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**Mustang Journal of Business and Ethics**  
**Volume 7 (Fall, 2014)**

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All articles that appear in this volume of the *Mustang Journal of Business and Ethics* have been recommended for publication by the Reviewers/Advisory Editors, using a double, blind peer review process. I express a personal thanks to the Reviewers/Advisory Editors for all their hard work and dedication to the *Journal*. Without their work, the publication of this Journal would be impossible.

I wish to express my sincere thanks and appreciation for all the support, encouragement, assistance and advice throughout this year. I would like to further express appreciation to Will Mawer of Southeastern Oklahoma State University, for his efforts in coordinating the entire process. The publishing of this journal is an intense educational experience which I continue to enjoy.

Congratulations to all our authors. I extend a hearty invitation to submit your manuscripts for future issues of *Mustang Journals*.

To further the objectives of Mustang Journals, Inc., all comments, critiques, or criticisms would be greatly appreciated.

Again, thanks to all the authors for allowing me the opportunity to serve you as editor-in-chief of the Journal.

**Brad Reid**  
**Editor-in-Chief**  
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Paper: Are Routine Retiring CEOs More Closely Monitored in their Last Year?
DO MOBILE SPORTING EVENTS PRODUCE NET INCREASES IN TOURISM, LOCAL HOTEL REVENUES, AND OVERALL ECONOMIC IMPACT? EVIDENCE USING STR DATA

Patrick James Rishe
Webster University

ABSTRACT

Smith Travel Research (STR) produces daily hotel metrics often cited in mainstream media and regional business journals when assessing local economic trends, but few academic papers use STR data when analyzing the economic impact of mobile sporting events. Using an unprecedented sample of STR data, the results suggest that the typical increase in net daily weekend occupancy rates is between 46-63% for Super Bowls, 53-55% for Final Fours, 10% for major golf events, and 2% for March Madness Regionals. Additionally, these events generally experience net increases in local hotel revenues, while regression analysis suggests city size and general economic conditions impact the magnitude of hotel spikes. Lastly, the STR data is used to proxy gross increases in overall visitor spending, with the conclusion that the true net economic impact for most of these events is positive, yet nowhere near the optimistic projections typically espoused by local organizing committees.

INTRODUCTION

Mobile sporting events (e.g. Super Bowls, Final Fours) are annual events which occur in different cities each year. Subsequently, these events present an opportunity to examine whether they create net increases in local economic activity during Event Week compared to historical norms. Though regional business journals across the United States commonly cite Smith Travel Research (STR) data when analyzing whether the local hotel industry experiences net gains (Bailey, 2012; Fink, 2011; Vomhof, 2010), few academic papers have utilized STR data when examining this same issue. 1

With an unprecedented sample of STR data pertaining to fifty-three mobile sporting events spanning Super Bowls, Final Fours, March Madness Regionals, and major golf tournaments, the purpose of this paper is to (1) determine whether these events produced net increases in tourism and hotel revenue for their host Metropolitan Statistical Areas (MSAs), (2) explore the reasons why the net increases in hotel activity differ across events, and (3) make inferences regarding the overall level of gross visitor spending associated with these events. Apart from concluding that many (but not all) mobile sporting events do generate net increases in tourism and local hotel revenues compared to historical norms, the estimates of gross overall economic impact produced herein simultaneous suggest that (1) local host committees are guilty of inflating economic impact estimates and (2) the collective deflating effects of displacement, leakage, public subsidies, and crowding out would have to be quite large in some instances for sporting events to produce net negligible impacts for the entire MSA.

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1 STR is a U.S. company that tracks supply and demand data for the hotel industry, and provides market share analysis for all major hotel chains and brands in the United States, Canada, Mexico and the Caribbean. STR has the capability of tracking MSA-level daily hotel data for occupancy rates, average room rates, revenue per room, and total local hotel revenue.
LITERATURE REVIEW

Both the mainstream news and regional business journals frequently cite STR data when discussing changes in hotel spending as a proxy for general economic conditions. Trejos (2012) noted the consulting firm PwC, when forecasting growth in revenue per room within the United States for 2013 and 2014, used STR data. Additionally, DeLollis (2010) cited STR data in detailing the post-recessionary phenomenon that hotel demand in larger cities appeared to rebound faster from the recession than was true in smaller cities. On a more micro-oriented level, Corbett (2012) used STR data when discussing the growth of local hotel revenues in Scottsdale, AZ in 2011, while Boyer (2014) employed STR data in reporting that hotel revenues in Rutherford County, TN increased by $6 million.

Pertaining more specifically to sporting events, Bailey (2012) used STR data when reporting that San Antonio saw its hotel revenues increase by three-fold in comparison to the same period in 2011 from hosting the city’s first-ever Formula 1 Grand Prix auto race, while Jackson (2011) reported that Baltimore’s inaugural Grand Prix race only saw one of three nights from event weekend produce a hotel spike compared to the same weekend the year prior. Fink (2011) discussed how Buffalo and Erie County saw its hotel occupancies increase by roughly 8% in year-to-year comparisons due largely to hosting a World Junior Hockey competition and two Buffalo Bills games. Bilbao (2010) cited STR data in describing how the Orlando hotel industry rebounded in 2010 from the recession, in part due to the opening of the Amway Center (home of the NBA’s Orlando Magic). Vomhof (2010) noted significant increases in Minneapolis occupancy rates after the Minnesota Vikings hosted the Dallas Cowboys in a 2010 NFC playoff game. Cooper (2010) employed STR data to detail how Birmingham, AL occupancy rates and hotel revenue were up 28% and 38%, respectively, in April 2010 relative to the same period from 2009 due largely to an Indy Car race. Using STR data for the second week in October 2009, Vomhof (2009) noted that hotel occupancies in Minneapolis increased to 83% in 2009 from 60% for the same week in 2008 on the strength of a combination of sporting events including a Vikings home game against Green Bay, a marathon, the Minnesota Twins’ one-game playoff versus the Detroit Tigers, and the Minnesota Wild’s home opener.

Academic research has scarcely used STR data to examine whether sporting events positively impact local economies, partly because accessing the data has historically been cost prohibitive. Dermody, Taylor, and Lomanno (2002) used STR data to examine the impact of NFL teams on the local hotel industry, and found positive net increases in hotel activity in twenty-eight of the thirty-two NFL market areas. Though Ritchie and Smith (1991) examined the degree to which the 1988 Winter Olympic Games impacted the awareness and image of the host city (Calgary), their methodology consisted of a longitudinal analysis of 20 cities across the United States and Europe. Hence, STR data was not required to support their conclusions.

While the regional business journal literature frequently cites STR data to conclude that select sporting events have had a positive net impact on their local hotel industry, most academic studies – which typically focus on metrics such as taxable sales, earnings, per capita income, or employment – downplay the overall economic impact that sporting events produce for the local economy. Coates and Humphreys (2003) found little evidence that big-time sporting events generated significant impacts for local service and retail sectors. Matheson (2006) suggested that public funding for infrastructure projects solely for the purpose of sports is harmful for the local economy. Coates and Gearhart (2008) concluded that there is little evidence that NASCAR tracks or events have substantially positive or negative effects on rents. Porter (1999) used sales tax data to argue that the Super Bowls hosted in Miami, Tampa, and Phoenix in the 1980s and 1990s had little effect on those cities. Matheson and Baade (2006) note that while not uncommon for the NFL and local supporters to place the economic impact of the game somewhere north of $400 million, the actual economic impact of the Super Bowl is closer to one quarter of these claims. Similarly, Coates and Humphreys (2003) found that the Super Bowl had no significant effect on the host city’s per capita personal income.

Not all academic research disparages the potential economic impact that sporting events can create for host cities. Coates and Depken (2006) found that regular season college football games do generate revenues for host communities, but not when the visiting team is of lesser caliber or from a weaker conference. Furthermore, they found that sales tax revenues increased for cities in Texas when hosting major college football games. Lentz and Leband (2008) reported a positive relationship between athletic department revenues and employment in local hotels and restaurants for programs with athletic budgets in excess of $40 million. Baade and Matheson (2000) estimated that the Daytona 500 raised taxable sales across Volusia County and neighboring counties by roughly $40 million.
for the month of the race. Coates (2006) found that the Houston MSA enjoyed incremental sales tax increases of $5 million for the Super Bowl and $1 million for the Major League Baseball All-Star Game.

In sum, STR data is widely regarded as a robust source of information for assessing changes in economic activity for the local hotel industry. However, most academic research which examines the overall economic impact of sporting events does not utilize this data source, despite the fact that hotel expenditures represent the largest component of new visitor spending in conjunction with sporting events. In making STR data the focal point of the analysis herein, the primary goal is to assess whether mobile sporting events impact the local hotel sector of host communities. The secondary goal is to use the STR data to make inferences about potential increases in gross overall spending related to sporting events in order to compare economic impact estimates using STR data with both popular claims of economic impact and the estimated impacts reported within the existing academic literature.

RESEARCH QUESTIONS, METHODOLOGY, AND DATA

This paper examines three specific research questions. First, do the most popular mobile sporting events contested in the United States actually produce net increases in tourism and hotel revenues for their host communities? Second, what factors cause the magnitude of these spikes in hotel activity to vary across different events? Third, what can we deduce from the event-specific STR hotel data regarding the overall gross spending by sports tourists?

Regarding the data sample, STR provided MSA-level daily hotel data on occupancy rates, average room rates, revenue per room, and total industry revenue for fifty-three events held in thirty different MSAs between 2008 and 2014. These events include seven Super Bowls, six Final Fours, sixteen major golf events in the United States (including six U.S. Opens, six PGA Championships, two Ryder Cups, and two Presidents Cups), and twenty-four March Madness Regionals. For each event, three years of daily hotel data was collected centered on the Event Year.

The metric used herein to test for net increases in local hotel activity relative to historic norms is a ratio which compares the daily hotel metrics from Event Week (numerator) to the average value of these metrics for the same week from the years before and after the event (the denominator). For example, the occupancy rate for the Indianapolis MSA on Super Bowl Sunday (February 5th, 2012 – the sixth Sunday of that year) was 94.8%, and the average Indianapolis MSA occupancy rate of that same Sunday from 2011 and 2013 was 29.5%. Hence, the occupancy rate ratio for Indianapolis’ Super Bowl Sunday was 3.213 (94.8 / 29.5), or 221.3% higher than the average occupancy rate for the same day (sixth Sunday of the year) from bordering years. With daily ratios available for each day of event week across fifty-three events, this yields 371 observations for each of the four hotel metrics provided by STR.

For the first research question (whether mobile sporting events produce net increases in local hotel activity), mean and median daily comparison ratios were calculated. Ratios significantly greater than one would imply that the event in question produced net increases in tourism and hotel expenditures. For the second research question (exploring why net changes in hotel metrics differ across events), Model 1 is specified below using ordinary least squares regression corrected for heteroskedasticity using White’s robust standard errors.

\[ OCP-RAT = a + b (SB) + c (FF) + d (GOLF) + e (WKEND) + f (MSAPop) + g (RECESS); \]

- OCP-RAT is the daily occupancy rate ratio comparing daily occupancies from Event Week to the same calendar week from the years before and after the event;
- SB, FF, and GOLF are separate event-specific dummy variables, with a value of ‘1’ denoting their event (Super Bowl, Final Four, or Golf), and ‘0’ otherwise. The control group here is the March Madness Regionals.

2 With the exception of the 2013 Super Bowl, all 2013 and 2014 events analyzed used Event Week data from the two years prior to the Event Year as the proxy for historical norms. This occurred because the Year After data was not available at the time this paper was completed.

3 Regarding the four hotel metrics provided by STR, occupancy rates are a better estimate of net tourism increases because it is not influenced by dynamic pricing practices commonly employed within the hotel industry. For example, net increases in local hotel revenue are due to more visitors and higher daily room rates charged. Thus, occupancy rates are a more appropriate dependent variable in Model 1 to focus strictly on net increases in visitors to the MSA.
Regionals. The expected sign on each of these coefficients is positive, suggesting that each of these events will have higher occupancy ratios compared to March Madness Regionals;

- **WKEND** has a value of ‘1’ if the daily ratio falls on the weekend of Event Week, and ‘0’ otherwise. The expected sign on WKEND is positive, based on the presumption that the relative spike in local hotel activity will be higher on the weekends of Event Week rather than weekdays. Note that different events have slightly different weekday versus weekend designations depending upon the logistics of the event;

- **MSAPop** is the 2013 estimate of the host MSA’s population, where these estimates are based on data from the 2010 U.S. Census Bureau. If larger cities are more likely to be viewed as “destination cities” (either by tourists, event rights holders, or conventions business), then they may be less likely to see net spikes from mobile sporting events because they – more than smaller MSAs – could replace some of the sports-related tourism with either recreational or business tourists in other years. Thus, the expected sign on MSAPop is negative;

- **RECESS** is a dummy variable with a value of ‘1’ if the event took place in 2008, 2009, or 2010, and ‘0’ otherwise. The expected sign on RECESS is negative, given the presumption that the recession negatively impacted the incidence of sports tourism associated with big events.\(^4\)

For the third research question (deducing gross overall increases in visitor spending from net increases in hotel spending), the STR data on occupancy rates and total local hotel revenue is used in conjunction with economic impact research by Rascher (2010). Upon comparing a cross-section of sporting events, Rascher found that lodging expenditures generally comprise 25-40% of total expenditures by sports tourists for events yielding a high percentage of overnight visitors. Applying this lodging-to-overall spending ratio to event-related increases in hotel expenditures allows for a rough estimate of the gross overall increase in visitor spending which coincides with the mobile sporting events examined.

Lastly, the results reported below were not sensitive to alternate ratio specifications (i.e. alternate denominators). For example, one specification compared Event Week to the weeks immediately before and after an event, while yet another specification compared Event Week to the before and after weeks from both the Event Year and the same three-week span from the years before and after the event.

**RESULTS**

Tables 1 through 6 address the first research question of whether mobile sporting events generate net increases in local hotel activity. Table 1 below presents the mean and median daily ratios for the four hotel metrics provided by STR (occupancy rate, average daily rate, revenue per room, total hotel revenue). The weekend spikes in hotel activity during Event Weeks are significantly higher than weekday spikes. For example, the mean daily weekend occupancy rate is 18.4% higher during Event Weeks than what is historically the case for that weekend, compared to only 3.9% higher during Event Week weekdays. Similarly, total MSA daily weekend hotel revenue is 80.8% higher during Event Weeks than what is historically the case for that weekend, while only 22.0% higher during Event Week weekdays. All weekend daily ratios were statistically greater than 1, though weekday daily ratios (especially the median ratios) were far closer to 1. The considerable difference between the weekend mean and median ratios for each of the four hotel metrics is largely due to the heterogeneity across the fifty-three events in the sample. This becomes more apparent below when the data is further disaggregated by Event Type.

\(^4\) According to the U.S. National Bureau of Economic Research, the recession began in December 2007 and ended in June 2009.
Table 1

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Table 2 below partitioned the ratio metrics across Event Type. Focusing on the weekend ratios for total daily MSA revenue within the local hotel industry, Super Bowls produce the largest financial boost to the local hotel industry, followed by Final Fours and major golf events. The median daily Event Week weekend spikes in occupancy rates (OR) and local hotel revenues (HR) compared to historical trends is 46.2% in OR and 278.4% in HR for Super Bowls, 55.2% in OR and 157.5% in HR for Final Fours, and 10.3% in OR and 24.2% in HR for major golf events. Conversely, March Madness Regionals generally appear to have rather negligible financial impact on host MSAs. The median daily weekend spike in OR and HR compared to historical norms is a mere 1.7% in OR and 5.6% in HR for Regionals.

Focusing just on the occupancy rate ratio comparisons, there are several noteworthy observations. First, though the mean weekend occupancy ratio is higher for Super Bowls than for Final Fours, the median weekend occupancy ratio is higher for Final Fours than for Super Bowls. Though the financial spike for the local hotel industry is far higher for Super Bowls, due largely to the considerably higher net increases in average room rates, the median occupancy ratio comparisons suggest that the net impact upon daily weekend occupancy rates might be closer between these two events than previously considered. Second, the mean and median daily weekday occupancy ratio for major golf events is higher than for Super Bowls and Final Fours. However, this is not altogether surprising when one considers the structural logistics of a golf tournament. Unlike the Super Bowl and Final Four when there is less for event spectators to do during the early portions of Event Week, major golf events have practice rounds on Monday, Tuesday, and Wednesday. For some, attending the practice rounds is just as desirable as attending actual rounds of competition because the practice rounds are less expensive, generally allow greater access to the course with fewer restrictions on such things as camera usage, and allow fans a greater opportunity to potentially interact with players vis-à-vis autographs at the driving range or practice greens.
Table 2

Comparison Ratios of Year-to-Year Hotel Activity by Event Type

<table>
<thead>
<tr>
<th>Event</th>
<th>Variable</th>
<th>WEEKEND Mean</th>
<th>Median</th>
<th>WEEKDAY Mean</th>
<th>Median</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Bowl</td>
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<td>1.628</td>
<td>1.462</td>
<td>1.069</td>
<td>0.995</td>
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<tr>
<td></td>
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<td>2.501</td>
<td>1.404</td>
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</tr>
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<td></td>
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<td>3.934</td>
<td>1.658</td>
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</tr>
<tr>
<td></td>
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</tr>
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<td>Final Four</td>
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<td>1.552</td>
<td>1.083</td>
<td>1.064</td>
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To further demonstrate the heterogeneity of the data, Table 3 below presents a frequency distribution of the 40 largest and 40 smallest daily occupancy ratios from the sample of 371, while Tables 4 and 5 specifically identify these ratios by event and day. Regarding the 40 largest daily occupancy ratios, 45% were either Super Bowl or Final Four weekend days in MSAs with fewer than 3 million people. Also, note that more Final Four daily ratios populate the Top 40 compared to Super Bowl daily ratios, consistent with the median occupancy ratios from Table 2.

Separately, though only 12.5% of the Top 40 is populated by major golf events or March Madness Regionals, each of those events occurred in MSAs with fewer than 3 million people. Lastly, only one daily occupancy ratio among the Top 40 came from a weekday (the Wednesday of Super Bowl week in Indianapolis, which as an event itself realized the highest occupancy spikes of all fifty-three events analyzed). None of the Top 40 occupancy ratios were affiliated with March Madness Regionals.
<table>
<thead>
<tr>
<th>Event</th>
<th>&lt; 3.0 mil</th>
<th>3.0 - 5.0 mil</th>
<th>&gt; 5.0 mil</th>
<th>Total</th>
</tr>
</thead>
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<tr>
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<td>22.5%</td>
<td>7.5%</td>
<td>10.0%</td>
<td>40.0%</td>
</tr>
<tr>
<td>Final Four</td>
<td>22.5%</td>
<td>7.5%</td>
<td>17.5%</td>
<td>47.5%</td>
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<td>Golf</td>
<td>7.5%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>7.5%</td>
</tr>
<tr>
<td>MM Regional</td>
<td>5.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Total</td>
<td>57.5%</td>
<td>15.0%</td>
<td>27.5%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Event</th>
<th>&lt; 3.0 mil</th>
<th>3.0 - 5.0 mil</th>
<th>&gt; 5.0 mil</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Super Bowl</td>
<td>10.0%</td>
<td>5.0%</td>
<td>2.5%</td>
<td>17.5%</td>
</tr>
<tr>
<td>Final Four</td>
<td>2.5%</td>
<td>2.5%</td>
<td>0.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Golf</td>
<td>0.0%</td>
<td>0.0%</td>
<td>2.5%</td>
<td>2.5%</td>
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<tr>
<td>MM Regional</td>
<td>22.5%</td>
<td>25.0%</td>
<td>27.5%</td>
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</tr>
<tr>
<td>Total</td>
<td>35.0%</td>
<td>32.5%</td>
<td>32.5%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Regarding the 40 smallest daily occupancy ratios, 75% were associated with March Madness Regionals. Separately, these 40 ratios were evenly distributed between small, mid-sized, and large cities. Lastly, 60% of these ratios came from either Monday through Wednesday of Event Week, while another 20% were associated with dates not categorized as “weekends” (e.g. Thursdays for Friday-Sunday Regionals, or Sundays for Thursday-Saturday Regionals).
Table 4

40 Largest Daily Occupancy Spikes (n = 371)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Event</th>
<th>Day</th>
<th>Ratio</th>
<th>OCCP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2012 SB - Indy</td>
<td>Sunday</td>
<td>1.93</td>
<td>3.266</td>
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<td>2</td>
<td>2012 SB - Indy</td>
<td>Saturday</td>
<td>1.93</td>
<td>2.310</td>
</tr>
<tr>
<td>3</td>
<td>2012 SB - Indy</td>
<td>Thursday</td>
<td>1.93</td>
<td>2.239</td>
</tr>
<tr>
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<td>2012 SB - Indy</td>
<td>Friday</td>
<td>1.93</td>
<td>2.139</td>
</tr>
<tr>
<td>5</td>
<td>2008 Ryder Cup - Louisville</td>
<td>Sunday</td>
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<td>2.117</td>
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<td>2011 SB - Dal</td>
<td>Sunday</td>
<td>6.70</td>
<td>2.076</td>
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<td>2010 FF - Indy</td>
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<td>1.992</td>
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<td>2008 SB - Phoenix</td>
<td>Sunday</td>
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<td>2013 SB - New Orl</td>
<td>Sunday</td>
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<td>1.817</td>
</tr>
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<td>Sunday</td>
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<td>0.791</td>
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<td>2009 East Reg - Bos</td>
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<td>0.779</td>
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<td>40</td>
<td>2009 East Reg - Bos</td>
<td>Friday</td>
<td>4.64</td>
<td>0.765</td>
</tr>
</tbody>
</table>
Table 6 below offers an event-specific comparison of both daily weekend occupancy rate and daily weekend hotel revenue ratios. The largest net relative increase in weekend hotel activity was associated with the 2012 Super Bowl in Indianapolis. Median daily weekend occupancies were 131% higher than historical norms for that week, while median daily weekend hotel revenues were 837% higher. For the other Super Bowls, the Dallas and Phoenix MSAs saw their Event Week median weekend occupancies jump 71.2% and 62.2%, respectively, in comparison to historical norms for that same week, with the New Orleans and Tampa Bay MSAs lagging further behind at 46.2% and 44.4% occupancy spikes. Miami and New York saw the lowest spikes among Super Bowl host MSAs, with year-to-year median daily weekend occupancy gains of only 17.0% and 12.6%, respectively.

Among the Final Fours, the 2010 event in Indianapolis was the top performing MSA with median daily weekend occupancies that were 65.0% higher than historical norms for the same week, while median daily weekend total MSA hotel revenue was 191% higher than historically so. The occupancy spikes were more compact among the Final Four host MSAs than for the host Super Bowl sites, with the Detroit event in 2009 and the Atlanta event in 2013 each experiencing daily weekend occupancy rates that were 58% higher compared to historical norms, and the lowest net hotel spike arising for the San Antonio event in 2008 (37% increase in net occupancy rates compared to norms).

Among the major golf events, only four of the sixteen events analyzed saw net relative increases in daily median occupancy spikes that were 15% greater than year-to-year comparisons. Three of those four MSAs (Rochester for the 2013 PGA, Louisville for the 2008 Ryder Cup, and San Jose for the 2010 U.S. Open) are relatively smaller markets. Rochester saw weekend occupancy gains of 26.0%, with Detroit (host of 2008 PGA) and Louisville experiencing occupancy gains of 21.9% and 19.1%, respectively. Separately, Louisville and Rochester saw the largest net spikes in median daily weekend hotel revenues (216% and 134% respectively). Because most of the March Madness Regionals did not produce net increases in occupancy rates significantly above historical norms, these results are not included for space reasons.
### Table 6
Comparing Weekend Occupancy and Total Revenue Ratios Across Specific Events

<table>
<thead>
<tr>
<th>EVENT</th>
<th>DAILY OCCUPANCY</th>
<th>DAILY MSA TOT REV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td>SUPER BOWLS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012 SB - Indy</td>
<td>2.572</td>
<td>2.310</td>
</tr>
<tr>
<td>2011 SB - Dallas</td>
<td>1.780</td>
<td>1.712</td>
</tr>
<tr>
<td>2008 SB - Phoenix</td>
<td>1.609</td>
<td>1.622</td>
</tr>
<tr>
<td>2013 SB - NO</td>
<td>1.536</td>
<td>1.462</td>
</tr>
<tr>
<td>2009 SB - Tampa</td>
<td>1.511</td>
<td>1.444</td>
</tr>
<tr>
<td>2010 SB - Miami</td>
<td>1.191</td>
<td>1.170</td>
</tr>
<tr>
<td>2014 SB - NYC</td>
<td>1.194</td>
<td>1.126</td>
</tr>
<tr>
<td>FINAL FOURS</td>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td>2010 FF - Indy</td>
<td>1.763</td>
<td>1.650</td>
</tr>
<tr>
<td>2009 FF - Det</td>
<td>1.545</td>
<td>1.580</td>
</tr>
<tr>
<td>2013 FF - Atlanta</td>
<td>1.517</td>
<td>1.571</td>
</tr>
<tr>
<td>2012 FF - NO</td>
<td>1.401</td>
<td>1.455</td>
</tr>
<tr>
<td>2011 FF - Houston</td>
<td>1.443</td>
<td>1.448</td>
</tr>
<tr>
<td>2008 FF - SA</td>
<td>1.486</td>
<td>1.367</td>
</tr>
<tr>
<td>MAJOR GOLF EVENTS</td>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td>2013 PGA - Roch</td>
<td>1.237</td>
<td>1.260</td>
</tr>
<tr>
<td>2008 PGA - Detroit</td>
<td>1.192</td>
<td>1.219</td>
</tr>
<tr>
<td>2008 Ryder - Louisville</td>
<td>1.191</td>
<td>1.191</td>
</tr>
<tr>
<td>2010 USO - San Jose</td>
<td>1.172</td>
<td>1.157</td>
</tr>
<tr>
<td>2012 Ryder - Chicago</td>
<td>1.147</td>
<td>1.129</td>
</tr>
<tr>
<td>2012 USO - SF</td>
<td>1.120</td>
<td>1.117</td>
</tr>
<tr>
<td>2008 USO - SD</td>
<td>1.118</td>
<td>1.114</td>
</tr>
<tr>
<td>2013 Pres Cup - Columbus</td>
<td>1.083</td>
<td>1.102</td>
</tr>
<tr>
<td>2009 PGA - Minn</td>
<td>1.194</td>
<td>1.083</td>
</tr>
<tr>
<td>2012 PGA - Charleston</td>
<td>1.109</td>
<td>1.073</td>
</tr>
<tr>
<td>2011 PGA - Atlanta</td>
<td>1.059</td>
<td>1.067</td>
</tr>
<tr>
<td>2011 USO - Wash</td>
<td>1.052</td>
<td>1.051</td>
</tr>
<tr>
<td>2013 USO - Phil</td>
<td>1.064</td>
<td>1.048</td>
</tr>
<tr>
<td>2010 PGA - Mil</td>
<td>1.077</td>
<td>1.029</td>
</tr>
<tr>
<td>2009 USO - NY</td>
<td>0.986</td>
<td>0.983</td>
</tr>
<tr>
<td>2009 Pres - SF</td>
<td>0.988</td>
<td>0.983</td>
</tr>
</tbody>
</table>

Tables 7 and 8 address the second research question of which factors impact the degree to which net increases in hotel activity vary. Table 7 below presents the regression results from estimating Model 1. Recall that the dependent variable is the median daily occupancy rate ratio, the sample size is 371 daily occupancy ratios (a ratio comparing Event Week hotel activity to historical trends on the same calendar week is tabulated for each day of Event Week for all fifty-three events), and the estimation technique is OLS corrected for heteroskedasticity using White’s robust standard errors. 

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5 When H/S is present, OLS coefficient estimates are still unbiased but the OLS assumption of having an error term with constant variance is violated, thereby causing the standard errors and thus t-tests of individual variable significance to be unreliable.
The overall model is statistically significant (F = 30.3), and the adjusted R-square suggests that roughly thirty-two percent of the variation in daily occupancy ratios can be explained by the joint variation in the independent variables. A review of the t-scores indicates that daily occupancy ratios are sensitive to Event Type, time of week, MSA size, and general economic conditions. Compared to the control group (March Madness Regionals), occupancy rate spikes were 31.7% larger for Super Bowls, 25.7% larger for Final Fours, and 9.1% larger for major golf events during their respective Event Weeks compared to historical norms. Separately, weekend occupancy rate spikes were 14.7% higher than weekday ratios. Next, the results suggest that occupancy spikes grow by 1.1% as MSA size falls by 1 million people. Lastly, events taking place either during or shortly thereafter the 2007-09 recession experienced occupancy spikes that were 4.4% lower than events which took place post-recession.

### Table 7

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef</th>
<th>t-score</th>
<th>p-value</th>
<th>Beta Coef</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.013</td>
<td>50.74</td>
<td>&lt;.0001</td>
<td>0.000</td>
</tr>
<tr>
<td>SB</td>
<td>0.317</td>
<td>5.11</td>
<td>&lt;.0001</td>
<td>0.424</td>
</tr>
<tr>
<td>FF</td>
<td>0.257</td>
<td>7.25</td>
<td>&lt;.0001</td>
<td>0.322</td>
</tr>
<tr>
<td>Weekend</td>
<td>0.147</td>
<td>6.49</td>
<td>&lt;.0001</td>
<td>0.287</td>
</tr>
<tr>
<td>MSAPop</td>
<td>-0.011</td>
<td>-4.73</td>
<td>&lt;.0001</td>
<td>-0.192</td>
</tr>
<tr>
<td>Golf</td>
<td>0.091</td>
<td>5.41</td>
<td>&lt;.0001</td>
<td>0.166</td>
</tr>
<tr>
<td>Recession</td>
<td>-0.044</td>
<td>-1.95</td>
<td>0.052</td>
<td>-0.087</td>
</tr>
</tbody>
</table>

To more accurately pinpoint weekend effects by Event Type, the weekend dummy variable is separately interacted with SB, FF, and GOLF. These results are presented in Table 8 below, and again employ White’s robust standard errors to correct for heteroskedasticity. The inclusion of these interaction terms significantly improves the model, as the revised model can explain nearly 49% of the variation in daily occupancy rate ratios. Based on the beta coefficients, the interaction terms associated with Super Bowl weekends and Final Four weekends become the most significant explanatory values. Ceteris paribus, daily weekend occupancy ratios are 52.0% higher for Super Bowl weekends and 40.5% higher for Final Four weekends compared to the control group (March Madness Regionals). Additionally, there is still a separate daily occupancy ratio premium of 9.4% for Super Bowls and 8.3% for Final Fours compared to Regionals, as well as a general daily occupancy ratio premium of 3.8% on weekends compared to weekdays. Major golf events still experience daily occupancy ratios that are 10.7% higher than for Regionals, but the interaction of golf and weekend did not produce statistically significant results. This is likely due to the fact that weekday daily occupancy spikes for major golf events are the largest among all Event Types for the reasons discussed earlier. Lastly, note that the modified model specification did not significantly impact the statistical importance or magnitude of the coefficients associated with “MSAPop” and “Recession”.

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6 Given the presence of H/S, various remedial approaches were attempted following Gujarati’s textbook prescriptions (Gujarati, 2011). The log transformation of the dependent variable did remove H/S but led to the sample size falling considerably given that many markup percentages were negative. Weighted least squares (WLS) using the predicted value of the dependent variable as the weight did not remove H/S. Conversely, White’s corrected standard errors did remove H/S.
Table 8

Model 1 Modified with Weekend Interaction Terms

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coeff</th>
<th>t-score</th>
<th>p-value</th>
<th>Beta Coeff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.062</td>
<td>54.4</td>
<td>&lt;.0001</td>
<td>0</td>
</tr>
<tr>
<td>SB wkend</td>
<td>0.520</td>
<td>4.5</td>
<td>&lt;.0001</td>
<td>0.477</td>
</tr>
<tr>
<td>FF wkend</td>
<td>0.405</td>
<td>7.2</td>
<td>&lt;.0001</td>
<td>0.345</td>
</tr>
<tr>
<td>MSA Pop</td>
<td>-0.011</td>
<td>-5.0</td>
<td>&lt;.0001</td>
<td>-0.198</td>
</tr>
<tr>
<td>Golf</td>
<td>0.107</td>
<td>5.0</td>
<td>&lt;.0001</td>
<td>0.194</td>
</tr>
<tr>
<td>SB</td>
<td>0.094</td>
<td>1.8</td>
<td>0.073</td>
<td>0.126</td>
</tr>
<tr>
<td>FF</td>
<td>0.083</td>
<td>2.7</td>
<td>0.007</td>
<td>0.105</td>
</tr>
<tr>
<td>Recession</td>
<td>-0.047</td>
<td>-2.4</td>
<td>0.016</td>
<td>-0.092</td>
</tr>
<tr>
<td>Weekend</td>
<td>0.038</td>
<td>2.1</td>
<td>0.035</td>
<td>0.075</td>
</tr>
<tr>
<td>Golf Wkend</td>
<td>-0.027</td>
<td>-0.9</td>
<td>0.359</td>
<td>-0.036</td>
</tr>
</tbody>
</table>

F-value 40.35  
Pr > F 0.0001  
Adjusted R2 0.4891 n = 371

Table 9 below addresses the third research question of producing estimates of overall gross direct visitor spending associated with these events. These estimates are produced as follows. First, the STR data allows a calculation of both the daily and weekly year-to-year increases in MSA hotel revenue tied to a sporting event. Second, it is assumed that the net weekly increases in hotel revenue represent 50% of total gross spending by sports tourists. Third, the overall spending estimate is further revised downward by multiplying the non-hotel spending component by the OCCP/ADR ratio in an attempt to adjust for the fact that non-hotel sectors do not dynamically price their products during Event Week like the hotel industry can. Focusing on the last column of Table 9, the results suggest that the overall direct visitor spending impact on host MSAs is $82.9 million for the median Super Bowl, $31.7 million for the median Final Four, and $8.6 million for the median major golf event. Two of the six Final Fours yield spending projections in excess of $50 million, while four of the sixteen golf events yield spending projections in excess of $25 million. The impacts associated with the typical March Madness Regionals were again negligible, and thus are omitted for space reasons.

Though these rough estimates are produced using a less rigorous methodology, as one would expect from a contracted on-site study, these estimates are nonetheless quite conservative for numerous reasons. First, the percentage of overall spending tied to hotel expenditures is assumed to be higher than is consistent with Rascher’s (2010) research. Doing so lowers the estimate of overall gross direct visitor spending. Second, this approach does not consider spending by non-local event rights holders who often invest money locally into the production and operation of an event. Third, this approach does not account for spending by day-commuters (i.e. non-locals who travel from home and back each day of an event without incurring lodging expenditures, but still inject money elsewhere into the local economy). Lastly, this approach does not allow for even a small portion of spending by locals whose dollars may otherwise have leaked out of their home community had they attended the event in question in another community.  

Rascher (2010) notes that it may be appropriate to count some spending by locals towards economic impact considerations, referring to this behavior as “vacationing at home”.

7 Rascher (2010) notes that it may be appropriate to count some spending by locals towards economic impact considerations, referring to this behavior as “vacationing at home”.

29
Table 9
Approximating Increases in Gross Overall Spending by Event - Median Daily Occupancy Rates and ADRs for Event Week

<table>
<thead>
<tr>
<th>Super Bowl</th>
<th>OCCP</th>
<th>ADR</th>
<th>Net Daily-Hotel</th>
<th>Net Wkly-Hotel</th>
<th>Gross Wkly-Overall</th>
<th>Adjusted Gross</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB11-Dallas</td>
<td>1.329</td>
<td>1.980</td>
<td>$7,998,571</td>
<td>$55,989,997</td>
<td>$111,979,994</td>
<td>$93,592,242</td>
</tr>
<tr>
<td>SB14-NYC</td>
<td>1.065</td>
<td>1.400</td>
<td>$7,540,039</td>
<td>$52,780,273</td>
<td>$105,560,546</td>
<td>$92,907,512</td>
</tr>
<tr>
<td>SB10-Miami</td>
<td>1.088</td>
<td>1.507</td>
<td>$6,880,659</td>
<td>$48,164,612</td>
<td>$96,329,223</td>
<td>$82,953,322</td>
</tr>
<tr>
<td>SB08-Phoenix</td>
<td>1.211</td>
<td>1.925</td>
<td>$6,612,982</td>
<td>$46,290,877</td>
<td>$92,581,754</td>
<td>$75,424,570</td>
</tr>
<tr>
<td>SB12-Indy</td>
<td>1.998</td>
<td>3.569</td>
<td>$6,110,418</td>
<td>$42,772,925</td>
<td>$85,545,850</td>
<td>$66,714,313</td>
</tr>
<tr>
<td>SB09-Tampa</td>
<td>1.146</td>
<td>2.082</td>
<td>$3,902,711</td>
<td>$27,318,975</td>
<td>$54,637,950</td>
<td>$42,365,346</td>
</tr>
<tr>
<td>SB Median</td>
<td>1.211</td>
<td>1.980</td>
<td>$6,880,659</td>
<td>$48,164,612</td>
<td>$96,329,223</td>
<td>$82,953,322</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Final Four</th>
<th>OCCP</th>
<th>ADR</th>
<th>Net Daily-Hotel</th>
<th>Net Wkly-Hotel</th>
<th>Gross Wkly-Overall</th>
<th>Adjusted Gross</th>
</tr>
</thead>
<tbody>
<tr>
<td>FF13-Atlanta</td>
<td>1.136</td>
<td>1.036</td>
<td>$4,165,472</td>
<td>$29,158,305</td>
<td>$58,316,609</td>
<td>$54,258,926</td>
</tr>
<tr>
<td>FF12-NO</td>
<td>1.224</td>
<td>1.923</td>
<td>$4,426,529</td>
<td>$30,986,406</td>
<td>$61,972,813</td>
<td>$50,701,563</td>
</tr>
<tr>
<td>FF12-Houston</td>
<td>1.204</td>
<td>1.290</td>
<td>$2,379,784</td>
<td>$16,658,489</td>
<td>$33,316,977</td>
<td>$32,209,984</td>
</tr>
<tr>
<td>FF08-San Ant</td>
<td>1.121</td>
<td>1.603</td>
<td>$2,598,543</td>
<td>$18,189,799</td>
<td>$36,397,598</td>
<td>$31,201,063</td>
</tr>
<tr>
<td>FF10-Indy</td>
<td>1.360</td>
<td>1.633</td>
<td>$1,645,825</td>
<td>$11,520,772</td>
<td>$23,041,544</td>
<td>$21,169,032</td>
</tr>
<tr>
<td>FF09-Detroit</td>
<td>1.198</td>
<td>1.515</td>
<td>$1,161,844</td>
<td>$8,132,909</td>
<td>$16,265,817</td>
<td>$13,881,956</td>
</tr>
<tr>
<td>FF Median</td>
<td>1.201</td>
<td>1.559</td>
<td>$2,489,163</td>
<td>$17,424,144</td>
<td>$34,848,288</td>
<td>$31,705,523</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Golf Event</th>
<th>OCCP</th>
<th>ADR</th>
<th>Net Daily-Hotel</th>
<th>Net Wkly-Hotel</th>
<th>Gross Wkly-Overall</th>
<th>Adjusted Gross</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ryder-12-Chicago</td>
<td>1.137</td>
<td>1.103</td>
<td>$2,622,819</td>
<td>$18,359,731</td>
<td>$36,719,462</td>
<td>$37,279,689</td>
</tr>
<tr>
<td>USO-08-San Die</td>
<td>1.138</td>
<td>1.240</td>
<td>$2,229,768</td>
<td>$15,608,374</td>
<td>$31,216,748</td>
<td>$29,933,386</td>
</tr>
<tr>
<td>USO-12-San Fran</td>
<td>1.057</td>
<td>1.123</td>
<td>$2,016,963</td>
<td>$14,118,743</td>
<td>$28,237,486</td>
<td>$27,410,163</td>
</tr>
<tr>
<td>Ryder-08-Louis</td>
<td>1.304</td>
<td>2.459</td>
<td>$2,542,898</td>
<td>$17,800,283</td>
<td>$35,600,565</td>
<td>$27,235,206</td>
</tr>
<tr>
<td>USO-11-Wash</td>
<td>1.041</td>
<td>1.028</td>
<td>$1,137,234</td>
<td>$7,960,639</td>
<td>$15,921,277</td>
<td>$16,024,380</td>
</tr>
<tr>
<td>PGA-08-Detroit</td>
<td>1.210</td>
<td>1.184</td>
<td>$806,957</td>
<td>$5,648,702</td>
<td>$11,297,404</td>
<td>$11,422,633</td>
</tr>
<tr>
<td>PGA-13-Roch</td>
<td>1.265</td>
<td>1.700</td>
<td>$848,887</td>
<td>$5,942,208</td>
<td>$11,884,415</td>
<td>$10,364,355</td>
</tr>
<tr>
<td>USO-13-Phil</td>
<td>1.033</td>
<td>1.148</td>
<td>$693,316</td>
<td>$4,853,210</td>
<td>$9,706,419</td>
<td>$9,219,899</td>
</tr>
<tr>
<td>USO-10-San Jose</td>
<td>1.188</td>
<td>0.992</td>
<td>$525,246</td>
<td>$3,676,719</td>
<td>$7,353,438</td>
<td>$8,078,778</td>
</tr>
<tr>
<td>PGA-12-Charl</td>
<td>1.143</td>
<td>1.223</td>
<td>$594,082</td>
<td>$4,158,572</td>
<td>$8,317,144</td>
<td>$8,045,388</td>
</tr>
<tr>
<td>Pres-13-Colum</td>
<td>1.102</td>
<td>1.124</td>
<td>$459,915</td>
<td>$3,219,405</td>
<td>$6,438,810</td>
<td>$6,375,137</td>
</tr>
<tr>
<td>PGA-09-Minn</td>
<td>1.052</td>
<td>1.020</td>
<td>$414,006</td>
<td>$2,898,044</td>
<td>$5,796,088</td>
<td>$5,887,495</td>
</tr>
<tr>
<td>PGA-10-Milw</td>
<td>1.242</td>
<td>1.044</td>
<td>$333,712</td>
<td>$2,335,982</td>
<td>$4,671,965</td>
<td>$5,116,115</td>
</tr>
<tr>
<td>PGA-11-Atl</td>
<td>1.015</td>
<td>1.000</td>
<td>$184,125</td>
<td>$1,288,872</td>
<td>$2,577,444</td>
<td>$2,596,663</td>
</tr>
<tr>
<td>Pres-09-San Fran</td>
<td>0.998</td>
<td>0.958</td>
<td>-$348,480</td>
<td>-$2,439,360</td>
<td>-$4,878,720</td>
<td>-$4,980,756</td>
</tr>
<tr>
<td>USO-09-NYC</td>
<td>0.896</td>
<td>0.876</td>
<td>-$6,806,098</td>
<td>-$47,642,685</td>
<td>-$95,285,370</td>
<td>-$96,365,649</td>
</tr>
<tr>
<td><strong>Golf Median</strong></td>
<td><strong>1.120</strong></td>
<td><strong>1.113</strong></td>
<td><strong>$643,699</strong></td>
<td><strong>$4,505,891</strong></td>
<td><strong>$9,011,782</strong></td>
<td><strong>$8,649,339</strong></td>
</tr>
</tbody>
</table>
DISCUSSION

Upon reviewing STR data for Super Bowls, Final Fours, March Madness Regionals, and major golf events during this sample period, the following conclusions are made. First, and not surprisingly, there are significant net increases in tourism and local hotel revenues on the weekends of major sporting events such as Super Bowls and Final Fours. Net increases in tourism and hotel revenues are less strong for major golf events, but are still significantly greater than historical norms within those host communities. Conversely, March Madness Regionals do not generally produce large year-to-year increases in either the incidence of visitors or the magnitude of hotel spending. Second, the difference in the median net occupancy spike between the Super Bowl and Final Four is perhaps closer than previously believed. Third, it appears that smaller MSAs are more likely to see larger relative increases in net visitor activity when hosting a sporting event. This result holds true regardless of the magnitude of the sporting event, and is consistent with the idea that smaller cities may produce smaller displacement effects because such cities are not as likely to be perceived as destination cities for general tourism or conventions. Fourth, the size of net visitor gains associated with sporting events was less for those events which took place during or shortly after the conclusion of America’s latest recession, implying that general economic conditions can have an impact on the net hotel spike realized by communities hosting mobile sporting events.

Regarding the estimates of overall gross visitor spending associated with various sporting events from Table 9, several thoughts follow. First, these estimates (which are admittedly conservative for the reasons mentioned earlier) are consistent with criticisms commonly levied by academicians towards local constituents (e.g. event organizers, politicians, tourism agencies) that such groups tend to overstate the net economic benefits of sporting events. This is likely because such organizations may only consider total gross spending that takes place during Event Week, without (1) distinguishing between spending by ‘locals’ and ‘non-locals’, (2) accounting for whether the event in question displaced other economic activity that historically takes place during Event Week, (3) examining whether an influx of visitors might crowd out spending by locals who stay at home to avoid congestion caused by an influx of visitors, and (4) accounting for public subsidies associated with the event (including expenditures on police, firemen, or bidding on the event in the first place).

All this said, using the STR data in conjunction with Rascher’s (2010) spending ratios to estimate gross overall spending does focus on spending by ‘non-locals’ and accounts for displacement. Hence, for Porter’s claim that Super Bowls impart zero economic impact upon host communities to be consistent with Table 9, this would suggest that the combined deflating weight of public subsidies and “crowding out” would have to be roughly $83 million for the median Super Bowl. Likewise, for Final Fours to have zero net economic impact for their host communities, this would mean that the collective magnitude of public subsidies and “crowding out” would be nearly $32 million for the median event. Though beyond the scope of this paper, these comparisons should foster further discussion and analytical research to properly ascertain just how large public subsidies and “crowding out” are, for if their collective weight is overstated by existing academic research, then this places a downward bias on academic assessments of the true net overall increase in economic activity associated with mobile sporting events.

IMPLICATIONS FOR FUTURE RESEARCH & CONCLUSION

In terms of future research, one consideration would be to examine whether the results are significantly impacted by using either county-level rather than MSA data, or a geographic region within a certain radius (e.g. 5 or 10 miles) from the competition location. The importance of examining whether the results are sensitive to the size of the defined impact area becomes apparent when looking at the results herein associated with the 2009 U.S. Open Golf Championships. The 2009 U.S. Open took place at Bethpage Black State Park in Farmingdale, NY, located 37 miles away from Manhattan in Nassau County. Nassau County is part of the New York City MSA, so in being consistent with the methodology used throughout, the New York City MSA was the region studied for this event. However, it is possible that not selecting the host county (Nassau) as the focal point of the analysis could skew the results. This issue is more common among the major golf events analyzed, in part because the competition venues

8 The importance of further exploring how boundary definitions can impact results, and in conjunction with preparing the author for a presentation pertaining to the hotel impacts associated with Orlando hosting 2nd and 3rd round games in the 2014 rendition of March Madness, STR noted that Orlando saw little evidence of net hotel gains when using MSA data. However, when focusing on the hotels within a 5-mile radius of the Amway Center, occupancy rates increased by 15% compared to historical norms.
(i.e. the golf courses) are located further away from the MSA’s core crop of hotels than is true for Super Bowls and Final Fours, where often times the stadium/arena is within close proximity to downtown and numerous hotels.

Another extension for future research is to refine the regression analysis to capture how timing and other conditional considerations such as team quality and proximity may impact the net relative increases in hotel activity across events. In regards to timing, recall that the 2012 Super Bowl in Indianapolis experienced the largest net relative increases in occupancy rates and hotel revenues. Part of this may be because, historically, Indianapolis is less of a destination city during that particular time of the year (early February). In regards to other conditional considerations, it may be worth examining if ‘team quality’ (or the quality of the field of competitors in the case of golf) affects ratio differences, which would allow an assessment of whether better teams/fields would attract more out-of-town visitors. Yet another consideration could be whether the proximity of the team’s competing in an event impacts the inflow of sports tourists, which would allow for an examination of whether teams whose fan bases have a shorter commute are more likely to travel to an event.

Another revision to consider for future research is to acquire a larger sample size of non-Event Year data. A larger sampling of historical data (say, Event Week data for each of the five years prior to an event) would better reflect historical norms in the local hotel industry, and thus, produce more robust comparisons with hotel activity during Event Week.

REFERENCES


USING ASSESSMENT INSTRUMENTS TO ANALYZE THE BEAR STEARNS ETHICAL CODE

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Abstract
Ethical codes state the major philosophical principles and values in organizations and function as policy documents that define the responsibilities of organizations to stakeholders. To be effective, corporate codes must be communicated well in the organization and become assimilated as part of its culture. When they exist as separate entities outside the culture of an organization or are communicated ineffectively, they can fail to function as key strategic documents. Too often they are composed by legal staff to meet a few narrow, legal guidelines and are not fully embraced by organizational members.

The Bear Stearns ethical code was analyzed using two different methodologies. Results showed the code was clear in communicating facts and information, but was not very strong in the transformational and visionary aspects that might assist a company during a crisis. The code was also shown to be fairly generic and did not express ethical values that were unique to the organization.

Key words: corporate ethical codes, ethics, investment banks, Bear Stearns, corporate ethics, ethics in banking, financial crisis

INTRODUCTION

Corporate codes of ethics are documents designed for internal and external audiences which state the major philosophical values embraced by an organization. These codes define the responsibilities of the organization to stakeholders, describe conduct expected of employees and set the ethical parameters of the organization by articulating what is acceptable and what is not ((Kaptein & Wempe, 2002; Stevens, 1996). They can serve as key strategic documents in organizations, guiding their decisions in complex circumstances, or they can occupy an ornamental role and attempt to boost the organization’s ethical appearance to stakeholders. Some firms write codes largely to manage their public images and to protect the organization against egregious behavior rather than take a comprehensive approach to their codes. They turn the jobs over to attorneys who use boiler plate language and minimal compliance approaches (Holder-Webb & Cohen, 2012). Other firms genuinely attempt to make certain their codes reflect important ethical positions of the organization and its culture, then attempt to guide and instruct employees on ethical behaviors appropriate to their organizations.

Codes in the U.S. have an interesting history; an early volume with 134 ethical codes from organizations in the 1920’s shows that association codes were prevalent in the first part of the 20th century (Heermance, 1924). However, the majority of U.S. corporations did not adopt ethical codes until much later. Following the savings and loans scandals in the 1980’s, the U.S. government responded with Federal
Sentencing Guidelines which laid out steps for calculating civil penalties. Companies with codes and effective compliance programs could receive lesser penalties than those without, giving an incentive to create a code for that purpose alone (U.S Sentencing Commission Guidelines, 1999). Use of corporate codes increased dramatically in the 1980’s and 1990’s following FSG’s and other legislation passed after the loan crisis. Additionally, section 406 of the Sarbanes Oxley Act (SOX) passed in 2002 required companies to disclose if they had a code of ethics as a means of deterring wrongdoing; SOX emphasized “the tone at the top” requiring publically traded companies to have ethics transparency, providing an additional stimulus for companies to embrace ethical codes. Ethics training programs and the numbers of ethics committees within corporation also proliferated during this time (Weber and Wasielecki, 2013).

This paper analyzes the corporate code of ethics from Bear Stearns, one of several major investment banks which failed during the financial crisis of 2008. The code is examined in terms of its role as a strategic document – whether it guided the executives during the financial crisis or was a generic corporate document which received little attention from employees. Rhetorical structures, tone, readability and style are also examined to analyze strategies used to communicate the code. Bear Stearns failed to navigate the great recession and was acquired in March, 2008 by JPMorgan Chase at a fraction of its market value in 2007. We explore whether the code might have played a significant role in the bank during its precipitous devaluation or whether it was a corporate document with no material connection to the operations of the firm. We analyzed the code in light of the company’s demise to better understand how it may or may not have influenced executives and managers during Bear Stearns’ final year as an investment bank.

THE SCOPE OF ETHICAL CODES

Corporate ethical codes, also called codes of conduct, business principles, codes of ethics and corporate ethics statements, range in length from one paragraph to over fifty pages. They are designed to guide employee behavior and organizational decisions by articulating the company’s values. Codes differ from mission statements by addressing the question—with what ethical standards and values should the mission be pursued? In contrast, mission statements articulate the objectives of a company and the organizational goals in ways that affect its strategy (Stevens, 1994). Ethical codes generally contain open guidelines describing desirable behavior and restrictive language prohibiting undesirable behaviors such as bribery and conflict of interest (Nijhof, Cludts, Fisscher, & Laan, 2003). Corporations attempt to influence employee actions, mitigate bad behavior, and effect change through these explicit statements of values and conduct.

Effective codes have visionary and transformational features which provide guidance to organizational members in difficult circumstances (Stevens, 2008). They can add value when they address internal and external stakeholders, articulating the norms and standards the organization seeks to uphold, and addressing social responsibility. They establish the ethical tone and, if carefully constructed, can function as key corporate strategic documents upon which major decisions are based. Kaptein and Wempe describe them as policies which define the organizational responsibilities to stakeholders and address the conduct expected of employees (2002). Additionally, codes clarify the corporate norms and values in areas of social responsibility (Kaptein, 2004). Adherence to the code during ethical dilemmas is a commitment an organization can undertake to ensure a strong ethical climate, but not all firms have effectively handled the challenge of implementing and maintaining codes within an organizational milieu.

PREVALANCE OF CODES AROUND THE WORLD

Ethical codes are widespread among U.S. companies (Trevino, Weaver, Gibson and Toffler, 1999; Chonko, Wotrub, and Loe, 2003). They have become more common globally as an increasing number of companies choose to adopt them (Carasco and Singh, 2003; O’Dwyer and Madden, 2006). A study conducted ten years ago indicated that 80% of top American and Canadian companies were using a code (Nijhof, Fischer and Lann, 2003).

Another study reported that fifty-three percent of the largest companies worldwide had a code (Kaptein, 2004). A more recent research article examining Fortune Global 200 companies indicated that 100% of American firms in this group had a code as did about 80% of European firms (KPMG, 2008).

Scholars have observed that code content differs across countries and continents. Langlois and Schelgelmilch’s study of codes from England, France, Germany and the U.S. yielded that British and European codes addressed government and customer relations less frequently than American codes (1990). Kaptein also identified content differences among European, Asian and North American codes, noting that European codes focused more on the environment than American codes while discussions of honesty were more prevalent in the latter (2004). Indeed sixty-four percent of American codes focused on honesty.
compared with forty-five percent of European codes and thirty-eight percent of Asian codes. The concept of fairness was found more frequently in European and Asian codes than American codes. Differences in cultural beliefs, values, and political norms are likely to have influenced these variables in code content.

In an early study analyzing the content of 202 Fortune 500 company codes, Mathews found that firms mostly emphasized illegal activities and employee misconduct and paid little attention to the environment, product quality or safety (Mathews, 1987). Stevens’ study several years later revealed evidence that codes were used to protect and defend organizations against egregious behavior by employees and typically lacked statements providing ethical guidance and vision (1996). Snell and Herndon agreed, concluding that codes were mainly focused on corporate self-defense (2000). A more recent work shows that codes from the Global 200 emphasize the interests of investors, the central role of profits, and the need to abide by the law; they are also beginning to reflect an increased focus on corporate social responsibility (KPMG, 2008).

THE ROLE OF CODES IN ORGANIZATIONS

Codes can enhance a company’s reputation, improve the work climate, help employees feel more positive about the company (Manley, 1991) and affect employee behavior by positively influencing ethical decision-making in organizations (Trevino and Weaver, 2003). Codes can also discourage government intervention, allowing companies to manage themselves with less regulation or they can help garner favors with regulators if transgressions occur (Kaptein and Schwartz, 2008). European companies have increasingly used codes to reduce government intervention and regulate labor relations (Sobczak, 2003). Empirical studies examining the relationship between codes of ethics and ethical behavior are mixed; however, recent studies show that codes can be effective if certain parameters exist. For example, when employees’ and managers’ behaviors align with codes, their behavior positively influences others in the organization, reflecting the importance of buy-in and consistency (Laufer and Robinson, 1997). One study revealed that management accountants perceived less wrongdoing in organizations with corporate codes while respondents in organizations without formal codes reported more infractions (Somers, 2001). Valentine and Barnett (2002) observed a positive effect with sales professionals’ perceptions of their organizations when they had a code. Additionally codes of ethics were found to create patterns of trust amongst employees (Scalet, 2006). These studies point to codes encouraging employees and managers to act with integrity. After reviewing sixty-seven code studies, Kaptein and Schwartz concluded that codes positively affected behavior in organizations (2008). These studies add to the growing body of work supporting the use of codes and provide additional evidence that codes can be effective in promoting more transparent and ethical corporate behavior.

Codes have emerged as one of the major CSR instruments by which companies align their actions and values with those of their customers, enacting a concept known as ethical consumerism (Castaldo, Perrini, Misani and Tencati, 2009). Seventy-five percent of codes in a study of 157 global codes mentioned social responsibility, although the researchers found references were slight (Stohl, Stohl and Popov, 2009). Kaptein and Schwartz’ study showed that codes are evolving toward a greater interest in social responsibility (2008). DeTienne and Lewis revealed that a high number of American investors consider social responsibility (2008). DeTienne and Lewis revealed that a high number of American investors consider social responsibility (2008).

WHAT MAKES CODES EFFECTIVE?

Codes can serve as core foundational documents that give organizational members a sense of shared values and commitment to ethical purposes (Stevens, 2008). Studies indicate that codes can deter the kind of unscrupulous behavior that erodes morale, but only under two conditions. First, they must be communicated effectively in the organizations and supported by the management team. Second, they must be authentically integrated into the organizational culture.

Communicating the code and instructing employees on its content are critical to the effectiveness of the code. Both Weeks and Nantel (1992) and Adam and Rachman-Moore (2004) noted that codes were effective if they were well communicated in organizations using the right channels. Messikomer and Cirka also noted that quality and frequency of communication were important to a code’s success (2010). Most importantly, open discussions about ethics in the organizations fostered an increase in ethical behavior, and strong leaders who shared their values with others positively affected both the organization and its code (Trevino et al, 1999). An example of dialogic communication about ethics with positive results occurred at the healthcare company Novo Nordisk. Discussions about the importance of business ethics focusing specifically on the company’s ethics program and code at subsidiaries in Denmark and Brazil showed that dialogue among colleagues was “a positive characteristic of workplace culture, especially since it
encourages ethical behavior” (Trapp, 2011 p. 551). Trapp also found that attitudes are affected by levels of trust, confidence and credibility among colleagues.

Schwartz demonstrated that codes are most effective when they are readable, relevant and written with a positive rather than negative tone (2004). Codes have the ability to transform organizational cultures and function best when communicated effectively and culturally embedded in the organization; otherwise they remain as separate documents that can be seen as immaterial to the company’s mission and purpose. In organizations where the code is not communicated effectively – or, worse, when the code is subject to suspension for matters of convenience as happened in the Enron corporation, the result can be paralysis and corruption. Simply put, codes fail when poorly communicated.

While evidence exists that codes are effective under the right conditions, they sometimes fail to prevent unethical behavior. As tragically demonstrated with the Enron Corporation in 2000, they are not effective when communicated weakly or paid little heed (Sims and Brinkman, 2003). Bear Stearns had an ethical code, but as this paper will show, it was not written to play a significant role in the organization or to occupy a central role in the firm’s strategy.

Channels of communication can also determine whether a code is effective. For example, communicating an ethical code from levels of upper management downward to employees often leads to the code being ignored. In highly centralized organizations, mandated codes were found to be ineffective because employees rejected the attempts at top-down control (Trevino and Weaver, 2003). One study examined whether an ethical compliance program of ethical codes, training and communication would result in fewer OSHA violations. Researchers found no positive correlations linking the two, leading them to conclude that forced code compliance fails because codes communicated downward by management to employees are viewed as edicts and are often either resisted or ignored (McKendall, DeMarr and Jones-Rikkers, 2002). For example, Enron’s ethical failure, which cost investors around $11 billion, reflected a controlled organization where individuals felt they could not communicate openly about wrongdoing they were observing (Perlow and Williams, 2003). Enron had an ethical code, but it also had multiple sets of books, and the board of directors had the authority to suspend the code (which they did more than once) when they wanted to act against it (Sims and Brinkman, 2003). Numerous other examples of companies with ethical codes acting unethically abound and have been noted in the media.

The second factor critical to a code’s success is that it must be authentically integrated into the corporate culture. Codes work most effectively when employees see organizational actions clearly aligned with the code. Codes become organizationally embedded when leaders create and manage the organization’s culture using the code. Petersen and Krings found that codes of conduct reduced employer discrimination, but only when the codes were integrated into the practices of the organization and backed up by sanctions; otherwise, they were ineffective (2009). When coupled with the right ethical behavior from managers, codes are more effective than formal ethical training (Adam and Rachman-Moore, 2004). Code effectiveness is also identified with corporate boards setting the right tone in organizations at the top (Schwartz, Dunfee and Kline, 2005).

Organizational members react to transparent and visible justice, so consistent application and enforcement of the code is important for effectiveness. On the other hand, when managers’ or employees’ behaviors violate the code and no consequences are observed, the code will fail and faith in organizational leadership will erode. Nitsch, Baetz and Hughes observed that frustration, cynicism, and anger metastasize when code violations go unpunished (2005). Perceived unfairness or unequal treatment also causes low trust in organizations and weakens members’ commitment to the code (Kickup, 2005). Distributive justice is an important construct for organizations; leaders who build trust by ensuring justice occurs will strengthen members’ affiliation with the code (Greenberg, 1990). Additionally Singh’s recent study revealed that code effectiveness is connected to the way it is communicated and enforced in the organization (2011).

The quality of a code, reflecting the human and capital resource investments to ensure the code is consistent with corporate values, plays an important role in the organization’s culture. Erwin found that corporations with high quality codes appeared more frequently on top CSR rating lists for ethical behavior, corporate citizenship, sustainable achievement and public perception than codes that were rated lower quality in his study (2011).

INEFFECTIVE CODES

Codes fail if rejected by the culture of an organization. Healey and Isles studied London IT firms attempting to govern information and use of technology, discovering that using codes to achieve governance and compliance was ineffective and the behavior of IT end users in organizations was not
changed (2002). A study involving Norwegian businesses with codes measured the attitudes of engineers and economists and found that the mere presence of a code was not sufficient to influence the ethical attitudes of respondents (Marnburg, 2000). He observed that organizational members need to acknowledge and accept the code as part of their culture, which, in this case, they did not. Some Chinese organizations exhibited this same phenomenon. While leaders in the organization paid lip service to the code, behaviors did not adhere to the code. Leaders failed to adopt best practices of a code even when it would benefit their situation (Snell & Herndon, 2000). The authors indicated that cultural factors such as power distance caused the behavior since Chinese subordinates are required to publicly support their superiors even when they disagree with a decision. Webley and Werner also concluded that the mere presence of a code did not abate unethical behavior (2008) as did Trapp who found it must be an integral part of the culture (2011). These studies illustrate the interplay between culture and codes; codes, when mandated by external agents, are ineffective. Simply put, goals are not achieved when managers impose legal controls on employees and order them to act ethically; codes attempting to regulate ethics simply do not work.

Top down attempts to control fail, which explains why Marnburg, McKendall et al, Healey and Isles and Snell and Herndon all reported codes were unsuccessful in regulating behavior. Schwartz (2000) also observed that codes are not good compliance control systems; Trevino and Weaver agreed stating that forced legal compliance moves codes outside the climate and cultural boundaries where employees have no ownership (2003). Culture and cooperation create the climate where codes can be effective tools rather than statements attempting to dictate compliance.

THE COLLAPSE OF BEAR STEARNS

Bear Stearns, an 85-year-old investment bank headquartered in the U.S. was the first casualty in the 2008 banking crisis that led to the most serious economic recession in the U.S. since the 1930’s. Fourteen trillion dollars’ worth of highly rated bonds suddenly plunged, shocking the financial world; investment banks, mortgage lenders and commercial banks were especially hard hit during this time. Bear Stearns, having invested heavily in subprime mortgages and other high-risk financial instruments, suffered a liquidity crisis in March 2008. Like several other large banks, the bank did not consider the risks of defaulted subprime loans or a downturn in the economy, yet both occurred simultaneously. Institutional investors, concerned that the company could no longer repay loans, began to withdraw money and decline new loans. This caused the demise of Bear Stearns, which was purchased by JPMorgan Chase in March, 2008, for a fraction of its previous value. Shares of Bear Stearns sold for less than two percent of their 52-week high when acquired by JPMorgan Chase, requiring the U.S. government to stand behind the deal because the Bear Stearns assets were questionable, at best. (Bamber, 2008; Cohan, 2009; Greenberg, 2010). Several other large U.S. banks also folded. Lehman Brothers collapsed; Bank of America bought Merrill Lynch for $50 billion; JPMorgan Chase purchased Washington Mutual Bank. These developments lead us to question the value-based statements in the Bear Stearns code of ethics and to wonder how they were applied as the firm made gut-wrenching decisions during its final year.

Although headquartered in the U.S., Bear Stearns had extensive operations in the UK, Europe, Asia and Latin American. By 2007 non-U.S. revenue had increased to 29 percent, up 13 percent from 2006 (Bear Stearns,10-K, 2007, p. 125). More than half of all UK employees were laid off in the 2008 collapse including 13 of the 23 lawyers employed in the firm’s London office (Chellel, 2008). Given the international reach of their operations, the collapse of the company, along with the Lehman Brothers’ failure, affected economies around the globe. Six years later Europe’s bad bank assets were reported as topping $2.5 trillion, reflecting numerous bad banking loans in addition to those of JPMorgan Chase (Wright, 2014).

Was the bank committed to the wellbeing of employees and shareholders and the long-term growth of the firm, or did it sacrifice fiduciary responsibility to the pursuit of short-term profits? Although risk-taking is certainly part of any investment bank’s strategy, why was excessive and sometimes blind risk-taking acceptable at Bear Stearns? Were the values of the institution based on building wealth through skilled analysis, care and reason or based on acquiring wealth in any way possible, regardless of risk to shareholders? Most importantly, what lessons can be learned about the principles, culture and values discussed in their ethical code?

THE STUDY

This study set out to determine whether the Bear Stearns code of ethics was a sufficiently robust example of management discourse to function as a strategic document within the organization. Was the code capable of playing a significant role in corporate decision-making or was it simply an artifact? The authors analyzed the code using two different methodologies—the Competing Values Framework (Quinn,
Hildebrandt, Rogers, and Thompson, 1991) and the eight-point Ethisphere benchmark analysis developed by Erwin (2011). A rhetorical analysis was conducted to analyze communication strategies. Research questions focused on what the Competing Values Framework (CVF) could reveal about relational, transformational, instructional, and informational aspects of the code and what scores might the code receive using the Erwin system. Researchers then interpreted the codes using the two frameworks and rhetorical analyses to examine word choice, placement and tone.

Methodology

Developed to capture discourse interaction, the CVF is a tool for assessing documents such as ethical codes as it reveals the rhetorical elements of the message. The CVF is sufficiently intuitive and yields consistent results; nonetheless, to ensure inter-rater reliability, the raters first practiced on two corporate codes not included in this study to be certain codes were assessed consistently. Each code was scored on the 12 dimensions of the CVF worksheet which indicates the degree to which the document displays characteristics of each of the rays on the framework. Researchers used the model’s seven point grading scale ranging from 1 (not at all) to 7 (very much so). Using Pearson’s r, an inter-rater reliability of .694 was achieved on one practice code and .842 on the other, demonstrating moderate to high correlations and strong inter-rater reliability (Pearson, 1966). After analyzing these results, the Bear Stearns code was scored using the CVF worksheets. The correlations score was .973, reflecting a high degree of inter-rater reliability between the evaluations. The code was then scored on the eight dimensions using the system developed by Erwin (2011).

The Competing Values Framework

Underlying the model, shown in Figure 1, is the concept of competing values or the notion that a document may have strengths or weaknesses in multiple areas. Four quadrants (transformational, instructional, informational, and relational) represent different rhetorical dimensions of managerial communication which reflect opposite or competing values.

(Figure 1 about here)
This model uses a multidimensional approach where strength in one area may directly cause weakness in another. This is particularly helpful in examining ethical codes as they involve complex ideas, philosophical concepts, and sometimes conflicting ideologies. Documents are rarely transformational, instructional, informational, and relational simultaneously. Thus, code writers may draft a code to emphasize both informational and relational elements in the code, but may sacrifice some transformational and instructive aspects in the process. In this way the model helps identify more than content; it reveals some of the philosophical assumptions underlying the code itself and can help identify rhetorical strategies. If a code shows strength or weakness in a quadrant, it then highlights some of the key characteristics of that code.

Many code studies provide rich information about which subjects are addressed in the code and which are not; yet a greater understanding of code dimensions that extend beyond content analysis is needed to understand the purpose of the codes and how they achieve that purpose. For example, are they visionary? Do they instruct? Do they inspire trust? Do they motivate? Are they written in ways that encourage or discourage compliance? Content analysis usually does not discern these more subtle messages buried in text. A rhetorical analysis using the Competing Values Model can provide this insight.

In Figure 1, the upper right quadrant reflects communication that is change oriented. Transformational communication typically addresses the benefits of change and encourages commitments to change. Messages are often organized in a persuasive fashion and incorporate explanatory and reason-giving language; the tone may be inspirational and visionary (Stevens, 1996). Central descriptors of transformational communication include words such as “emphatic, powerful, forceful” and “insightful, mindstretching, visionary.” The lower right instructional quadrant describes action-oriented communication which has, as central descriptors, “interesting, stimulating and engaging” and “conclusive, decisive, and action-oriented.” The lower left informational quadrant reflects communication that is primarily factual — e.g., a computer training manual. “Rigorous, precise and controlled” and “focused, logical, and organized” describe its primary focus. Finally, the upper left relational quadrant focuses on communication that seeks trust. “Credible, believable and plausible” and “open, candid and honest” describe trust-based communication.

The Erwin methodology

Erwin’s system was used to assign a grade to each code. His methodology, based upon Ethisphere Institute criteria, allows raters to grade codes based on eight different dimensions using the traditional academic 4.0 scale. Derived from 43 elements identified by the Ethisphere Council, it assesses public availability, executive tone, readability and tone, non-retaliation and reporting, commitment and values, risk, comprehension, and style and provides an overall grade (Erwin, 2011). Both raters independently graded the Bear Stearns code using this scheme.

RESULTS

(Figure 2 about here)
Figure 2 plots the weighting of the Bear Stearns code and shows that it exhibits high scores in the informational quadrant. This indicates that the code was strongly focused, logical and organized and that it displayed characteristics of being rigorous, precise and controlled. On the opposite side of the model, it is apparent the code displayed fewer characteristics of the transformational and instructional quadrants. The model also indicates higher scores on one of the rays in the instructional quadrant, indicating action-oriented communication.

**Bear Stearns—discussion and rhetorical analysis**

The Bear Stearns code is strongest in the informational quadrant, excelling at organization, preciseness and accuracy, displaying a score of either a six or seven on five rays central to the information quadrant and high on each ray closest to it. Conversely the code is weakest in the transformational and instructional quadrants, reflecting the competing values. One can conclude that transformational aspects might have been sacrificed for the other dimensions the authors deemed more important. This has implications for the role the code might have played in the crisis. It excels at communicating facts and specific information, but was not a code that offered guidance, inspiration and vision in difficult times. This is a picture of a code designed to reinforce expectations for compliance with company policy and regulations; a code that emphasizes control over vision, is more technically accurate than innovative, and weighs practicality over perceptiveness. Thus, employees within the organization may well see a message that it is better to comply with company policy than to seek and lead for constructive change. Scores suggest that the code does not necessarily encourage creativity or open communication about ethical issues.

Its strengths are that it is practical, focused, rigorous and technically correct. Considerable information is imparted in the two and half pages in a very direct manner. For example, commands and directives are used frequently. “May,” “may not” and “must” appear frequently and there is almost no relational language (i.e., pronouns such as “you, “we,” or “our”) to suggest inclusiveness. Directions are very straightforward as in employees “must avoid conflicts of interest” (p.1), are “prohibited from competing with the firm” (p.2) and “shall endeavor to insure” that all information in reports and documents is “complete, fair, accurate, timely, and understandable” (p.2).
The code is divided into eight sections that establish “standards that Bear Stearns deems necessary to deter wrongdoing and promote compliance” with applicable laws (p. 1). It states that the code principles are not “exhaustive” and admonishes everyone to use judgment and common sense in their work (Bear Stearns Code of Ethics, 2008).

Section one “Accountability for Adherence to the Code of Ethics” places responsibility for reporting code violations on the Ethics Compliance Officer. But it also states that the Board or a Board Committee may waive provisions in the code for a Senior Executive. Employees are told to consult with managers about the proper course of action, and the firm promises it will not retaliate against an employee who reports a violation. The section closes by warning employees they may be fired for violating the code and could forego any deferred compensation.

Section two “Conflict of Interest” tells employees that their private interests should not supersede the interests of the firm nor should they gain materially in this way. Senior executives are directed to disclose any material transactions that may conflict with putting the firm’s interests first. Section three “Corporate Opportunities” states that every employee “owes a duty to the Firm to advance its legitimate interests when the opportunity to do so arises” (p. 2). But there is no discussion of ethics here. The second paragraph only warns employees not to gain personally from an opportunity before the firm has fully mined the venture. Missing in section three is a discussion of ethical parameters in terms of advancing the firm’s interests. Under what conditions is it appropriate for Bear Stearns employees to aggressively pursue an opportunity and when should it not be pursued? There is no cautionary language in this section nor is there a discussion of the Bear Stearns’ values assessment of risk. In hindsight, the absence of risk discussions in the code shows a fundamental weakness, as excessive risk-taking caused the demise of the firm.

Section four “Fair Dealing” addresses interactions with clients, vendors and competitors. Here Bear Stearns reveals some ethical standards. Employees are not to take “unfair advantage of anyone through manipulation, concealment, abuse of privileged information ….or other unfair dealing practice” (p.3). This is one of the clearest value statements found in the code as it articulates the standards for how other people should be treated. Section six “Financial Reporting and Disclosure” tells employees that information in documents should be “complete, fair, accurate, timely and understandable” (p.2). Most of this is required by law and this section does not appear to go beyond legally required accounting practices. Employees are also prohibited from misleading or coercing auditors or falsifying reports and financial statements. These actions, of course, are illegal and here Bear Stearns is simply protecting itself against illegal employee behavior by reiterating legal regulations.

Section seven “Protection and Proper Use of Company Assets” is comprised of only one sentence following the title, telling employees and senior executives to “protect the Firm’s assets and ensure their efficient use for legitimate business purposes only” (p.3). Section seven must now cause some regret from ex-Bears Stearns executives, for this is exactly what they failed to do. Bear Stearns collapsed because managers did not protect the firm’s assets and, instead, invested in risky financial instruments designed for short-term gain. “By not understanding inherent risks and what could implode they reduced their business to gambling,” according to two financial experts on the credit crisis (Graafland and Ven, 2011, 608). In addition to miscalculating the risk and missing the signs of an economic downturn, Bear essentially put themselves out of business. A very different outcome might have existed had the code expanded on what was meant by protecting the assets and the limits of acceptable risk-taking. If responsible risk had been addressed at the company, articulated in more detail in the code, discussed fully and embraced as part of the culture, a different ending could have been possible. Instead risk was relegated to the seventh of eight points and addressed with only one sentence in the code.

“Confidentiality” marks the eighth and final section of the code, admonishing employees to keep client information confidential and warning specifically about acting on insider information. The last sentence in the code changes in tone and a second person pronoun is used for the first time stating “Insider trading is unethical, is prohibited by law and can expose you and the Firm to risk” (p. 3). Interestingly, this is the most strongly worded sentence in the code and seemingly what code authors wanted to emphasize. Misrepresentation of material facts (p. 2) would also violate a number of securities laws, but there is no mention of legal compliance in this section.

Although inclusive language is absent, the document is clear, straightforward and even terse in addressing the eight topics. Its low scores on the right half of the model reflect the fairly legalistic use of language. Additionally low scores on the insightful, innovative and interesting rays reflect the code’s silence on the topics of how the Bear Stearns culture and value system might help the reader understand what it meant to “protect the firm’s assets.”(p. 1) and the boundary lines regarding the duty an employee
has to “advance the Firm’s legitimate interests when the opportunity arises” (p. 2). The code does not discuss cautionary areas, such as how much risk is acceptable and the circumstances under which one should exercise restraint in advancing the firm’s interests. Its weakness on the right side of the framework reflects low expectations for the visionary and action-oriented concepts of the document.

No sentences are found in the Bear Stearns code that fit the transformational quadrant central descriptors of “insightful, mind-stretching and visionary.” The framework reveals the code to be focused exclusively on imparting information and issuing directives. It offers almost no moral guidance for one caught in an ethical dilemma nor does it inspire the reader to think deeper about moral issues. The code lays out rules, but remains mute on the gray areas.

Could the Bear Stearns ethical code have helped the organization survive? The CVF shows it to be a generic code which could be used in almost any financial institution. Discussions addressing the Bear Stearns culture and what is appropriate and not appropriate in that organization are missing. The code could have discussed risk in far greater detail, but the reader finds no guidance on this topic and aspects which are unique to Bear Stearns are not articulated in the code. It does not help with moral dilemmas beyond telling the employee not to break the law. In short, this code covers the basic elements of a code, focusing primarily on illegal employee actions that might jeopardize the firm.

### The Erwin Framework

(Figure 3 about here)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Rater 1</th>
<th>Rater 2</th>
<th>Average score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public availability (5)</td>
<td>4</td>
<td>5</td>
<td>4.5</td>
</tr>
<tr>
<td>Tone from the top (15)</td>
<td>11</td>
<td>12</td>
<td>11.5</td>
</tr>
<tr>
<td>Readability and tone (20)</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Non-retaliation and reporting (10)</td>
<td>8</td>
<td>7</td>
<td>7.5</td>
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<tr>
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<td>6.5</td>
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<td>Risk topics (20)</td>
<td>13</td>
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<td>14</td>
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</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>73</td>
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Scores from the Erwin analysis (Figure 3) show the Bear Stearns code was rated in the “C” range. Highest possible scores for each of the eight categories are shown in parentheses on the left. These grades reflect the same strengths and weaknesses revealed by the CVF, and the results using the two tools complement each other. Low scores on readability and tone, the coverage of risk and comprehension aids confirm the document has an authoritative tone and lacks readability. The highest score was on public availability, as this document is easily accessible on the internet. Overall, the code’s grade of “C” reflects the legalistic language used to protect and distance the organization against potentially illegal behavior by an employee. This is not a code that serves to inspire, motivate, lead or provide ethical guidance outside of the legal areas.

Ethical codes have secured a place as strategic management tools; they have the ability to send powerful messages to organizational members about ethical business practices. Conversely weak codes have little effect. As patterns of discourse create meaning in organizations, language evokes change, renewal and reorganization (Barrett, Thomas and Hocevar, 1995). Constructing a code is an important managerial process as language and discourse create meaning; viewing management from a rhetorical perspective recognizes that ideas and sense-making are framed by language (Eccles and Nohria, 1992). Thus finding the right words to express a vision, ideas and behaviors is a key strategic action for an organization. If codes are embedded in the organizational culture and communicated effectively, they can significantly affect ethical behavior. But codes themselves cannot create ethical organizations; they are part of an organizational culture and only reflect the values—good or bad—embedded in the organization.
THE CULTURE AT BEAR STEARNS

Several books written about the downfall of Bear Stearns describe its culture. One, House of Cards, (Cohan, 2009) paints a picture of a firm whose success was based on a “rough-and-tumble” culture created by three of the firm’s leaders: Cy Lewis, Ace Greenberg, and Jimmy Cayne (153). Each of these three personalities is described as an aggressive opportunist. Cy Lewis was a master salesman, Ace Greenberg was a first-class dealmaker and cost cutter, and Jimmy Cayne was “a supremely confident and idiosyncratic shark who felt right at home in the rough-and-tumble confines of Bear Stearns.” (168). Bear Stearns’s culture is described as opportunistic and aggressive, ideally suited to pursue the high-risk market in financial derivatives that developed throughout the 1980’s and 1990’s.

What role did the code of ethics play in the environment? The legalistic code of ethics was designed to keep Bear Stearns out of trouble with the courts, and its employees out of jail. Its guiding statement of purpose makes this clear as it “establishes standards that Bear Stearns deems necessary to deter wrongdoing and to promote compliance with applicable law, rules and regulations and honest and ethical conduct.” (Bear Stearns Code, p. 1) In selling and swapping risky financial instruments, Bear Stearns was operating within the law and therefore within the letter of its code of ethics. This was true, in fact, of many of the large financial firms hit hard by the financial crisis. According to Fortune author William Cohan, “Wall Street was just playing by the regulatory rules that it helped write.” (Cohan, 2009, 88).

However, the code also states that “Employees and Senior Executives shall protect the Firm’s assets and ensure their efficient use for legitimate purposes only” (p. 3). Did their practices follow this dictum? Bear Stearns had a history of leveraging its assets, maintaining a leverage rate in excess of 30 (Boyd, 2008); it could be argued that they were meeting their clients’ expectations of high returns, and it was a strategy that had worked for the firm for many decades. However, the words of Warren Buffett must haunt everyone involved in the financial crisis: derivatives, he famously wrote, are “financial weapons of mass destruction, carrying dangers that, while now latent, are potentially lethal.” (Buffett 2002, p. 16). With the benefit of hindsight, the form taken by their lethal nature is apparent. The culture of Bear Stearns, with its high tolerance for risk, seems at odds with the mission to “protect the Firm’s assets.”

However, the high stakes world of derivatives is infinitely more complicated, and values are expressed through incentive systems rather than signed agreements on codes of ethics. Seven-figure bonuses are likely to trump signed affidavits expressing allegiance to a code of ethics. So it appears that the code of ethics served primarily to protect the firm from illegal activities and had little impact on behaviors related to economic decisions regarding the returns on highly leveraged and complicated financial instruments.

We can never know whether Bear Stearns would be an independent firm today if it had incorporated into its culture a more comprehensive code of ethics, one to which the firm could turn for guidance when deciding on which strategies to pursue and which to avoid. Analysts have identified numerous factors that contributed to the financial crisis, from the economic system to incentive systems to decreasing regulation and perceived governmental pressure to make homeownership available to a larger percentage of Americans. Some researchers add improved communication to the list of solutions to this complex problem (Pirson and Turnbull, 2011; Michele and Deme, 2012). Still others have argued that a clearer and more rigorous set of ethics could avert another crash (Weber-Berg, 2008; Can financial ethics, 2011; Graafland and Ven, 2011; Pendse, 2012). Johnson & Johnson’s response to the Tylenol incident of 1982 represents the classic example of how a code of ethics can help an organization navigate a complex problem. The organization looked to their credo and followed the course dictated by the values included in it: “We believe our first responsibility is to the doctors, nurses, and patients, to mothers and fathers and all others who use our products and services” (Johnson and Johnson, 1943). By following their credo, Johnson and Johnson became an iconic representation of corporate ethics and responsibility.

From a 52-week high of $159.36, Bear Stearns was purchased by JP Morgan Chase at the fire-sale price of $2 per share in March 2008, requiring government guarantees to JP Morgan Chase. Bear Stearns’ eighty-five year reign as an independent bank had ended. Interestingly, JP Morgan Chase dodged much of the economic pain of the financial crisis because they had avoided over-committing to the kinds of investments that led other firms to fall (Graafland and Ven, 2011). However, several years later, JP Morgan Chase itself was the subject of Congressional inquiry as a result of high-risk trades that resulted in a multi-billion dollar loss to the firm. The primary difference between the outcome of JP Morgan Chase’s problems and those of Bear Stearns was liquidity: JP Morgan Chase had access to the funds to meet their obligations; as a result of the loss of confidence in its ability to operate, Bear Stearns did not.

Four years later, in June 2012, the Federal Reserve reported that JP Morgan Chase had repaid the full amount of the loan to assist in its purchase of Bear Stearns (Ng, 2012). Much was lost over those four
years, but the financial obligation was met, as stipulated in the legal agreement arranging the purchase of Bear Stearns. In February 2013, the U.S Department of Justice announced it was investigating allegations that Bear Stearns had altered due diligence information about the quality of their mortgage-backed securities and was examining whether misconduct in the promotion and sale of those securities took place (DOJ probes, 2013).

CONCLUSION

This study uncovered some interesting aspects about Bear Stearns’ culture as revealed by its code of ethics. Both the CVF and Erwin scheme illuminate the rhetorical aspects of the code showing that the code was fairly generic, commonplace and had few aspects of originality; furthermore, it was weak in transformational, guiding concepts that might help in a crisis. It provided little detail about the unique ethical values of the institution and what behaviors might be off limits. The code forbids behaviors that violated the law, such as insider trading and those that would harm the firm’s reputation, but did not discuss the firm’s specific ethical culture or fiduciary responsibility to its investors, the community it served, or the society in which it played a role.

While the present study certainly has limitations such as subjectivity and scores from only two academic raters, it nevertheless provides a unique look at one ethical code and its internal dimensions. The frameworks showed that the ethical code was a commonplace document and played no strategic role in helping the organization remain viable. It was a plain vanilla code written by the Bear Stearns legal staff to protect the firm against egregious behavior.

It would be naïve to claim that a different code alone could have saved Bear Stearns, and this paper makes no such assertion. A large number of complex factors were in play during the financial crisis of 2008. Regulators were not sufficiently aggressive with financial institutions and allowed aberrant behavior in the investment banking industry; the industry was reckless with subprime lending practices; rating agencies rated high-risk instruments at a much lower level of risk than they deserved (Lewis, 2010). Bear Stearns and other well-known financial firms are now history. It is not clear why some corporations were saved in the 2008 recession and others, such as Lehman Brothers, were left with no lifeline. While some corporate codes appear to play a minimal role in the overall operation of the firms, as appears to be the case with Bear Stearns, others may be more robust. Analyzing the language and the roles that codes play sheds light on how organizations express their ethical standards and utilize the codes in the firms. Additional studies are needed to explore the interplay between codes and the ways they operate as strategic documents to communicate organizational values.
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THE ENTREPRENEUR’S GENE
WHAT MAKES A GREAT ENTREPRENEUR GREAT?

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ABSTRACT

The purpose of this article is to discuss the existence of an “entrepreneur’s gene” in the making of world famous entrepreneurs. With the need for entrepreneurs and innovation it is increasingly important to identify and develop individuals who show an interest or talent for entrepreneurship. The article examines the power of passion and how deliberate practice creates an interaction between genes and environment in the development of world-class entrepreneurs.

DESIGN/METHODOLOGY

This paper employs the study of the lives and development of five world-famous entrepreneurs Bill Gates, Steve Jobs, Larry Page, Sergey Brin and Richard Branson. The paper provides a viewpoint for the integration of genes, environment, and development based on the research of well-known neurobiologists, psychologists and scientists.

FINDINGS

Successful entrepreneurs are made not born but there is a definite genetic influence that direct or guides their development. There appears to be specific genes that interact within a dynamic business culture, in an ongoing learning process of skill development that produces a successful entrepreneur.

ORIGINALITY/VALUE

The paper focuses on the development of five highly successful entrepreneurs and provides insight into what really separates world-class performers from everybody else.

Key Words—entrepreneur, genetics, talent, deliberate practice, development, and world-class performers

INTRODUCTION

A series of researchers have studied the role of nature versus nurture in developing expert performance. In a landmark article titled, “The Mundanity of Excellence,” Daniel Chambliss made the argument that the difference between an expert performer and an average performer is not that the expert makes quantitative changes in their practice, but they make qualitative changes that change the nature of the work itself. (Chambliss, 1989)

In 2006, Anders Ericsson released The Cambridge Handbook of Expertise and Expert Performance. This breakthrough book was the foundation research for promoting the idea of deliberate practice as the means to greatness (Ericsson, Charness, Feltovich and Hoffman, 2006). In 2008, Geoff Colvin released Talent Is Overrated, a book that presented the idea that great achievers, from Mozart to Tiger Woods, were a result not of great genes, but of great effort (Colvin, 2008). In 2009 Daniel Coyle, in The Talent Code, announced that “Greatness isn’t born, it’s grown”. (Coyle, 2009)

In 2010, David Schenk’s, The Genius in All of Us, dispels the idea that one is born a genius and makes the case that within each of us there is the potential for greatness. (Schenk, 2010) In 2013, David Epstein, in his bestselling book, The Sports Gene, using the latest research from the Human Genome Project, raised the question: “Is there a gene, a special gene that results in world champion performers?” (Epstein, 2013)

The body of research appears to indicate that when it comes to world-class performance in any activity, nature and nurture are integrated but the question remains still remains, Are Great Entrepreneurs Born or Made?
This article is an attempt to answer this question by studying the development of “great entrepreneurs.” We believe that expert entrepreneurs like Bill Gates or Steve Jobs are a combination of genes, environment, and development. By reviewing and studying how these great entrepreneurs are different from novice entrepreneurs, we plan to not only identify and explain what makes these entrepreneurs great but also provide the reader with information that will be helpful for improving their entrepreneurial skills.

WHAT IS AN ENTREPRENEUR?

The term entrepreneur is a word of French origin. It first appeared in Savary’s Dictionnaire Universel de Commerce in 1723. Savary defined an entrepreneur as one who undertakes a project such as a manufacturer or a master builder. A more modern definition of the term was provided by an eighteenth-century businessman and financier named Richard Cantillon. His definition differed from Savary’s and established the entrepreneur as a central figure in the marketplace. Cantillon described an entrepreneur as the intermediary between landowners and hirelings. In this definition, the landowners were the people who established patterns of consumption through their individual tastes and preferences. It was the role of the entrepreneur to take the risk to produce and distribute the needed goods and services. (Cantillon, 1931) Cantillon’s description of an entrepreneur is consistent with the best-known quote from Peter Drucker, “There is only one valid definition of business purpose: to create a customer…Therefore, any business enterprise has two-and only two-basic functions: marketing and innovation”. (Drucker, 1954 at 39-40) If it is the job of the entrepreneur to create a customer, perhaps a good place to start would be to study the lives of world-famous entrepreneurs and see at what age they first showed an interest in being an “entrepreneur” — someone who fills the needs of the customer.

WHAT IS A WORLD CLASS ENTREPRENEUR?

In our research we focus on the “great entrepreneur.” In order to identify “great entrepreneurs” we reviewed the histories of a number of highly successful entrepreneurs with the intent of selecting individuals who possessed the following qualities:

- A person who, at an early age, was motivated to start a business because of curiosity, talent, or interest.
- A person who, at an early age, saw a business as a means to create profits and to increase their self-worth.
- A person who showed early leadership skills and was the founder of a company.
- A person who failed early, but continued on persisting until they ultimately succeeded.
- A person who saw things other people could not see and built a company that nobody else was willing to build.
- A person who had a major influence on the world of business.
- A person who had appeared on the cover of Time magazine.
- A person who has achieved large financial rewards from business.

After reviewing a wide number of entrepreneurs we selected the following entrepreneurs: Bill Gates, Steve Jobs, Larry Page, Sergey Brin and Richard Branson.

GREAT ENTREPRENEURS DEVELOP DIFFERENTLY

Our research showed that when it came to identification, environment and development, an expert entrepreneur follow a pattern similar to a famous artist, musician, athlete, or any expert who excelled at his or her chosen activity. Although there was little research concerning the development of entrepreneurs there was substantial information concerning the development of great athletes.

In 2003, an international consortium announced the completion of the Human Genome Project. After thirteen years research the project completed a map of the human genome, namely all 23,000 regions of DNA that contain genes had been identified. The result of this project was that for the first time researches knew where to being looking for foundations of human traits. Now, scientists could identity genes that help to determine height, hair color, left or right handedness, and even hand-eye coordination. The good news was although the genomes had been mapped, the researches underestimated the difficulty of understanding how to read and understand the genetic instructions and how genetic patterns were formed. (Epstein, 2013)

Since 2003, the scientists focused their attention on picking single genes that they expected would influence the skill level of the subject. The sport scientists placed their attention on genes that would influence athleticism and compared those genes with groups of high performing athletes and non-athletes. The research idea appeared sound, but a problem occurred when the researchers found it was possible to detect genes that influence
height. It was extremely difficult, if not impossible, to determine how those genes interacted not only with other genes but also with outside factors, such as the environment and the effects of training.

Scientists then moved away from the study of single genes and focused their attention on analyzing how genetic instructions influence the development of highly successful performers in all areas. The result of this change was to realize that genes do not determine physical, character, and performance traits by themselves. Genes interact with the environment based on the actions of the individual in a dynamic, transformational, synergistic process that continually changes and refines the individual’s performance.

THE DEVELOPMENT OF ANDRE AGASSI

Andre Agassi is legendary professional tennis player. He did not become a legend overnight and had no physical advantages. Many critics claimed Andre was too small, and too slow to be a world champion. So, what was it that made Andre special? The expert’s answer is that he followed the 10,000 hours of deliberate practice to become an expert. (Ericson, Krampe and Tesch-Romer, 1993) This is not an hour of practice repeated 10,000 times. It is 10,000 hours of increasingly difficult practice.

Here is the tennis practice schedule for Andre Agassi, at age seven. Andre’s dad constructed a regular size tennis court in the backyard of their house outside of Los Vegas, Nevada. The court was surrounded by a four cement walls painted green, the surface of the court was also green, to resemble grass, at the service line was a special oversized tennis ball machine. This machine was designed to shoot balls from an impossibly difficult angle so that they would land right at the base of Andre’s feet. The tennis net was raised six inches higher than regulation to make it more difficult to return the balls. Andres’s schedule was to each day to return 2,500 tennis balls over the net. Therefore he each week 17,500 tennis balls were returned over the net and in a year, nearly a million tennis balls were returned over the net. Andre, by the age of 9, was an expert tennis player who not only was winning age-related tournaments on a regular basis, but was also playing adults for large sums of money at a local tennis club. (Agassi, 2010)

THE DEVELOPMENT OF BILL GATES

Our research showed that if one wants to develop a world-class performer in any area, the best age to start is when the person becomes interested in the activity. None of our top entrepreneurs were forced by their parents to start a business or to spend time studying about a subject that later became the foundation for their business. Whatever the young entrepreneurs wanted to do, they were allowed to do it and were strongly supported by their parents.

Bill Gates, like Andre Agassi, appeared to have no physical advantages over his classmates. Bill was the smallest boy in his seventh grade class and although he excelled in math and science he, unlike Andre, had not found a special interest. As a seventh grader, at age 13, Bill wrote his first computer program. As an eighth grader, Bill took a job at a new company in Seattle called the Computer Center Corporation. After school, Bill caught a bus to the company where he often worked until late at night. When the company failed Bill, at age 15, started a computer programming business with a fellow student named Paul Allen. By the time Bill graduated from high school he had not only put in over 10,000 hours of study, but had started a business and found his future business partner for creating Microsoft. (Wallace and Ericsson, 1993)
problems, are a product of the mind, and the mind is a product of genes working together within a special environment. Experts are made as a result of the interaction between genes, an enriched environment and hours of practice. Anders Ericsson, famous for his research on deliberate practice and the idea of 10,000 hours of practice, wrote in 2007, “New research shows that outstanding performance is the product of years of deliberate practice and coaching, not of an innate talent or skill.” (Ericsson, Prietula and Cokely, 2007)

There is no denying that practice is a key factor in developing expertise. Practice does matter. No one has ever achieved excellence without practice. However, it would be a logical error to assume that practice alone creates a world-class performer.

Dr. Gary Marcus, a well-known expert in cognitive science, explained the role of genes and talent using an analogy comparing the growth of trees and the growth of great musicians. “The trees that grow the tallest aren’t just the one that get the most water, they are also the ones with the best genes, the one’s that can most efficiently build new structure by metabolizing sun and light. Great musicians like the tallest plants, need optimal conditions and ideal environments”. (Marcus, 2013 p. 98)

Genes do matter. In sports there is a common saying that you cannot teach speed. You can improve speed but at the Discovery High Performance Center at the Sports Science Institute of South Africa, they tested over 10,000 boys and they never found a boy who was slow that became fast. It was found that the slow kids could never catch up to the fast kids in sprint speed. Research on Jamaican sprinters and Kenya distance runners indicates that there are more than hours of practice that leads to world-class performances. (Epstein, 2013)

THE COMPLEXITY OF GENES AND EFFECTIVE MOTIVATION

Research has shown there are two kinds of motives for engaging in any activity, internal and instrumental. A person who undertakes a difficult task because he or she wants to become an expert or the best at something, is following an internal motive. A person who undertakes the work of becoming an expert performer to earn large sums of money, awards, recognition and fame is following an instrumental motive. Often time’s people have both internal and instrumental motives for doing what they do.

In his 2009 book, Born to Run, Christopher McDougall studied the motivation and success of ultra-marathon distance runners who routinely ran races of more than 75 miles. McDougall’s research showed that after a short-burst of success, the sport of running extreme distances declined dramatically. McDougall’s answer was that the American approach of trying to attract and develop runners by offering prizes and awards was not effective. Long distance runners are driven by internal not instrumental motives.

McDougall’s simple and direct conclusion may accurately pinpoint the motivation of our “great entrepreneurs.” Perhaps, it is the person who wants to “ding the universe” who wants to “change the world” who has the passion and incentive who makes the top entrepreneur. (McDougall, 2009)

THE IMPORTANCE OF PASSION

This theme of passion and the inner motivation to do something important appeared in the life of each of our chosen entrepreneurs. Internal motives seemed to drive our entrepreneurs. As a child Larry Page said that he wanted to be an inventor because, “I really wanted to change the world.” (Levy, p. 11) Steve Jobs presented the importance of passion and hard work in a speech at D5 Conference in 2007. “People say you have to have a lot of passion for what you’re doing and it’s totally true. And the reason is because it’s so hard that if you don’t, any rational person would give up. It’s really hard. And you have to do it over a sustained period of time. So if you don’t love it, if you’re not having fun doing it, you don’t really love it, you’re going to give up. And that’s what happens to most people, actually. If you really looked at the one’s being “successful” in the eyes of society and the ones that didn’t, often times it’s the ones who were successful, loved what they did so they could persevere when it got really tough. And the ones that didn’t love it quit because they’re sane, right? Who would want to put up with this stuff if you don’t love it? So it’s a lot of hard work and it’s a lot of worrying constantly and if you don’t love it, you’re going to fail.” (Beahm, 2008 p. 78)

THE DEVELOPMENT PROCESS OF A GREAT ENTREPRENEUR

Ericsson was right. Practice does matter but the environment and the combination of genes that drives a person to “want to be great” also matter. Gates, Jobs, Page and Brin were developed in the culture of Silicon Valley. Richard Branson was molded by the competitive challenge of the music industry. A great in any profession or sport needs optimal conditions, ideal genes, and an ideal environment. Our research indicated there was a combination of
factors that resulted in the development of each of our five entrepreneurs. Each of our entrepreneurs was a combination of nature and nurtured but what they did have in common was a passion and the willingness to put forth thousands of hours to fulfill that passion. In the end, here is what we discovered.

- Genes play an important part in the development of a great entrepreneur.
- Genes alone cannot explain the development of great entrepreneur.
- Deliberate practice and hours of experience alone do not account for the development or the success of an entrepreneur.
- Genes can accelerate the learning ability of an expert whereas a novice shows little or no improvement from the same training.
- People have both internal and instrumental motives for doing what they do but internal motives are essential for become a top performer.
- No one is born an entrepreneur. There is no such thing as “great entrepreneur” without the learning of a specialized set of skills that are created by an interaction between genes, culture, and a special environment.

CONCLUSION

Richard Feynman, noble laureate, said the first principle of science is that you must not fool yourself and you are the easiest person to fool. Feynman described science as a method of finding things out and believed that the scientific method was based on the principle that observation was the judge of whether something is true or not. Feynman’s test, as to whether something was true or not, was based on “the exception tests the rule. If there is an exception to any rule, and if it can be proved by observation, that rule is wrong.” (Feynman & Leighton, 1985 p. 343)

Steve Jobs, said that he had long thought his personality was entirely the result of his life experiences, until as an adult, he discovered an unknown, full sister, Monica Simpson. After meeting and talking with her Jobs was amazed to discover that although Monica had been raised in a different family, she was similar to him. Jobs observed they were both intense in their artistry, observant of their surroundings, sensitive, and strong-willed. “I used to be way over on the nurture side,” Jobs told the New York Times in 1997, “but I’ve swung way over to the nature side.”

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INTENTIONS, ETHICS AND SOCIAL MEDIA RESEARCH

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ABSTRACT
Social media are influencing our communications, collaborations and creating vast research opportunities in business and the social sciences. Many are mining massive continuous data flows to understand and predict human behavior. Mavericks in the research community claim that traditional utility-based explanations are far too simplistic, limit understanding, and lead to poor insights and predictions. Further, they point out that many questionable management practices have their roots in these amoral, value-free theories of human behavior. We present a similar critique of recent frameworks for social media research. Based on this analysis, we suggest that social network designers adapt pattern languages used successfully in designing buildings, physical communities and software objects. Such adaptations will require explanations of human intentions, morals, and ethics and will not be amenable to causal models proposed for social media research.

INTRODUCTION
Social scientists and business researchers salivate over opportunities provided with “big data” available through social media. Several frameworks have been recently proposed to guide efforts to build a richer understanding of human behavior within on-line social networks that lead to better predictions and media design choices. The analysis of these frameworks below suggests broadening their philosophical underpinnings include human intentionality guided by morals and ethics.

The development and philosophy of the scientific approach to the study of business appears in the next section along with a critique and limitations to explanations derived in such a manner. These limitations require us to consider alternatives that consider human intentions when studying social phenomenon. With this background, recent social media research frameworks are critiqued in the following section.

The next section provides a discussion of the cultural impacts of technology and social networks that many see weakening important interaction skills. On-line social networking can have externalities if designed with narrow goals that fail to consider such problems. Finally, we show how ideas from architectural research and moral foundations theory can be used to provide insights into social media research that could not be found with current research frameworks.

SCIENTIFIC MANAGEMENT RESEARCH – THE PRETENSE OF KNOWLEDGE
Ford Foundation sponsored papers claimed that practice demanded a scientific approach to the study of business (Gordon & Howell, 1959; Pierson, 1959). Business school academics altered their approach to research by adopting the scientific approaches taken by the physical, natural and social sciences.

The creation of new knowledge in the physical sciences relies exclusively on causal explanations while the life sciences also admit functional explanations (Elster, 1983). These functional explanations often demonstrate that some behavior or feature of the organism enhances its ability to reproduce. Functional explanations are valuable because they fit under the umbrella of a natural selection causal explanation.

Unfortunately, in the social sciences and business, causal and functional explanations rarely explain or predict interesting phenomena. Consider the widely applied functional explanations of capital markets, efficient market theory (Fama, 1970) and agency theory (Jensen & Meckling, 1976). They are not predictive in the sense of their counterparts in the life and physical sciences. Even a relatively small financial firm, Long Term Capital Management, went bust through leveraged strategies that depended heavily on efficient markets and liquidity. While the fund contained just 5 billion dollars it had leveraged that by a multiple of 25 and required a government bailout to prevent market collapses in 1998 (Edwards, 1999). Frequently, in practice, managers have looted their
companies as they approach bankruptcy (Akerlof, Romer, Hall, & Mankiw, 1993). These results are at odds with agency theory prescriptions for aligning management incentives with shareholders. Others have blamed agency theory for excessive executive compensation via stock options and decreased trust between stakeholders with different incentives within the organization (Ghoshal, 2005).

The economist Frederich von Hayek used his 1974 Nobel Prize lecture to issue a famous warning about the harm that can be done through the “Pretence of Knowledge” (von Hayek, 1989). While his warning mainly concerned harm to society from bad economic theories, they apply to management research equally. He asserts that complex phenomena cannot be predicted or understood because of difficulties ascertaining an appropriate fact set. While many researchers hope that they can use social network experiments and data to address social contagion and perhaps reduce destructive behaviors, we must remember that these phenomena are far more complex than we will be able to model.

The practice of management has become dependent on simple metrics to inform complex decisions (Webber, 2006). Performance-based compensation is one such area. Predictably, these metrics are gamed often to the detriment of the organization, especially in the financial sector (Akerlof et al., 1993). Metrics tend to encourage short-term individualistic thinking at the expense of the long-term health of the organizational community. While many bemoan the lack of influence of management research, there can be little doubt that data-driven decision making, now common in industry, has its roots in academic theory. When these theories are applied to complex human processes, there is reason for skepticism. As von Hayek suggests, such theories likely suffer from the “pretense of knowledge.”

**SOCIAL MEDIA RESEARCH AGENDAS**

In this section, we review social media research agendas from researchers in the social sciences and information systems. These agendas explicitly dismiss moral, ethical, or mental phenomena in their social media frameworks and theories. While they claim to provide a “rich and empirically verified understanding of some of the central phenomena of behavior in social settings” they also admit that “the theories are incomplete; they offer no guidance on some important design choices” (Kraut, Resnick, & Kiesler, 2012, p. 12). Some believe social media research will lead to functional or causal explanations of why people using on-line social networks are so willing to reveal valuable personal information (Grabner-Kräuter, 2009).

Social scientists also provide social media design guidance based on causal and functional explanations (Kraut et al., 2012). They derive their theories and explanations by observing behavior, controlled experiments, and mathematical models. However, this approach cannot inform moral judgments about which goals lead to desirable online communities. Rather, they are satisfied with “identifying the likely effects of particular design alternatives in meeting the fundamental design challenges of online communities” (Kraut et al., 2012, p. 9). However, despite efforts not to make moral judgments, they admit that their social media design theories start from a premise that individuals “increase their own utility” (Kraut et al., 2012, p. 11). As described in the section above, this premise is essentially a moral judgment. It is especially questionable in community building where people are often willing to give up their lives in war for the benefit of society.

Information systems and business researchers also salivate over opportunities provided with “big data” available through social media. In particular, Information Systems researchers have established a framework for such research (Aral, Dellarocas, & Godes, 2013). The entire March 2013 issue of one of the leading information systems research journals, Information Systems Research (ISR), was dedicated to articles spanning the breadth of the research framework.

The framework describes research questions across four activities: design/features, strategy/tactics, management/organization, and measurement/value. For each activity, it calls for analysis at three levels: users/society, platforms/intermediaries, and firms/industries. It does not consider cultural impacts, desirable design goals, or explanations of human intentionality.

Their framework for future research lacks a moral foundation that the critics cited in the previous section have deemed necessary to guide research into human behavior and business. In particular, research frameworks need to call explicitly for explanations that depend on intentional choices of individual actors (Elster, 1983).

For example, one of the ISR papers addresses questions of measurement and value within firms (Goh, Heng, & Lin, 2013). They claim that user-generated social media produce greater profits than firm generated. Given the complexity of measuring profits and relating it to a specific activity, the reader may recall von Hayek’s warning and the dangers of relying on metrics for such decisions. Readers might have similar concerns about another paper claiming that the predictive power of social media metrics is a greater predictor of stock market returns to a technology firm than search metrics (Luo, Zhang, & Duan, 2013).
At the tactical level, social network adoption probabilities are derived from data and complex classification models (Fang, Hu, Li, & Tsai, 2013). They claim their model can help identify “seeds” for viral marketing. While the model might provide a useful tool for designers, one wonders how such models will stand the test of time. Humans learn and once they see how they are being manipulated they can change behavior, potentially making such models worthless or worse.

Human intentions and mental processes are essential to the understanding of social phenomenon within on-line settings. Recent social media research frameworks from information systems and the social sciences dismiss these efforts and rely on assumptions of utility maximizing actors and empirical data in building causal and functional models. These frameworks will have little to offer design practitioners seeking to create healthy communities that benefit society.

**CULTURAL IMPACTS OF SOCIAL MEDIA AND TECHNOLOGY**

Sherry Turkle’s research shows that while we are becoming increasingly connected through social media and related technologies we are creating emotional voids that leave us feeling lonely everywhere, even when physically among friends (Turkle, 2011). Declining social engagement and decreased intimacy are among the impacts of electronic communications on our relationships. Her research suggests that empirical academic studies are unlikely to produce convincing evidence to change unhealthy communications behaviors for many of the same reasons described above. Labeling a set of communications behaviors as unhealthy requires judgments not found in amoral theories.

Internet-connected devices can be used to stay connected and maintain social capital. Unfortunately, as Turkle’s research suggests, these devices have decreased our ability to communicate face-to-face in a meaningful way. Increased texting and social media use means that we spend much less time in personal, face-to-face discussions. Without non-verbal cues and context, many electronic messages are misinterpreted. Public use of the devices takes us out of the moment making us much less likely to interact with people in our physical presence. Important discussions are deferred or never occur. Relationships become frayed and social capital is lost.

Moreover, empathy among college-age students has dropped by 40% between 1979 and 2009 (Konrath, O’Brien, & Hsing, 2011). Developing empathy requires deeper, more emotional conversations that Turkle says are not occurring today. These kinds of conversations are simultaneously deeply desired and yet avoided at all costs. Electronic devices can be addictive and may require interventions similar to those used for alcoholics and other addicts (Roberts & Pirog, 2013). Many of the most effective approaches to understanding and treating addiction require “intentional” explanations – causal and functional explanations provide little assistance. Group talk therapy is common. Unfortunately, for the vast majority of people, there is no way to “quit” internet-related activities cold turkey as one might with drugs, alcohol or gambling. Healthy uses of technology are often required for livelihoods. Those who “unplug” from electronics may become even more isolated than they are with the devices. Unfortunately, the “abstinence” approaches used to treat other addictions is probably not realistic for ubiquitous newer technologies including social media.

Robert Putnam describes the declining levels of civic and interpersonal engagement in the United States from the mid-1960s through the mid-1990s. He summarized his research and potential public policy cures in the best-selling book *Bowling Alone* (Putnam, 2000).

In the book, Putnam warned that social capital needed for thriving communities was declining at an alarming rate and made several public policy recommendations to reverse the trend. Social capital refers to the total value of social networks that foster cooperation, reciprocity in giving, trust and information. When social capital is present, one has a place to “belong” and can rely on others for support and encouragement.

Even in its earliest days, America has been envied for having high levels of social capital. By 1840, Alexis de Tocqueville had attributed much of the success of American democracy to the thriving social institutions and civic associations he describes in the early 19th century classic *Democracy in America* (De Tocqueville, 2004). While the United States has had periods where civic and social engagement have both grown and declined, the potential threat to democracy from sharply reduced levels of social capital is of great concern to policy makers.

**MODELING HUMAN INTENTIONALITY IN SOCIAL NETWORK DESIGN**

Christopher Alexander’s architectural pattern languages have been usefully incorporated in designing software objects for several years (Christopher Alexander, Ishikawa, & Silverstein, 1977; Rising, 2001). The patterns will undoubtedly need to be adapted to virtual life environments. As with architecture, the goal of social media site design is to create healthy environments that allow people to flourish socially as well as on community tasks.
These ideas and theories will necessarily involve moral judgments and intentional explanations that the information systems community have avoided in their research (C. Alexander, 1999). It is not likely that they will have causal or functional explanations in a “scientific” sense. However, as Alexander has shown, there can be widespread agreement on many of the most critical patterns.

In recent years, Jonathan Haidt’s Moral Foundation Theory may provide clues to why researchers go awry when modeling complexity. He asserts that people make complex decisions on intuition then later justify their actions with empirical evidence (Haidt, 2012). This implies that people will not believe anything that violates their intuitions so you need to understand their passions to build influential messages and healthy relationships. It is a message that flies in the face of causal empirical research but has huge implications for developing social networks.

Haidt also suggests that humans can transcend self-interest and temporarily immerse themselves in a "hive." Those seeking to build successful groups should accentuate similarities rather than diversity to increase such behavior. Synchronicity and team competition build trust and morale needed to build cohesive groups. Transformational leaders motivate isolated individuals to see themselves as members of a larger group. While Haidt does not apply his theories to social media design, his results complement Alexander’s community building efforts.

In contrast to the other societies, Western, Educated, Independent, Rich, Democratic (WEIRD) people perceive a world of objects rather than a world of relationships. Their morals emphasize concerns about harm and fairness to protect individuals and their rights. However, these concerns are not sufficient to build healthy relationships and thriving communities. Successful groups have moral capital that enhances social order. That capital is built on moral foundations such as authority, loyalty and sanctity in addition to caring and fairness. On-line designers can consider these foundations as critical for establishing community.

Diversity reduces both bridging capital (between groups) and bonding capital (within groups) by creating social isolation or anomie. While diverse perspectives should theoretically improve problem solving, building cohesive diverse groups requires extra effort to establish bonds. This insight also has implications for media designers. It is clear that many on-line social networks appeal to very narrow audiences and support homogenous groups.

Resistance to authority can undermine cohesiveness of groups. However, unchecked power can lead to abusive within group and between-group behavior. Certain tribes of hunter-gathers demonstrate the possibility of healthy egalitarian cohesive groups (Haidt, 2012). As with all relationships, on-line community developers must strike a delicate balance between authority and its potential for abuse.

Haidt and Alexander provide pattern languages and moral theories that explicitly consider human intentions when explaining many phenomena of interest to social media designers. They provide two rich sources of insight to guide these efforts.

CONCLUSIONS AND IMPLICATIONS FOR FUTURE RESEARCH

Insights from Alexander and Haidt could lead social media researchers in vastly different directions from those envisioned by the information systems and social science research agendas described in this paper. While not as scientific or grounded in causal or functional explanations, their pattern languages and moral foundation theories provide a foundation for the study of ethical and moral issues surrounding social media. As we facilitate many of our communications through technology and social media, we must consider whether the changes in culture and our ability to interact in richer face-to-face contexts will create undesirable externalities.

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