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Rule-Based Thinking in Commercial Real Estate Transactions

Matthew S. Wood, PhD and David W. Williams, PhD

Commercial real estate is one of many possibilities buyers have for investing capital. By treating the commercial real estate buying decision as an investment, these buyers are unlike residential buyers who often make purchase decisions by relying, perhaps unwittingly, on less rational dynamics like emotion. Instead, commercial buyers are focused on the potential economic value of the purchase relative to other investments. This decision context parallels the prevalently studied context in entrepreneurship where individuals must decide if a specific set of circumstances represents an attractive business opportunity for them or their firm. Building on this parallel, what we know about how entrepreneurs make decisions about opportunities, broadly defined, presents interesting insights regarding how commercial real estate buyers are likely to make decisions about real estate transactions.

In that spirit, we make connections between recent research that documents entrepreneurs' use of rule-based thinking to make opportunity evaluation decisions and the decision making of commercial real estate buyers. Specifically, we provide an overview of rule-based thinking, its use in opportunity evaluation and then conceptualize commercial real estate transactions as resting, at least in part, on rule-based thinking around specific attributes of the property. In doing so, we endeavor to provide insight for real estate professionals concerned with understanding how commercial buyers evaluate properties as investment opportunities, and ultimately, make purchase decisions about specific properties.

What is Rule-Based Thinking?

Real estate purchase decisions are complex and mentally taxing (Perry and Lee 2012) and thus necessitate a systematic way to think about the decision. Cognitive science research finds that in situations such as these, *rule-based thinking* is a mechanism that allows individuals to cognitively frame decision problems via deliberately engaging in mental simulations of cause-and-effect relationships. These simulations flow from rules of reasoning derived from one's knowledge base (e.g., lessons from education, day-to-day experiences, and interactions with others). In that way, rules are analytical knowledge structures that take the form of "if s_1, then if a_1, then c_1 where s represents a setting condition, a represents an antecedent, and c is a consequent" (Frye, Zelazo and Palfai

1995, p. 486). Rules do not have to come from direct experience but can be socially learned from "other individuals, the media, or other cultural sources" (Smith and DeCoster 2000, p.112) and are applied to specific circumstances via cognitive comparison between the decision rule and the target.

Opportunity Evaluation as Rule-Based Thinking

Our recent study published in *Journal of Management Studies* builds on the rule-based thinking approach and documents entrepreneurs' use of rule-based thinking in opportunity evaluation decisions (Wood and Williams 2014). Specifically, we developed an on-line experiment using a technological innovation as a business opportunity and then manipulated specific characteristics of the opportunity. The entrepreneurs participating in this study evaluated a series of opportunity profiles where the characteristics of the opportunity varied for each profile. Sixty-two experienced entrepreneurs, defined as an individual who has started at least one business intended to be his/her primary source of income, participated in the experiment and completed a total of 498 opportunity evaluation decisions. This technique allowed us to identify entrepreneurs' decision rules-in-use, as they actually make decisions about the attractiveness of opportunities.

Analysis of the data revealed that entrepreneurs consistently used rules about opportunity novelty, resource efficiency, and the worst-case scenario to evaluate opportunities. Concretely, entrepreneurs evaluated opportunities significantly more positively when the opportunity had high novelty or high resource efficiency (i.e., optimal deployment of resources such as capital), and less positively when it had a severe worst-case scenario. The worst-case scenario indicates the severity of the downside risk for the opportunity under consideration. Interestingly, the negative effect of worst-case scenario rule was approximately double that of the positive effect for novelty or resource efficiency indicating that even for entrepreneurs, who are typically characterized as risk-seeking (Stewart and Roth 2001), the downside (worst-case scenario) mattered the most in their opportunity evaluation decisions. Building off this finding for the importance of the worst-case scenario, when considering the worst-case scenario alongside the otherwise positive influence of opportunity novelty and resource efficiency, worst-case scenario moderated the positive influence of these other two rules on entrepreneurs' opportunity evaluations. Specifically, the worst-case scenario overwhelmed the otherwise positive effects of novelty and resource efficiency.

Further, we examined the importance of different levels of knowledge about the opportunity market and the opportunity technology. We discovered that higher levels of opportunity market and opportunity technology knowledge strengthened, rather than weakened, the negative influence of the worst-case scenario on entrepreneurs'

opportunity evaluations. This highlighted that more knowledgeable entrepreneurs took the worst-case scenario about an opportunity even more seriously than those with less knowledge. Taken together, these findings suggest that entrepreneurs' experienced-based rules regarding the worst-case scenario are "driving the bus" and, in so doing, it is steering them away from the opportunity when the worst-case scenario is severe. This is especially true if the individual has extensive knowledge about the market or technology, presumably because this knowledge allows him or her to paint an accurate picture of the worst that can happen. These findings demonstrate the salience of rule-based thinking as a cognitive structure used to evaluate business opportunities.

Commercial Real Estate as Opportunity Evaluation

To the extent that commercial real estate represents a business opportunity, we believe there are important lessons to be learned by real estate professionals from the Wood and Williams (2014) study. Specifically, the fact that two opportunity characteristics (novelty

and resource efficiency) positively charge entrepreneurs' evaluations of opportunities indicates that, all else equal, entrepreneurs prefer opportunities that are more novel and/or make the best use of available resources. For real estate professionals, this suggests that an effective sales strategy would be to quantify and emphasize the uniqueness of the property (i.e., its novelty) and/or the optimal use of resources associated with property as compared to others on the market (i.e., its resource efficiency). One could, for example, provide the buyer information that demonstrates the novelty of the location or a unique feature such as clear span construction. Likewise, a savvy broker may develop a spreadsheet that has current listings along with recent prior sales that demonstrates the efficient use of resources, manifest as return on investment or similar measures of efficiency, if the target property is purchased over other alternatives.

Another key lesson that comes from the study is that the worst-case scenario is a powerful rule in opportunity evaluation decisions. Specifically, the worst-case scenario had a negative effect on evaluation and the effect was nearly three times as large as the positive effects of novelty and twice that of resource efficiency, to the point of negating the positive effects of these variables when the three are considered in unison. The insight is that buyers are likely to place a much heavier weight on the possible negatives associated with the worst-case scenario rather than the positives associated with other factors. Therefore, real estate professionals may consider finding ways to reduce the downside associated with the worst-case scenario. Therefore, we suggest that rather than simply focusing on the positive aspects of a property, as is common practice, brokers may

want to have explicit discussions with clients about the worst-case scenario as the research suggests that it is a dominant consideration. Doing so allows one to understand how the client is conceptualizing the worst-case scenario. This understanding is critical because the client may have a very different picture of the worst-case scenario than the broker, and if this is due to extensive knowledge of the market, the research suggests that negative effects of the worst-case scenario become especially powerful. Once a broker understands the client's vision of the worst-case scenario, he or she can then work to find ways to help reframe the scenario by altering perceptions or by mitigating the concerns of the buyer. Mechanisms, such as contract clauses, hold outs, and creative financing arrangements may be used to minimize concerns over the worst possible outcome. The research suggests that doing so will increase the odds that the target property will be evaluated favorably, which in turn increases the odds a transaction will take place.

Conclusion

Commercial real estate is a specialized investment opportunity and should be treated as such. Rule-based thinking plays an important role in opportunity evaluation decisions, and savvy real estate professionals can use this understanding to positively influence clients' transaction decisions. By providing clients with valuable information about the novelty, resource efficiency, and worst-case scenario associated with specific opportunities, commercial agents can establish themselves as advisors in the evaluation process, thereby increasing the value created for both buyers and sellers.

Recommended Reading

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Dr. Matthew Wood (PhD, Southern Illinois University) is an Assistant Professor of Entrepreneurship in the Hankamer School of Business, Baylor University. He earned his PhD after a career as an entrepreneur in the commercial printing industry. His research focuses on entrepreneurial cognition and understanding the nature of opportunities. His work has appeared in respected journals such as *Journal of Management Studies*, *Entrepreneurship Theory and Practice*, *Journal of Business Venturing*, and *Academy of Management Perspectives*. Dr. Wood is the most recent recipient of the Young Researcher Award within the Hankamer School of Business.

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The Mindset Needed for Sales Success

Chuck Fifield, MBA

Key #1 to Successful Selling: The Right Mindset

A mindset, which is a set of assumptions, beliefs, habits or methods held by one or more people or groups of people, can be very insidious in terms of its influence on behavior. How a mindset is shaped and developed can have powerful implications for relationships, selling interactions and successful selling outcomes.

In simple terms, the salesperson operating from a *static or fixed* mindset has imposed artificial barriers to potential productivity. The salesperson having a *dynamic, learning or growth* mindset is managing from the perspective of incremental productivity progress and potentially unimaginable opportunities. Since a person's potential is unknown and unknowable, a *growth* mindset provokes an adventurous journey, where one anticipates and grows one experience at a time. Doing business where seemingly limitless information manifests at an increasing rate of volume, variety and velocity is high-octane fuel for the growth-minded person.

Fixed Mindset and Growth Mindset

Carol Dweck's book, *Mindset – The New Psychology of Success,* explores the power of our beliefs, both conscious and unconscious, and how changing even the simplest of our beliefs can have a significant impact on both our lives and our sales productivity.

Maria Popova's article, "Fixed vs. Growth: The Two Basic Mindsets That Shape Our Lives," summarized Dweck's work and highlighted one of our fundamental beliefs, which is how we perceive our personality. A *fixed mindset* considers our abilities, including character and intelligence, to be static givens that cannot change in a meaningful way. The *fixed mindset* views success as the affirmation of inherent talents. One's ongoing assessment of how those given talents measure up against a striving-for-success-and-avoiding-failure-at-al-costs standard becomes a way of maintaining the sense of being smart or skilled. A *growth mindset*, on the other hand, thrives on challenge and sees failure not as evidence of inadequacy, but as a heartening springboard for growth and for extending existing abilities. Out of these two mindsets, which are manifested at an early age, springs a great deal of our behavior and our concepts of success and failure in both professional and personal contexts.

Dweck writes, "For twenty years, my research has shown that the view you adopt for yourself profoundly affects the way you lead your life. It can determine whether you become the person you want to be and whether you accomplish the things you value. How does this happen?

How can a simple belief have the power to transform your psychology and, as a result, your life?" She adds, "Believing that your qualities are carved in stone – the *fixed mindset* – creates an urgency to prove yourself over and over. If you have only a certain amount of intelligence, a certain personality, and a certain moral character – well, then you'd better prove that you have a healthy dose of them. It simply wouldn't do to look or feel deficient in these most basic characteristics. I've seen so many people with this one consuming goal of proving themselves – in the classroom, in their careers, and in their relationships."

The *growth mindset* lives life from a very different perspective. Dweck says, "There is another mindset in which these traits are not simply a hand you're dealt and have to live with, always trying to convince yourself and others that you have a royal flush when you're secretly worried it's a pair of tens. In this mindset, the hand you're dealt is just the starting point for development. This *growth mindset* is based on your belief that your basic qualities are things that you can cultivate through your efforts. Although people may differ in every which way – in their initial talents and aptitudes, interests, or temperaments – everyone can change and grow through application and experience. They believe that a person's true potential is unknown (and unknowable); that it's impossible to foresee what can be accomplished with years of passion, toil, and training." Not only are *growth-minded* individuals not discouraged by failure, but they see themselves as having a learning experience in the process. Why waste time proving over and over how great you are, when you could be working on becoming better? And why seek out the tried and true instead of looking for experiences that will stretch you?

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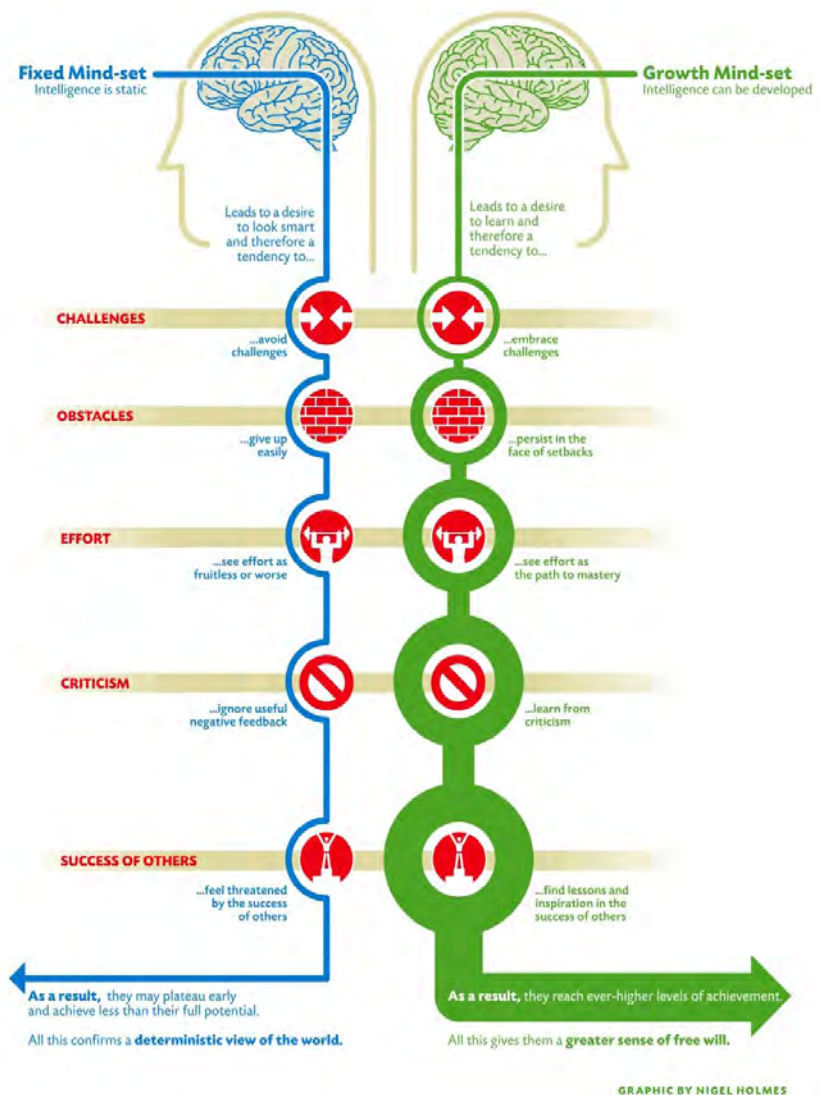
Comparing the Two Mindsets to Create Habits Which Build the Right Mindset

In order to develop a *growth mindset*, sales professionals should focus on building sound habits of industry, which are essential ingredients to the highly productive sales career mindset. In the words of Aristotle, "We are what we repeatedly do. Excellence, then, is not an act, but a habit."

Stephen Covey in his book, *The Seven Habits of Highly Effective People*, provided a guide to changing one's mindset from the inside-out. Change must start from within.

Habit #1 – Be Proactive

Proactive people are solution-minded, using their resourcefulness and initiative to find solutions rather than reporting problems for others to solve. Being proactive is about being responsible for our own lives, and understanding that you will get from an experience what you put into it, nothing more and nothing less.

Habit #2 – Begin with the End in Mind

The most productive way to begin a project, personal or business, is to begin with the end in mind. Once your desired destination is clear, then you process the necessary steps and actions to fulfill the mission by working backwards.

Habit #3 – Put First Things First

Putting first things first is about prioritizing your planned necessary steps to the desired outcome or end in mind. In carrying out a plan, especially one that is long term, we all must wrestle with the same self-management dilemma - when do I address urgent matters versus when do I perform the important tasks necessary to the fulfillment of my work in mind? To paraphrase Peter Drucker, effective people don't solve problems – they pursue opportunities. Time management is an essential skill for personal effectiveness, and the essence of quality time management is to organize and execute around your priorities.

Habit #4 – Think Win – Win

Thinking win-win is a powerful self-management tool. The salesperson's biggest dilemma is when do I compete (win-lose thinking) versus when do I cooperate/collaborate (win-win thinking)? The latter has consistently proven to be the most productive outcome in both the short- and long-term.

Habit #5 – Seek First to Understand, Then to be Understood

The most important ingredient to mastering this habit is the practice of active listening. One of the key attitudes in life, personally and professionally, is the attitude of active

listening. Right listening is essential to doing the right things for others. It is much more than demonstrating empathy. It is about sincerely caring about the interests of others to cultivate a more productive relationship result. The three most important words in managing successful selling relationships is nurture, nurture, nurture.

Habit #6 – Synergize

The practice of all of the first five habits prepares us for the habit of synergy. The result of exercising synergy is that the whole is greater than the sum of its parts, i.e. 1 + 1 = 3. In both personal and business interactions, synergy is one of our most productive activities. Highly successful salespeople are continually seeking to add customer value by creating alternatives and tapping new opportunities.

Habit #7 – Sharpen the Saw

This habit is about consistently and regularly practicing physical, mental, social/emotional and spiritual renewal. Taking the time to sharpen the saw (that's you) is the habit that makes the others possible.

Adopting a Growth Mindset in Real Estate

Peter Senge, author of *The Fifth Discipline* says, "The only sustainable competitive advantage is an organization's ability to learn faster than the competition." Nothing could be truer for the individual salesperson, especially in the highly competitive discipline of real estate sales. Employing a *growth or learning mindset* is essential to the shaping and development of a continuously productive real estate sales career.

So how does one commence this *growth-minded* journey? Highly productive people don't begin with motivation, but rather with action. William James, considered by many to be the father of American psychology once posed the question, "Do we run from a bear because we are afraid or are we afraid because we run?" Probably both conditions have some truth, but he proposed that the seemingly obvious answer, that we run because we are afraid, was wrong, and instead concluded that we are afraid because we run. He stated, "My thesis on the contrary is that bodily changes follow directly the PERCEPTION of the exciting fact, and that our feeling of the same changes as they occur is the emotion."
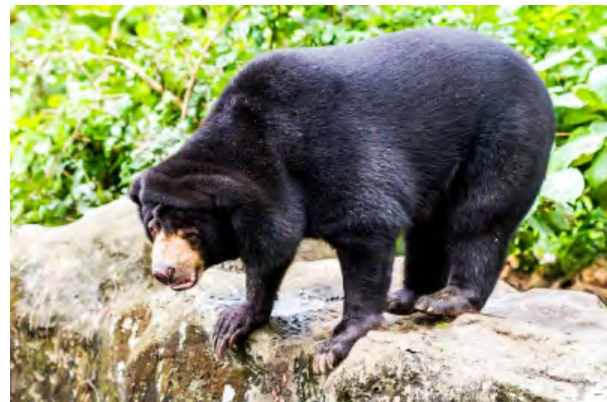
Therefore, it would seem to make sense to begin with physical action, or from Covey's habit terms, be proactive. Develop an action plan with each individual habit, and as you realize improved productivity, motivation (the emotion) and progress will be realized. Using James' terms, man isn't productive because he's motivated, but rather he's motivated because he's productive.

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About the Author

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Chuck Fifield is a Senior Lecturer for Baylor University's Hankamer School of Business, Marketing Department and serves as the faculty coach to Baylor's Sales Team and Uproar Music and Entertainment Group, a student-managed business. He joined the faculty at Baylor University in 2001, teaching in the Graduate Business School (Operations Management), the Management Department (Negotiations and Conflict Resolution) and the Economics Department (Principles of Macroeconomics). Chuck has taught or guest lectured at other Texas-based Universities in the fields of sales, international business, money and banking and finance/investments. Professor Fifield has conducted sales research and training for several organizations, including most recently State Farm Insurance. Prior to joining Baylor, Chuck was a financial consultant for nearly thirty years to businesses located throughout the U.S. He owned and operated several financial service businesses in the fields of securities, real estate, oil and gas and insurance.

Can A Team Have Too Much Cohesion?

Sean Wise, PhD

Strong communication, good group dynamics, and collaboration are all cohesion goals for which real estate professionals and their team members strive. These attributes improve a team's ability to share knowledge, utilize resources, accomplish tasks and thus, improve the team's performance, specifically financial performance (Evans and Dion 2012; Beal, Cohen, Burke, and McLendon 2003; Carron, Brawley, and Widmeyer 1998). These scholars have posited that group cohesion is strictly positively related to a group's performance. However, recent research supports the idea that there is an optimal level of group cohesion, past which, returns of group performance begin to diminish. The concept of both positive and negative impacts of strengthening group cohesion was first suggested by Carron, Prapavessis, and Grove (1994), and articulated by Lechner et al. (2010) in the *Dark Side of Social Capital* theory. Our research explores the structural cohesiveness using social network analysis to determine impacts on financial performance.

The Research

This study analyzed email communications for 187 teams of five to eight, with one group of 15, from a single company, operating across several locations throughout Canada. The digital data available in the twenty-first century allows for straightforward and relatively reliable, unbiased testing. In past research, scholars had to rely on self-reported data or time-consuming surveys or observational research. Modern techniques for digital data collection, storage, and analysis facilitate faster and more accurate research and results.

The company approved the collection of team email logs. All details were removed from the collected emails, with the exception of *to, from*, and *date*. The email logs were analyzed to determine the structural cohesiveness of each team. Structural cohesiveness, or network density, was determined by comparing the number of relationships that exist within a team, as demonstrated by the email logs, when compared to the maximum number of possible relationships within the team. To establish whether a relationship exists between team members, ties between members were recorded. A team member sending another an email equates to one tie. A response back would constitute another tie. Ten ties between two members are required before a relationship, or connection, is established and recorded. Social network analysis software was used to determine the

maximum number of possible relationships and the calculation of network cohesiveness or density (Network Density = Actual Number of Connections/ Maximum Possible Connections). The density results were compared to team performance to identify and analyze patterns that may exist.

The Results

The theory of Task Contingency predicts that high-performing teams will have similar topologies and low-performing teams will have similar topologies; another prediction is that the two groups' topologies will differ from one another. Topology is the arrangement or interrelatedness of constituent connections (see Figures 1 and 2 for examples). In alignment with the theory, our results show that low-performing teams are full of structural holes. When two workers possess non-redundant information and they are not connected to one another, there is a structural hole between them. Our results also show that low-performing teams have several isolated members with quite attenuated connections (similar to Figure 2).
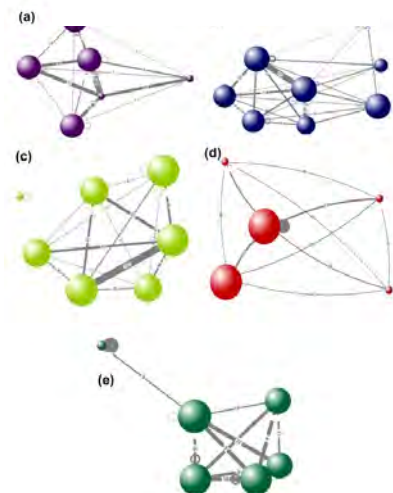
Figure 1
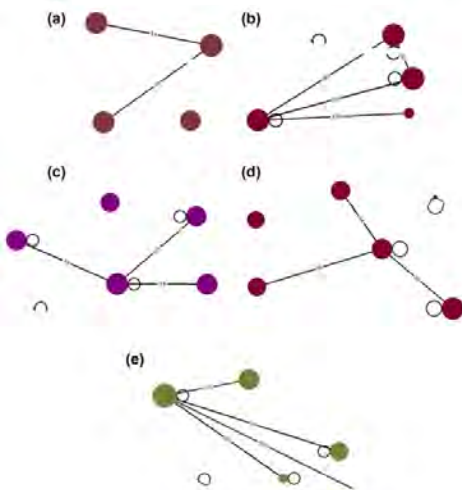
Regression analysis was used to examine the relationship between group cohesion or density and team performance. Plotting the data (density to performance), we found that a best-fit curve peaked far right, as expected from the positive skew of both performance and density (see Figure 3). However, there is also a clear decline on the right side of the curve which shows diminishing returns of performance in relation to continued increases in density or cohesiveness.

Figure 2

This peak skews far right due to a revenue outlier result from a single group of 15 members (this team follows a different business model and therefore may not appropriately reflect the density-performance relationship). Removing this outlier, the curve's peak would be slightly left of the current result, demonstrating diminished returns even sooner for group cohesion or density.
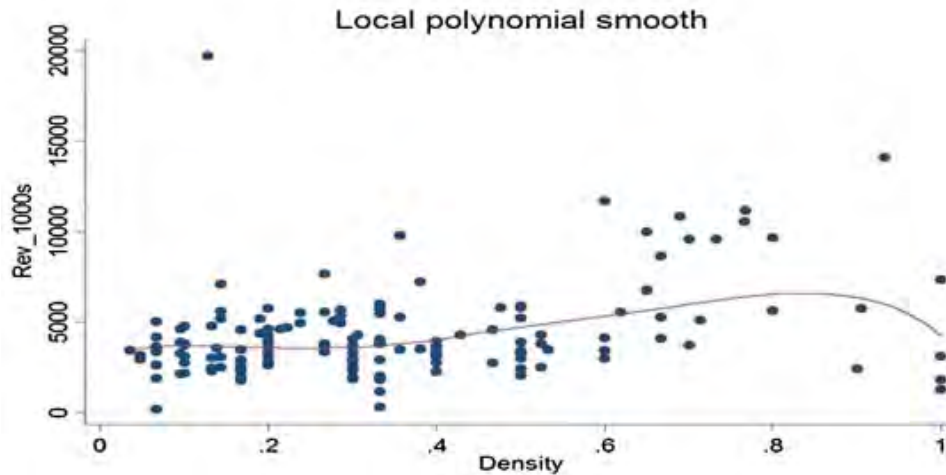
Figure 3

Conclusion

Our research results suggest the relationship between group cohesion or density and financial performance is more complex than originally thought. The patterns within the high-performing and low-performing teams are different. Additionally, the relationship between cohesion and performance cannot be glossed over with the thought that "more cohesion is better."

Our work shows that work groups with similar performance results have similar network topologies. High-performing groups had high cohesion with dense, repeated ties between members. Low-performing groups were filled with structural holes. The research also demonstrates that the correlation between cohesion and performance is inversely curvilinear. At a certain point, there must be a fine balance of group cohesion, not too much, not too little, in order to achieve maximum performance results.

What does this mean for real estate professionals? To improve the efficacy of their performance to reach optimized financial results, replicating the topology of these high-performing groups is the first step. Decreasing structural holes, meaning no isolated members with few ties to the group, and dense repeated communications between all members of the group will improve communication, resource utilization, and task efficiency. However, leaders and members of these real estate teams must be mindful of diminishing returns once cohesion reaches a certain point. Research suggests that the efficiency, knowledge transfer, and other positive cohesion results will eventually give way to negative impacts such as information overload or cognitive lock-in (Lechner et al. 2010). Being aware and wary of these potential negative impacts is the first step in preventing, or combatting current, diminishing performance returns on group cohesion.

Negative and Positive Influences of Intergroup Relations on Initiative Performance
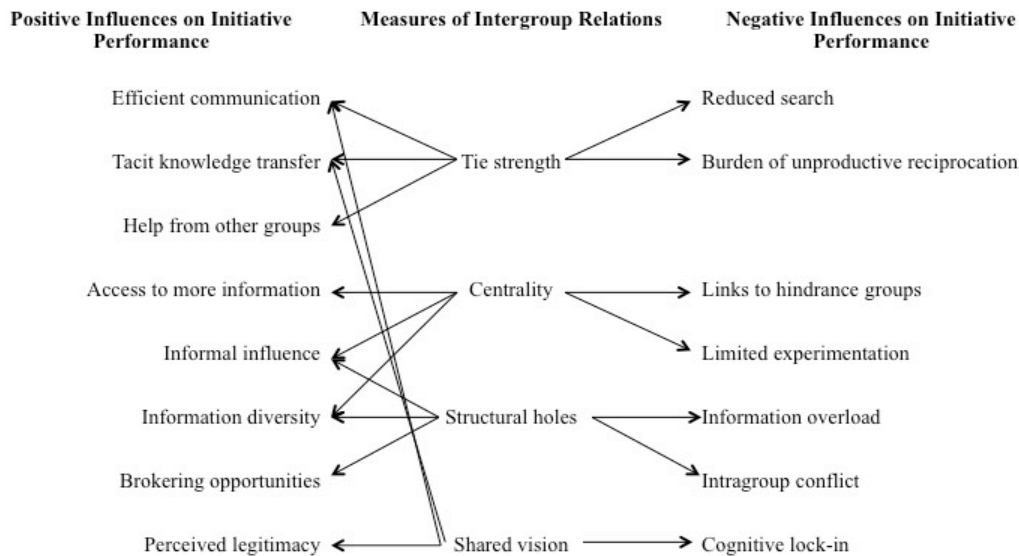

Figure 4

Recommended Reading

This research was first published in the *European Management Journal:*

Wise, Sean (2014), "Can a Team Have Too Much Cohesion? The Dark Side to Network Density," *European Management Journal*, 32(5), 703–711

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About the Author

Sean Wise, PhD
Professor of Entrepreneurship, Ryerson University
Dr. Sean Wise specializes in helping emerging and high-growth potential organizations jump on the trajectory and turn a profit. His intense, entertaining and direct approach has earned him a loyal following of disciples who swear by his lessons and best practices for business success. With 10 years of venture capital and more than 15 years of entrepreneurial services to his credit, Wise has helped found six business ventures of his own to date, the first at age 16. When seeking the best in business, CBC recruited him as online host and industry advisor for their hit show, *Dragons' Den.*

Wise is also a popular writer. First, with his Globe and Mail column and then his books: *Wise Words: Lessons in Entrepreneurship and Venture Capital.* In *How to be a Business Superhero,* Wise takes his readers on a guided tour through the world of superheroes and their lessons, directly relating them to essential business strategies we all need to master in order to succeed in today's workplace. Wise's third book, *HOT OR NOT: How to Know if Your Business Idea Will Fail or Fly!* was released in 2012, selling 30,000 copies in 90 days.

Wise majored in engineering and economics at Carleton University and earned a law degree and MBA from the University of Ottawa. In 2012, he received his Ph.D. from the Adam Smith Business School at the University of Glasgow.

Salesperson Knowledge Distinctions and Sales Performance

Thomas W. Leigh, DBA, and Thomas E. DeCarlo, PhD

Professional selling is a learned intellectual skill where more knowledgeable sales personnel, *ceteris paribus*, should be expected to be more productive due to their superior client interaction and persuasion skills. Learned largely through direct-selling experience and training, these superior skills would be expected to enable high-performing salespeople to more accurately and appropriately classify clients according to their sales potential and needs and hence better adapt their selling strategies to specific clients (Leigh and McGraw 1989; Leong, Busch, and John 1989; Weitz, Sujan, and Sujan 1986). In turn, these more suitably tailored messages should enhance selling effectiveness and efficiency. Intuitively, this may make perfect sense to most real estate brokers. However, the nature of the content and structure of this salesperson working knowledge is not well understood and important questions remain. First, what are the specific knowledge dimensions that explain how and why higher performers are more adaptive and responsive to different clients? Second, is there a common base of selling knowledge that is unique to particular performance categories? If so, how do the highest performance groups differ from the middle and lower performing groups? Finally, do higher performers have different sales call goals than lower performers?

To answer these questions, we conducted depth interviews with 150 salespeople using a systematic procedural knowledge-based approach to identify critical sales knowledge differences among six distinct categories of sales performers (from superstars to below-average performers), Specifically, we investigate the procedural knowledge that enables high performers to better recognize, analyze, interpret, evaluate, and remember effective and appropriate sales strategies and tactics and how to adapt them to fit specific sales call contingencies. Our research is important for real estate professionals as it provides a conceptual logic and approach, as well as descriptive insights concerning how services are sold (our sample was derived from the financial services industry), and the results can be adapted to the real estate selling context to improve sales performance.

Higher Performing Sales Agents' Knowledge Structures Aid Adaptability

Our research proposition was that the procedural knowledge (know how) of higher performers would be more sophisticated than that of lower-performing agents. In particular, we found the procedural knowledge of highly effective sales agents was quantitatively more elaborate, more contingent, and more specifically adaptive to customer requirements than that of lower-performing agents. We also find that higher-performing salespeople have distinct knowledge that

is more central to a selling context and more specifically adapted to particular customer types or selling circumstances. These results are important in that they begin to explicate the nature and benefits of acquiring "accurate" knowledge structures (Sharma et al., 2000). In particular, our results show why and how higher performers are better at adapting. The relative lack of flexibility in sales approaches of lower performers, for example, may be rooted in a knowledge deficit in recognizing the importance of specific situations or customer behaviors within a sales interaction. Conversely, higher performers are not only better able to recognize the centrality of particular customer types or situations in achieving a successful outcome, but they are better able to respond in a task-specific adaptability manner.

The current research also provides evidence that higher (relative to lower) performers will self-impose a greater number of goals when planning a customer interaction. This implies that higher performers perceive sales call success in more and perhaps different ways than lower performers, which may help explain why higher performers maintain a relatively high level of self-esteem (Krishnan et al., 2002).

Implications for Real Estate Sales Professionals

Our findings raise a variety of issues for real estate sales, especially concerning how sales agent knowledge is developed, leveraged, and rewarded. Developing and leveraging deep and contextualized salesperson knowledge, for example, may be approached by employing either

talent-based or systems-based models. For example, our contingency results suggest it is not the amount of sales knowledge, but rather how the knowledge is stored and indexed in memory. Hence, one talent-based recommendation would be to enhance salesperson development, not by teaching lower performers a body of knowledge gained by high performers in a few training sessions (which we believe is doomed to fail), but by adopting a long-term developmental approach that includes elaborating on prior knowledge by teaching pattern recognition through highly varied and contingent sales call discrimination tasks and explanations (Heit 1994). Our study also suggests that agent training programs would benefit by emphasizing the importance of creative thinking in establishing a variety of intermediate and end goals prior to actual client interactions.

Turning to a systems-based model approach in leveraging and disseminating sales force intellect, one recommendation would be to create a culture that encourages knowledge sharing and modeling. Creating a learning culture and systems where expert brokers voluntarily share experiences and stories is essential for leveraging the knowledge of top salespeople. The use of

sales teams with different levels or types of sales expertise, for example, is also an approach to increasing contact, joint learning, and tacit knowledge sharing. Supporting these interpersonal activities, however, should be more systematic knowledge management practices, including software systems to capture explicit formal knowledge and link lower performing brokers to a network of recognized sales leaders.

Conclusion

Greater procedural (know how) and declarative (know what) selling knowledge enables the salesperson to adaptively manage a sales call toward an appropriate outcome. Real estate professionals can establish a more systematic approach to capturing and disseminating the unique knowledge bases that enables higher performance.

Additional Information on the Research Methodology

A multi-line insurance firm provided data for their top agents in terms of new business generated in auto, home, life, and commercial lines over 2 1/2 years. A random sample of 150 sales agents (25 per six sales performance categories) from four distinct regions (NE, SE, West, and Midwest) was selected and randomly assigned in an attempt to rule out alternative explanations (e.g., verbal ability or social maturity) of our findings. Each interview was scheduled for two hours and most required the full time allotted.

A free-elicitation methodology was used to elicit the procedural knowledge of financial services agents. Sales agents were presented two sales call contexts, an initial prospect telephone sales call and an initial face-to-face sales office call, and asked to describe in detail what would be expected to occur, in sequential order, in each context. This agent-level data allows an empirical assessment of the relative degree of elaboration, contingency, and distinctiveness in the procedural knowledge of higher and lower performing sales agents. After listing the activities, events, actions, or behaviors that would normally be expected to occur in successfully negotiating each sales call, agents were asked to list in order of importance: (1) goals that they expected to accomplish in each sales context; (2) unusual customer types or circumstances that might occur in each sales context; and, (3) if-then activity sequences indicated to resolve each of the sales call contingencies identified. These latter two tasks represent the prompted "if-then" contingency data.

To more deeply examine the contingent (or adaptive) nature of salesperson knowledge, two prompted "if-then" contingency contexts were developed. For the initial telephone call, sales agents were asked to identify and describe any customer circumstances that might present unique selling requirements and how they would handle each. For the office sales call, sales agents were asked to identify as many specific customer types as they had found relevant. Then, sales agents were asked to fully describe the activities or events necessary to adapt to each identified customer circumstance or type. These prompted "if-then" statements were then coded as to their

centrality to the process of making a successful sale and their task-specific adaptiveness to the customer. Two independent judges with sales experience coded the data. Inter-rater reliability indices ranged from .71 to .94, exceeding the .70 reliability standard (Perreault and Leigh 1989).

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Consumer Click Behavior at a Search Engine: The Role of Keyword Popularity

Kinshuk Jerath, PhD, Ma Liye, PhD, and Young-Hoon Park, PhD

Consumers use search engines every day. What they might not realize is that with each search and each click, they are giving information to researchers about their behavior. Search engine tools such as Yahoo!, Google, and Bing, as well as international versions of these such as Baidu in China or Yandex in Russia all provide consumers with answers to any of their questions in a matter of milliseconds.

When a user conducts a search, results consisting of *sponsored* links as well as *organic* links are returned. Sponsored results are links that are paid for via an auction process. This type of advertising is also referred to as *paid search* or *sponsored search* advertising. What our research explores is how consumers respond to the search results they are given, how their clicks vary with the use of different keyword searches, and if there are patterns in click behavior. Consumers use search engines to find answers to life's questions every day, and it is important that firms who wish to reach their markets analyze the click behavior of consumers.

Sponsored advertising is a growing practice that has developed into an art of choosing just the right keywords to *bid* on to obtain the most effective use of sponsored advertisements. In this study, we examined click behavior on organic and sponsored links generated by a search engine after a keyword search is conducted. We use this data to examine consumer activity and decipher their click behavior.

A key question in evaluating the data from 1.63 million keyword searches over a one-month period for 120 keywords is which characteristics should be considered as good indicators of *consumer response* after a search? Previous studies have considered whether or not a search has a particular retailer's name in the search, or the length of the search phrase as an important characteristic to consider. However, we also included the measure of popularity of a keyword. This measurement is determined by examining how many users searched for one particular keyword relative to others.

Our research shows that popularity is a key cause of consumer clicks on the search results page. The more *popular* keywords had proportionally more clicks on sponsored links, while less popular keyword searches had more clicks on organic results.

Additionally, we determined that consumers can be grouped into segments based on their click behavior and how involved they are with the topic they are searching. For example, a user who is searching a topic that they have a low level of involvement with will use more popular keywords, and therefore click on more sponsored links, comparatively. A user who is more highly involved with his or her search will use less popular and more specific keywords, and therefore tend to click on organic links.

Data Overview

Data for this research was collected through a leading search engine firm in Korea. The page layout that is produced when a search is conducted is similar to the layout produced by many U.S. search engines like Google or Bing. Sponsored links (up to 5) are displayed at the top of the page, followed by organic links below. The organic links that are produced by the Korean search engine are grouped based on the source of the content—news, images, video, etc.—similar to how users can search for images or video specifically on Google. Given these similarities, the conclusions that are drawn from this study can be applied to other search engines around the world.

The data that was collected centered around the click activity of 1,200 different keywords over a 28-day period in 2011. Keywords can refer to either a single word or a phrase of a few words. After the 28-day period was over, the dataset consisted of more than 30 million search occurrences. Given this large amount of data, a random sample of 120 keywords was chosen from the original 1200 keywords. The researchers ensured that there is exactly one search occurrence per IP address to make certain that there is no more than one search instance per user in the data. There is an average of 13,595 searches per keyword, and a total number of searches of 1,631,336 across the 120 keywords. An average of 4.39 advertisements are shown with each search with a standard deviation of 1.21.

Model Development and Estimation

The model that was developed with this data is governed by two components: the tendency to click, and the likelihood to utilize the sponsored or organic listings. Additionally, the model accounts for observed heterogeneity in keywords, the observed heterogeneity in consumers, as well as unobserved heterogeneity in consumers.

Even after narrowing down the selection of keywords down to 120, we were left with over 1.5 million search instances. A random sample of 20% of these instances was selected to narrow down the data set to 326,080 search instances, and the model was estimated on these data. Consumers were segmented into four different segments. Within those four segments, the expected number of organic and sponsored link clicks for each keyword were calculated, and these calculations were compared with the actual numbers. The percentage errors weighted by search volume are reported to be 2.33%, 1.08%, and 2.09% for organic, sponsored, and total

clicks, respectively. These percentages provide evidence that this model with four segments is an appropriate model for analyzing click behavior.

Results

Characteristics of Segments

We discovered that the average number of clicks immediately after a keyword search is relatively low, and the share of sponsored clicks is also comparatively small. In segments 3 and 4, consumers are more likely to click links after their search, and they are also more likely to click sponsored links than in segments 1 and 2. This information leads the researchers to conclude that segments 1 and 2 are lower-involved, while segments 3 and 4 are more highly involved segments. A consumer in segment 4 clicks almost 10 times more often than a consumer in segment 1, and is more than 3 times more likely to click on a sponsored link.

The sizes of the consumer segments are 49.11%, 44.96%, 4.20%, and 1.73%, respectively, meaning that segments 1 and 2 make up more than 94% of all searches. Keywords that are not used as often are more likely to be classified into segments 3 and 4. The lower-involvement segments have a higher search volume of keywords that are more common than higher-involvement segments.

As consumers move through a purchase inquiry process, often referred to as a *purchase funnel* in marketing, their level of involvement changes. The segments identified in this research are parallel to the purchase funnel model. The consumers representing a higher level of involvement are a significantly smaller group of individuals than the consumers in segments representing a lower level of involvement.

Effects of Popularity

The data show that the effect of popularity on click behavior occurs through the different stages of involvement of consumers with purchases.

Company information, brand information, and the length of search results also have an impact on the propensity for consumers to click links. The tendency for consumers to click is actually lower if there is a specific company identifier in the search criteria. Additionally, if more sponsored links are shown, the likelihood for a consumer to click a sponsored link increases. In other words, there is a positive correlation between the number of sponsored links and the propensity for a consumer to click.

Conclusion

The central finding of this study is that the total clicks and the proportion of sponsored clicks after a keyword search is greater for less popular keywords. Additionally, consumers can be grouped into segments that correlate with how high or low their involvement is with their product or service search. Segments with lower-involved consumers are usually focused on more popular keywords. Segments with more highly-involved consumers typically have more clicks per search, as well as more clicks on sponsored links.

In this information age, potential homeowners are turning to the Internet when searching for homes. This trend is especially prevalent for homebuyers who are moving longer distances; seeing the homes in person is not typically feasible in these cases. In fact, according to a study done by the National Association of Realtors and Google, 90% of homebuyers searched online during their home-buying process, and real estate-related searches on Google have grown 253% over the past 4 years. A movement towards digital home buying makes this research in consumer click behavior that much more vital for real estate professionals. Consumers searching for homes via search engines are conducting high-involvement searches. According to this study, those consumers will be using less popular keywords. For example, they could be searching for homes in particular neighborhoods, school zones, or apartment complexes.

What these implications mean for real estate agents is that it may be smart for them to develop their strategies and tactics to reach the online home buying community as potential customers. Agents may choose to focus on particular neighborhoods and place that information on their personal webpages, making their page more likely to pull with these less popular keywords. After all, home shoppers using search engines are 9% more likely to take an action on a real estate brand website than those who do not search (Digital House Hunt 2013). Having a presence on the web has become more important than ever in this age of information, especially in real estate.

Recommended Reading

Jerath, K., L.M. Ma, & Y.H. Park (2014). "Consumer Click Behavior at a Search Engine: The Role of Keyword Popularity" *Journal of Marketing Research*, 51(4), 480–486.

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