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The Effects of Cognitive Heuristics on Strategic Action: Overcoming the Risk Hurdle to First Move

Mark Simon Susan M. Houghton

Entrepreneurs who introduce pioneering products face substantial risks. How, then, do entrepreneurs overcome this risk hurdle? This article suggests that three cognitive heuristics (i.e., mental shortcuts)—namely, representativeness, illusion of control, and overconfidence—cause entrepreneurs to perceive less risk and therefore to act. This, however, creates a possible paradox: the very processes that increase the likelihood of first moving may decrease performance because entrepreneurs underestimate risk. To resolve this quandary, the article theorizes that underestimating the risks of first moving may actually enhance performance if entrepreneurs have a learning orientation, the organization is flexible, and the environment is benevolent.

new venture, the Europe Link Incorporated (ELI),¹ was seeking to import a product from Europe to the United States. While searching for potential products, the founders discovered a new type of furniture with a unique appearance. This furniture was virtually unknown in both the United States and throughout the world. As they considered carrying the product, the founders were influenced by an industry participant who repeatedly told them the product could really take off. This led them to decide to introduce the furniture, completely disregarding the fact that many new ventures launching radical products fail.

The company's founders invested their entire life savings. They exhibited this certainty and optimism throughout their history. For example, after visiting twelve major potential customers for their products, they became sure all would sign large long-term contracts. The founders' most pessimistic predictions indicated they would be rich. Much to their surprise, however, only one of the companies made a purchase, and even that was a relatively small order. In part, the founders' high level of education convinced them they would succeed. In an industry where many participants only had high school degrees, most of ELI's founders had master's degrees and were fluent in several languages. In fact, the three officers even invented a derogatory phrase to insult the intelligence of others in the industry.

Despite the founders' early certainty of success, ultimately they had to abandon their initial product when an economic downturn decreased sales. Furthermore, the

product's uniqueness and early market entry made potential customers nervous about purchasing. The company never made a profit.

The timing of a firm's entry into a market may dramatically affect its survival, financial performance, and market share.² Firms that are first in the marketplace, in particular, may achieve advantages,³ yet they face many risks.⁴ For example, they fail more than later entrants do,⁵ and the performance of survivors varies greatly.⁶ The risk of first moving is magnified when a new venture tries to pioneer a product, because the entrepreneurs are multiplying the dangers of being a new company with the dangers of introducing a new product.⁷

Given the high risk involved, it is important to examine how entrepreneurs decide to move first, yet little is known about this decision process.⁸ Many strategic decisions include extensive information gathering and analysis; however, it may be difficult to determine what information is needed to evaluate a first move's potential.⁹ By definition, a first move involves products or services that are unique, making it hard to determine how a market will respond. One may therefore ask: Why do companies like ELI enter new markets first, when the risks are so high and accurate judgments are so hard to make? In essence, why do entrepreneurs often locate "great" first-moving opportunities only to fail?¹⁰ And more important, what can be done to avoid this problem?

Scholars have investigated the influence of many different factors including culture, demographics, economics, and an individual's circumstances (e.g., being laid off) to explain why entrepreneurs engage in risky actions like starting a venture or introducing pioneering products. ¹¹ These approaches, however, do not explain the volitional nature of entrepreneurship. For instance, why out of hundreds who are laid off will only one person start a venture? ¹²

Researchers, therefore, began to examine whether entrepreneurs exhibited certain traits (e.g., locus of control and need for achievement) to a greater extent than others, only to find that for the most part, they did not.¹³ Especially surprising was the fact that entrepreneurs did not seem to have a higher risk propensity (i.e., a greater willingness to *knowingly* take risks) than managers.¹⁴

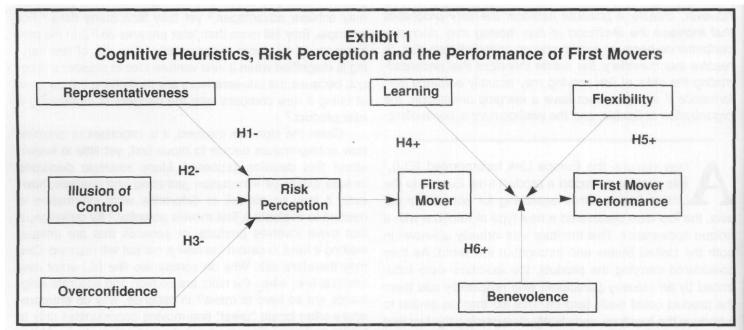
One possible reason why entrepreneurs take large risks, like first moving, even though they do not have a

greater willingness to *knowingly* take risks, is that entrepreneurs may underestimate the riskiness of their actions.¹⁵ In other words they pursue a risky course of action because they do not realize that it is risky. Specifically, this study suggests that entrepreneurs underestimate risk because they use rules of thumb, known as cognitive heuristics, to simplify their decision making.¹⁶ Researchers have found that cognitive heuristics act as mental shortcuts to expedite information processing, and may be especially prevalent among entrepreneurs.¹⁷ While these shortcuts enable entrepreneurs to make decisions in ambiguous situations, heuristics lead to severe and systematic errors that hurt firm performance.¹⁸

Despite the potential performance ramifications of the

ket category, the organization is said to have moved first.²⁰ There are several reasons why companies, including new ventures, move first. Firms may enter a market first to gain certain potential advantages, including establishing a positive reputation, locking in later sales by creating switching costs, advancing further up the learning curve, and defining the standards that will dominate the industry.²¹

Despite these reasons for first moving, many researchers suggest most firms avoid first moves, in part because the advantages often fail to materialize.²² Additionally, first movers face disadvantages, including the high costs and the danger that conditions will change, making their efforts largely obsolete.²³ In fact, risk is one of the major reasons why entrepreneurs choose not to first



topic, the role of cognitive heuristics in the decision to move first has been relatively unexplored. This article examines whether cognitive heuristics lower entrepreneurs' perceptions of risk, and thereby increase the likelihood of first moving. Next, it explains that entrepreneurs may still achieve superior performance even if they underestimate the risks of first moving by developing a learning orientation, remaining flexible, and entering benevolent environments. Exhibit 1 depicts the relationships discussed in the article.

This article describes first moving, reviews how entrepreneurs overcome the risk hurdle associated with first moving, and discusses the performance ramifications of the model. It concludes with some managerial implications and future research directions.

First Moving

When an organization introduces a unique product before any other companies and the product creates a distinct mar-

move.²⁴ First movers have a higher failure rate than later entrants,²⁵ require large up front investments, and lack relevant information for decision making.²⁶

All of the factors above indicate that first moving is risky. Most entrepreneurs do not have a greater willingness to *knowingly* take risks than managers,²⁷ and individuals are normally risk averse.²⁸ These facts suggest that entrepreneurs may proceed with first moves because they underestimate risk. In fact, several articles suggest that entrepreneurs systematically perceive less risk in a given situation than managers do.²⁹

This article, therefore, furthers the understanding of first moving behavior by focusing on the sources of difference in entrepreneurs' risk perceptions and how underestimating risk may impact firm performance. One key influence on both the perception of risk and subsequent performance may be the cognitive heuristics used by entrepreneurs, a thesis which is explored in the next section.

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Overcoming the Risk Hurdle to Move First

Individuals often fail to carefully analyze information when making choices, and instead apply general rules of thumb, known as cognitive heuristics. In doing so, however, they often unknowingly make judgments in ways that violate the principles of probability and produce systematic errors in judgment. Research indicates that, although cognitive heuristics are prevalent in countless circumstances and exhibited by a wide variety of individuals,³⁰ situational characteristics and a person's predisposition both may affect an individual's tendency to be influenced by a given heuristic.³¹ Individuals are especially vulnerable to cognitive heuristics when faced with complex decisions, time pressure, information overload, and stress;³² the very conditions entrepreneurs usually face when making the decision to first move.

While there are dozens of cognitive heuristics that may affect risk perception, this study utilized four criteria to identify those that are most likely to arise when evaluating the decision to move first. A heuristic was included if previous literature indicated it (1) occurred when facing a novel situation, (2) reduced one's perceptions of risk, (3) arose during the evaluation stage of decision-making, and (4) played an important role in explaining entrepreneurial activity. Three heuristics fit the above criteria: representativeness, illusion of control, and overconfidence.³³

Representativeness

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Representativeness is a pervasive cognitive heuristic that may affect risk perception. Representativeness is a process where a conclusion is reached because it closely resembles the attributes of the information used for the decision. Formally stated, individuals will use the attributes of limited informational inputs to draw conclusions that match those attributes.³⁴ For example, if individuals receive favorable descriptions of a company, they may reach the conclusion that the company is profitable. Profitability is representative of favorable descriptions. Similarly, individuals may conclude their first move will succeed because they have personally observed high-performing first moves in the past.

While this form of information simplification may sometimes be justifiable, the problem arises when the reliability or predictive validity of the input information is low.³⁵ For instance, entrepreneurs may only use a small sample of examples from the population to reach a conclusion. The characteristics of the small sample, however, may not be representative of the population as a whole, because small samples are more variable, with less predictive validity, a factor many individuals fail to understand. A related instance of representativeness occurs when people are influenced by concrete information, such as verbal feedback about a proposed action, and ignore or downplay more abstract statistics relating to the whole population of actions, thereby

ignoring base rates. For example, vivid, positive feedback about a potential project from one individual may cause entrepreneurs to disregard the fact that 50% of first moves are unsuccessful.

Illusion of Control

Whereas representativeness refers to the amount (e.g., sample size) and type of information used to reach conclusions, illusion of control is related to one's belief about what causes success. Specifically, illusion of control occurs when individuals overemphasize the extent to which their skill can increase performance in situations where chance plays a large part and skill is not necessarily the deciding factor. Thus, people may underestimate the effects of chance and uncontrollable events on outcomes. Research even indicates individuals displaying this heuristic believe, in part, that their accuracy in predicting a coin toss is a function of skill and not chance. State of the accuracy in predicting a coin toss is a function of skill and not chance.

Individuals exhibiting this heuristic are likely to overestimate their skills, believing that they can perform a task better than others can. In the coin-tossing experiments referenced above, the illusion of control led subjects to believe they would be more accurate than others engaged in a similar task. Factors which affect the prevalence of the illusion of control heuristic include how people view the competence of their competition, familiarity with and involvement in the task, and perceptions of their freedom to act.³⁸

Overconfidence

A third cognitive heuristic that may be associated with first moving is overconfidence. Whereas the illusion of control refers to an overestimation of the entrepreneurs' current skills and consequently their ability to cope with *future* events, overconfidence relates to an overestimation of certainty regarding *current "facts"* (i.e., information), leading to an overestimation of the accuracy of their predictions. Overconfidence occurs when the certainty of the judgment increases but the accuracy does not. More specifically, overconfidence has been defined as the failure to know the limits of one's knowledge.³⁹

Two factors that may influence the degree to which individuals are overconfident are the amount of information gathered and the ease with which individuals can recall reasons for confidence.⁴⁰ More information and easily remembered rationale, however, may not increase the accuracy of people's judgment. If individuals receive information from highly redundant sources, for instance, they may erroneously treat each item as new and become overconfident of their conclusions. For example, assume one uses intelligence to predict job performance. After learning that a candidate has a high intelligence quotient, a potential employer also discovers the candidate received good grades in school. It would be inappropriate for the employer to

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markedly increase the certainty of their judgment because intelligence quotient and high school grades are highly correlated.

Representativeness Heuristic

All three of the heuristics discussed above may lead to first moving by decreasing entrepreneurs' perceptions of risk. Specifically, the representativeness heuristic may cause entrepreneurs to discount the possibility of losses. Entrepreneurs may examine the performance of other first moves to gather information about their own decisions. They, however, may only observe a few first movers and reach a firm conclusion from that small sample (a form of the representativeness heuristic known as the law of small numbers). If a small number of first moves is observed, entrepreneurs are less likely to notice failures, because failures are less publicized than successes. For instance, Inc. magazine reports stories of new venture successes that often include examples of successful first moves. The magazine less frequently highlights failed attempts. As sample size increases, in contrast, it becomes more probable that some failures are noticed.

The ELI example illustrates a second form of representativeness heuristic: ignoring base rates. ELI's founders were willing to invest their entire life savings, largely based on the opinion of one person in the industry. Even though they may have been aware of the losses of other first moves, they downplayed this base rate statistical information in favor of concrete and vivid feedback. Ignoring the base rates for first moves in favor of more optimistic feedback about a particular first move lowers entrepreneurs' perceptions of the risks of failure. Yet, probability theory dictates that base rates do play a part in making predictions about specific members of a class, unless the information about that member is *perfectly* predictive and reliable, a situation that is unlikely to apply to opinions about unique first moves.

H1. The tendency to use the representativeness heuristic increases a new venture's propensity to move first by lowering the entrepreneur's perceptions of a venture's riskiness.

Illusion of Control

The illusion of control heuristic can affect entrepreneurs' abilities to perceive the risks of a first move. Specifically, entrepreneurs may decide the failure of other new ventures that moved first is irrelevant when assessing whether they will succeed. Whereas the representativeness heuristic may cause entrepreneurs to be unaware of failed first moves, an illusion of control might lead entrepreneurs to treat these failures as immaterial, even if observed. To the extent that an illusion of control heuristic induces entrepreneurs to

believe their own skills are greater than those of others, the entrepreneurs may conclude that they will not fail even though others have performed poorly.

The illusion of control heuristic may have affected the founders of ELI's perception of risk. The frequent allusions to their higher level of education, as well as their use of derogatory names for others in the industry, suggest that the founders believed they had superior skills and may have, therefore, thought they would succeed where others had failed. In retrospect, one might question whether the founders had all the skills they needed. Greater industry-specific experience might have made it possible for ELI's founders to anticipate their potential customer's nervousness about new products.

The illusion of control heuristic also may increase entrepreneurs' certainty about the potential outcomes of the move. Achieving success at first moving contains a component of luck,41 a factor that ordinarily makes risk-averse individuals reluctant to act. This random component makes outcomes hard to predict. The illusion of control heuristic, however, leads entrepreneurs to emphasize their own skills and downplay the role of chance in success. As the perception of chance or luck decreases, entrepreneurs are more likely to believe that outcomes are not subject to uncontrollable forces. Thus, in their minds, entrepreneurs may not see the uncertainty inherent in moving first. For instance, ELI's management team may not have accurately perceived the role of luck, thereby reducing uncertainty. Despite the founders' belief that they could perform well, they were unlucky in that the economy entered a recession that hurt sales.

H2. The tendency to have an illusion of control increases a firm's propensity to move first by towering entrepreneur's perceptions of a venture's riskiness.

Overconfidence

Entrepreneurs who exhibit the overconfidence heuristic may have a decreased perception of the risk involved in first moving. Specifically, the overconfidence heuristic causes entrepreneurs to be too sure of their own assessments, failing to recognize the uncertainty involved in their decisions; that is, the entrepreneurs treat assumptions as facts. Although the overconfidence heuristic has been studied in many settings, 42 it has never been applied directly to first moving. It follows, however, that an overconfidence tendency may cause entrepreneurs to disregard the inherent uncertainty in first moving.

Some research specifically suggests overconfidence may decrease the perception of risk and lead entrepreneurs to act. For example, Busenitz and Barney indicate that this heuristic may be needed to overcome the hurdles typically associated with high-risk settings.⁴³ Similarly, the overconfi-

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dence of new venture founders may allow them to start a company because they fail to see the risks involved.⁴⁴ Although these studies did not explicitly examine first moving, the same logic would seem to apply.

The ELI scenario, for instance, indicates repetitive and redundant information may have had a role in generating overconfidence. Company founders continually received inputs from an industry participant who was highly supportive of their move. Yet because the same person kept providing feedback, the information may have been redundant. The founders may have increased the confidence in their predictions without increasing the accuracy. Even ELI's pessimistic prediction indicated they would all be rich, when in fact this was not the case. This suggests the founders failed to consider the full range of possible outcomes, and their proposed action was much more uncertain than they realized. Thus, overconfidence may lead to first moving through its influence on perception of uncertainty, and hence, on risk.

H3. The tendency to have an overconfidence heuristic increases a firm's propensity to move first by towering the entrepreneur's perceptions of venture's riskiness.

First Mover Performance

The above hypotheses may help explain why many ventures encounter problems when introducing products. The quality of the entrepreneurs' decision processes may affect their firm's future performance.⁴⁵ Therefore, the errors in judgment created by heuristics might explain why so many first moves fail.

Yet this leads to a paradox. The very processes that increase a firm's likelihood of moving first by decreasing risk perception may actually decrease its future performance. Furthermore, although this paradox may occur in many different risky situations, it is especially relevant in the context of entrepreneurs that move first for several reasons. First, entrepreneurs are more likely to display cognitive heuristics than managers are.⁴⁶ Second, the paradox is especially relevant because the entrepreneurs face a particularly risky situation: They are multiplying the risks of starting a new venture by the risks of first moving.⁴⁷ Furthermore, almost by definition, both new ventures and first movers may have little or no choice but to move with incomplete information and therefore may often need to utilize cognitive heuristics if they are to act.

Despite this paradox, however, many entrepreneurs are able to buck established wisdom and succeed. For example, shortly after a college instructor gave Fred Smith a poor grade on a business plan, Smith went on to build one of the most successful start-ups ever, Federal Express. Similarly, when Rupert Murdoch launched Fox and when Dave

Thomas started Wendy's, industry experts thought them foolhardy. So the question arises: Why do some entrepreneurs, deciding to first move based on what most would consider a flawed decision process, succeed?

One possible explanation is that entrepreneurs have greater insights than others do. There is, however, substantial evidence that most entrepreneurs introducing new products do not have exceptional intuition. Not only do many ventures fail, there is also almost no relationship between entrepreneurs' beliefs that their company will succeed and objective characteristics associated with venture success. Along a related line, although not exclusively discussing entrepreneurs, several other studies suggest that individuals assessing new product introductions are not unusually perceptive. Managers often introduce products that fail, 49 kill products that are likely to succeed, 50 and rely on faulty assumptions.5

Arguably a more likely explanation is that certain factors will influence whether or not the underestimation of risk will impair or even possibly enhance the performance of new ventures that first move. Consistent with the literature on new venture performance, this article focuses on characteristics of the entrepreneur, firm, and industry environment. Specifically, it proposes that entrepreneurs need a learning orientation, firms have to be flexible, and industry environments must be relatively benign if entrepreneurs are to avoid problems caused by initial misperceptions. In fact, under such conditions, initially perceiving lower levels of risk may even positively influence firm performance because it generates needed action, inspires others in the organization and leads to innovative behaviors.

Learning Orientation

The importance of learning has long been stressed in the new venture literature.⁵² Furthermore, some potential advantages of first moving are predicated on the assumption that entrepreneurs will learn as they proceed. For example, it is believed that some first movers can achieve lower costs than others because they will get a head start on learning how to produce the product more efficiently.⁵³

Logic suggests that learning is especially crucial to success if one starts out with misperceptions, as is the case with entrepreneurs who underestimate the risk inherent in first moving and form erroneous conclusions regarding the product, market, or technology because of heuristics. Left unchecked, these errors could lead to venture failure. However, as individuals learn, they give a different interpretation to existing information and, thereby, may correct erroneous perceptions.⁵⁴ In fact, Maidique and Zirger's article⁵⁵ on product development suggests that managers gain success by first making mistakes and then learning from them. Underestimating risk may be a necessary part of the

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process because it gives birth to action that generates the feedback needed to start the learning process.⁵⁶

H4. Underestimating risk will enhance the performance of entrepreneurs who first move if they have a learning orientation, and decrease the performance of entrepreneurs who first move if they do not have a learning orientation.

Flexibility

Entrepreneurs may need more than learning, however, to enhance their performance when first moving. Their firms must also act on their knowledge. Change is a way of life for new ventures; they frequently modify a multitude of factors including the composition of team members, the mix of products, the prices of products, and firm strategies. Thus, it is crucial for ventures to remain flexible. In fact, flexibility may be particularly important to first movers, as they are in a dynamic environment.⁵⁷ Furthermore, a major factor hindering product introductions is that managers are not flexible enough.⁵⁸

Flexibility may be especially important to entrepreneurs who initially underestimate the riskiness of first moving because it allows them to take action to decrease the risk once they realize the precariousness of their situation.59 This is consistent with the findings of several authors that indicate flexibility may be needed to compensate for early mistakes. For example, Thomke⁶⁰ found that flexibility plays an especially crucial role in achieving success when managers have not formed, or perhaps cannot form, early plans, or when they fail to conduct rigorous market research. Some even suggest that early in the product introduction process, first movers should not even try to comprehensively gather information because their environment is unknowable and speed is of the utmost importance if they are to move before the competition.61 Thus, cognitive heuristics and lowered risk perception may be needed to provide entrepreneurs with the courage and nimbleness to move quickly, while flexibility is needed so that they can adapt later.

H5. Underestimating risk will enhance the performance of entrepreneurs who first move if their companies are flexible, and decrease the performance of entrepreneurs who first move if their companies are not flexible.

Industry Benevolence

Hypotheses 4 and 5 are premised on a major assumption: Entrepreneurs will have time to learn and to make the needed changes. In part, the amount of time they will have is based on the speed and aggressiveness of competitors' responses. In a benevolent industry, competitors are less aggressive and slower to react, suggesting that entrepreneurs introducing new products in this environment will have a chance to fix the mistakes caused by underestimating risk and exhibiting heuristics. The time element may be especially important given that conclusions generated by heuristics often persevere.⁶²

There is some empirical support suggesting that a benevolent environment may allow managers the time to correct early misperceptions. For example, Tsai et al. 63 found that innovation in a hostile environment decreases firm performance. Similarly, Atuahene-gima's 64 finding that the less hostile the industry, the less the need for an early focus on market needs further indicates that managers in benevolent environments do not have to be one hundred percent accurate at the start, but instead can learn about the market over time.

H6. Underestimating risk will enhance the performance of entrepreneurs who first move if their companies are in benevolent environments, and decrease the performance of entrepreneurs who first move if their companies are in hostile environments.

Managerial Implications and Future Research Directions

There are several implications of the proposed model. If, as suggested, entrepreneurs underestimate the risks of first moves, they may need to develop a learning orientation, promote a flexible organization and enter more benevolent environments. More specifically, in order to constantly learn and exhibit the needed flexibility, entrepreneurs should observe the following process when they pioneer products.65 First, they need to clearly identify the assumptions that are most critical to the success of the first move. Then, through the trial and error process that occurs during the product introduction, entrepreneurs need to gather feedback that allows them to examine the validity of their assumptions. As their assumptions are modified, they must have the flexibility to adjust their actions accordingly. In other words, entrepreneurs should not only act in order to achieve short-term gains, but they should be as concerned with generating useful feedback to learn which of their beliefs are true and which are erroneous.

Entrepreneurs may also need to enter environments that they believe are relatively benevolent. Of course, this is difficult to discern a priori considering that first movers, by definition, are entering a new market category about which little is known. There are, however, many strategic tools that provide general insights regarding the potential benevolence of the environment. For example, the Five Force Model can be used to describe the level of competitive rival-

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ry in the general industry that the first mover is entering.⁶⁶ Mitchell's⁶⁷ findings suggest that incumbent firms are more likely to retaliate if the incumbents' core products are threatened or if incumbents possess industry-specific supporting assets that may also provide useful information. Entrepreneurs can examine likely competitors in light of these findings to help determine if their first move will face a benevolent environment.

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Of course, even though learning, flexibility, and entering a benevolent environment all may improve the performance of first movers who initially underestimate risk, entrepreneurs should not always proceed with a first move. Sometimes the risks are simply too high, in which case they may want to minimize their heuristics so that they can make better judgments at the outset of the venture. It is, however, extremely difficult for entrepreneurs to eliminate heuristics from their decision processes. In fact, individuals are often unaware that their decision making was flawed.⁶⁸ Thus, modifying group decision-making processes may hold the key to coping with individual-level heuristics.⁶⁹

Specifically, entrepreneurs should pay careful attention to the reliability and predictive validity of their information to avoid the representativeness heuristic. Had ELI's management collectively questioned how much any one industry participant could know, they may have proceeded with greater care. The next heuristic, the illusion of control, may be minimized if the group carefully examines the relevance and extent of the entrepreneur's skill. More rigorous inquiry may have led to a more accurate assessment of the relevance of the founders of ELI's skills, the extent that the situation was controllable, and which gaps in knowledge needed to be filled.

To surmount overconfidence, the entrepreneurs' faith in their knowledge can be compared against more objective forms of information. For example, if ELI founders compared their projected returns with the actual performance of other companies who moved first, they may have realized that their range of projected outcomes was far too narrow. All of the safeguards above could be institutionalized through group decision-making techniques, such as devil's advocacy, or dialectical inquiry. Collectively, these procedures may limit the use of heuristics in decision making.

As the above discussion suggests, entrepreneurs must maintain a fine balance between "going for it," even though they may have inaccurate perceptions, and trying to carefully assess a situation at its outset. While this article indicates that a middle ground should be reached, future research needs to determine exactly when entrepreneurs should and should not strive to increase the accuracy of their perceptions by minimizing their use of heuristics. This article is meant to serve as a building block in understanding the relationship among heuristics, risk-taking, and performance, not an ultimate answer. Scholars need to empirically test the relationships posed in this study and to incorporate other heuristics and moderators into the model.

The above notwithstanding, this article provides some insights regarding the way in which entrepreneurs overcome one major first moving hurdle—risk. It suggests that entrepreneurs who employ three cognitive heuristics may have a lower risk perception and therefore proceed with a first move. It then emphasizes the importance of learning from early mistakes, acting on that knowledge, and having the time to make corrections.

Endnotes

- 1. The name of the venture, the industry, and the countries involved have been changed. All other information is accurately presented. The example is not meant to be treated as empirical evidence. It is included in order to clarify points and to increase the readability of the theoretical concepts discussed in this article.
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- 18. Simon, Houghton, and Aquino, "Cognitive Biases, Risk Perception, and Venture Formation: How Individuals Decide to Start Companies."
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- 23. Golder and Tellis, "Pioneer Advantage: Marketing Logic or Marketing Legend?"
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