs, especially those that are innovative (Corman et al., 1988; Hessels et al., 2008b), but there are different types of autonomy. Intellectual freedom, for example, may be captured as autonomy, but so may be flexible schedule, lifestyle, no reporting to superiors, etc. Therefore, with the goal of concentrating on narrower aspects of motivation, we specifically consider the implications associated with motivation for intellectual achievement and intellectual freedom. Following our theoretical explanation about the entrepreneurial motivational differences due to experience such that:

**Proposition 4:** Motivation for intellectual achievement/freedom will be negatively related with the likelihood to choose harvest strategy, and moderated by entrepreneurial experience, such that the relationship will be weaker for entrepreneurs with experience.

**Proposition 5:** Motivation for intellectual achievement/freedom will be positively related with the likelihood to choose stewardship strategy, and moderated by entrepreneurial experience, such that the relationship will be weaker for entrepreneurs with experience.

**Proposition 6:** Motivation for intellectual achievement/freedom will be positively related with the likelihood to choose voluntary cessation strategy, and moderated by entrepreneurial experience, such that the relationship will be weaker for entrepreneurs with experience.

Next, we consider entrepreneur who are motivated by power. Power motivation is defined as “non-conscious concern for acquiring status and having an impact on others” (House & Aditya, 1997); and as “a concern for impact and prestige, which is associated with getting formal social power” (Winter, 1991:p.68).
Research on power motivation with regards to leadership and success found mostly positive relationship, such that managers and executives with high power motivation were more successful in both large corporations and small entrepreneurial firms (Winter, 1991). However, while power motivation showed to be an important aspect in the actions and behaviors of leaders and managers, it has not been examined with relation to entrepreneurial exit.

Overall, individuals with high power motivation are motivated to engage in social influence behavior to influence others and to achieve social status. These individuals receive satisfaction from the processes of influencing people and from having the social and organizational status to do so (Winter, 1991). Therefore, when choosing an exit strategy, high power motivation will be positively related with the type of exit that allows the entrepreneur to maintain some level of power. We argue that this type of exit strategy is stewardship, because after the exit the entrepreneur may maintain some level of influence, whether through family member or individuals with established relationship (DeTienne et al., 2014). Therefore:

*Proposition 7: Motivation for power will be negatively related with the likelihood to choose harvest strategy, and moderated by entrepreneurial experience, such that the relationship will be weaker for entrepreneurs with experience.*

*Proposition 8: Motivation for power will be positively related with the likelihood to choose stewardship strategy, and moderated by entrepreneurial experience, such that the relationship will be weaker for entrepreneurs with experience.*

*Proposition 9: Motivation for power will be negatively related with the likelihood to choose voluntary cessation strategy, and moderated by entrepreneurial experience, such that the relationship will be weaker for entrepreneurs with experience.*
DISCUSSION

In this paper, we continued the research on entrepreneurial exit by connecting entrepreneurial motivation with the choice of exit strategies. We extended the view of motivation from extrinsic and intrinsic to the more specific types of financial, power, and intellectual achievement. We argued that adding a more specific and narrow view of each type of motivation can explain more variance with regards to the choice of exit strategy. We also examined the contextual role of entrepreneurial experience and suggested that the values of entrepreneurs will change due to embeddedness in different environments through the process of social construction. Following the rational for distinguishing between types of entrepreneurs, we proposed that entrepreneurial experience moderates the relationships between entrepreneurial motivation and choice of exit strategies.

The main contribution of this paper to researchers is the introduction of entrepreneurial experience as a moderator, thus advancing the research by examining contextual factors and moderating possibilities. Future research can examine additional contextual factors and other moderators, whether on the individual level of analysis or cross-level. Additionally, potential empirical tests that the propositions will offer greater understanding about the possible lack of support prior researchers encountered when examining the relationship between financial (extrinsic) motivation and harvest exit strategies.

To conclude, the goal of this paper was to extend the research on entrepreneurial exit by offering a deeper examination of the types of motivation that is related to choosing exit strategies and by introducing entrepreneurial experience as a moderator to these relationships. We argued that entrepreneurial experience can be viewed as a contextual factor, and relied on social
construction theory to explain how it can influence the choices entrepreneurs make in spite of their values and motivation.


Figure 1: Theoretical Model of Motivation, Experience and Exit
APPENDIX B

Figure 2: Conceptual Model of Proposed Relationships