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THE ENTREPRENEURIAL PERSPECTIVE

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ENTREPRENEURSHIP AND THE ENTREPRENEURIAL MIND-SET

LEARNING OBJECTIVES

1

To introduce the concept of entrepreneurship and explain the process of entrepreneurial action.

2

To describe how structural similarities enable entrepreneurs to make creative mental leaps.

3

To highlight bricolage as a source of entrepreneurs' resourcefulness.

4

To introduce effectuation as a way expert entrepreneurs sometimes think.

5

To develop the notion that entrepreneurs cognitively adapt.

6

To introduce sustainable entrepreneurship as a means of sustaining the natural environment and communities and developing gains for others.

OPENING PROFILE

EWING MARION KAUFFMAN

Born on a farm in Garden City, Missouri, Ewing Marion Kauffman moved to Kansas City with his family when he was eight years old. A critical event in his life occurred several years later when Kauffman was diagnosed with a leakage of the heart. His prescription was one year of complete bed rest; he was not even allowed to sit up.

www.kauffman.org Kauffman's mother, a college graduate, came up with a solution to keep the active 11-year-old boy lying in bed—reading. According to Kauffman, he “sure read! Because nothing else would do, I read as many as 40 to 50 books every month. When you read that much, you read anything. So I read the biographies of all the presidents, the frontiersmen, and I read the Bible twice and that's pretty rough reading.”

Another important early childhood experience centered on door-to-door sales. Since his family did not have a lot of money, Kauffman would sell 36 dozen eggs collected from the farm or fish he and his father had caught, cleaned, and dressed. His mother was very encouraging during these formative school years, telling young Ewing each day, “There may be some who have more money in their pockets, but Ewing, there is nobody better than you.”

During his youth, Kauffman worked as a laundry delivery person and was a Boy Scout. In addition to passing all the requirements to become an Eagle Scout and a Sea Scout, he sold twice as many tickets to the Boy Scout Roundup as anyone else in Kansas City, an accomplishment that enabled him to attend, for free, a two-week scout summer camp that his parents would not otherwise have been able to afford. According to Kauffman, “This experience gave me some of the sales techniques which came into play when subsequently I went into the pharmaceutical business.”

Kauffman went to junior college from 8 to 12 in the morning and then walked two miles to the laundry where he worked until 7 p.m. Upon graduation, he went to work at the laundry full time for Mr. R. A. Long, who would eventually become one of his role models. His job as route foreman involved managing 18 to 20 route drivers, where he would set up sales contests, such as challenging the other drivers to get more customers on a particular route than he could obtain. Ewing says, “I got practice in selling and that proved to be beneficial later in life.” R. A. Long made money not only at the

laundry business but also on patents, one of which was a form fit for the collar of a shirt that would hold the shape of the shirt. He showed his young protégé that one could make money with brains as well as brawn. Kauffman commented, “He was quite a man and had quite an influence on my life.”

Kauffman’s sales ability was also useful during his stint in the Navy, which he joined shortly after Pearl Harbor on January 11, 1942. When designated as an apprentice seaman, a position that paid \$21 per month, he responded, “I’m better than an apprentice seaman, because I have been a Sea Scout. I’ve sailed ships and I’ve ridden in whale boats.” His selling ability convinced the Navy that he should instead start as a seaman first class, with a \$54 monthly salary. Kauffman was assigned to the admiral’s staff, where he became an outstanding signalman (a seaman who transmitted messages from ship to ship), in part because he was able to read messages better than anyone else due to his previous intensive reading. With his admiral’s encouragement, Kauffman took a correspondence navigator’s course and was given a deck commission and made a navigation officer.

After the war was over in 1947, Ewing Kauffman began his career as a pharmaceutical salesperson after performing better on an aptitude test than 50 other applicants. The job involved selling supplies of vitamin and liver shots to doctors. Working on straight commission, without expenses or benefits, he was earning pay higher than the president’s salary by the end of the second year; the president promptly cut the commission. Eventually, when Kauffman was made Midwest sales manager, he made 3 percent of everything his salespeople sold and continued to make more money than the president. When his territory was cut, he eventually quit and in 1950 started his own company—Marion Laboratories. (Marion is his middle name.)

When reflecting on founding the new company, Ewing Kauffman commented, “It was easier than it sounds because I had doctors whom I had been selling office supplies to for several years. Before I made the break, I went to three of them and said, ‘I’m thinking of starting my own company. May I count on you to give me your orders if I can give you the same quality and service?’ These three were my biggest accounts and each one of them agreed because they liked me and were happy to do business with me.”

Marion Laboratories started by marketing injectable products that were manufactured by another company under Marion’s label. The company expanded to other accounts and other products and then developed its first prescription item, Vicam, a vitamin product. The second pharmaceutical product it developed, oyster shell calcium, also sold well.

To expand the company, Kauffman borrowed \$5,000 from the Commerce Trust Company. He repaid the loan, and the company continued to grow. After several years, outside investors could buy \$1,000 worth of common stock if they loaned the company \$1,000 to be paid back in five years at \$1,250, without any intermittent interest. This initial \$1,000 investment, if held until 1993, would have been worth \$21 million.

Marion Laboratories continued to grow and reached over \$1 billion per year in sales, due primarily to the relationship between Ewing Kauffman and the people in

the company, who were called associates, not employees. "They are all stockholders, they build this company, and they mean so much to us," said Kauffman. The concept of associates was also a part of the two basic philosophies of the company: Those who produce should share in the results or profits, and treat others as you would like to be treated.

The company went public through Smith Barney on August 16, 1965, at \$21 per share. The stock jumped to \$28 per share immediately and has never dropped below that level, sometimes selling at a 50 to 60 price/earnings multiple. The associates of the company were offered a profit-sharing plan, where each could own stock in the company. In 1968 Kauffman brought Major League Baseball back to Kansas City by purchasing the Kansas City Royals. This boosted the city's economic base, community profile, and civic pride. When Marion Laboratories merged with Merrill Dow in 1989, there were 3,400 associates, 300 of whom became millionaires as a result of the merger. The new company, Marion Merrill Dow, Inc., grew to 9,000 associates and sales of \$4 billion in 1998 when it was acquired by Hoechst, a European pharmaceutical company. Hoechst Marion Roussel became a world leader in pharmaceutical-based health care involved in the discovery, development, manufacture, and sale of pharmaceutical products. In late 1999 the company was again merged with Aventis Pharma, a global pharmaceutical company focusing on human medicines (prescription pharmaceuticals and vaccines) and animal health. In 2002, Aventis's sales reached \$16.634 billion, an increase of 11.6 percent from 2001, while earnings per share grew 27 percent from the previous year.

Ewing Marion Kauffman was an entrepreneur, a Major League Baseball team owner, and a philanthropist who believed his success was a direct result of one fundamental philosophy: Treat others as you would like to be treated. "It is the happiest principle by which to live and the most intelligent principle by which to do business and make money," he said.

Ewing Marion Kauffman's philosophies of associates, rewarding those who produce, and allowing decision making throughout the organization are the fundamental concepts underlying what is now called *corporate entrepreneurship* in a company. He went even further and illustrated his belief in entrepreneurship and the spirit of giving back when he established the Kauffman Foundation, which supports programs in two areas: youth development and entrepreneurship. Truly a remarkable entrepreneur, Mr. K, as he was affectionately called by his employees, will now produce many more successful "associate entrepreneurs."

Like Ewing Marion Kauffman, many other entrepreneurs and future entrepreneurs frequently ask themselves, "Am I really an entrepreneur? Do I have what it takes to be a success? Do I have sufficient background and experience to start and manage a new venture?" As enticing as the thought of starting and owning a business may be, the problems and pitfalls inherent to the process are as legendary as the success stories. The fact remains that more new business ventures fail than succeed. To be one of the few successful entrepreneurs requires more than just hard work and luck. It requires the ability to think in an environment of high uncertainty, be flexible, and learn from one's failures.

THE NATURE OF ENTREPRENEURSHIP

Entrepreneurship plays an important role in the creation and growth of businesses, as well as in the growth and prosperity of regions and nations. These large-scale outcomes can have quite humble beginnings; entrepreneurial actions begin at the nexus of a lucrative opportunity and an enterprising individual.¹ *Entrepreneurial opportunities* are “those situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their cost of production.”² For example, an entrepreneurial opportunity could stem from introducing an existing technological product used in one market to create a new market. Alternatively, an entrepreneurial opportunity could be creating a new technological product for an existing market or creating both a new product/service and a new market. The recurring theme is that an entrepreneurial opportunity represents something new. However, such possibilities require an enterprising individual or a group of enterprising individuals to recognize, evaluate, and exploit these situations as possible opportunities. Therefore, entrepreneurship requires action—*entrepreneurial action* through the creation of new products/processes and/or the entry into new markets, which may occur through a newly created organization or within an established organization.

Entrepreneurs act on what they believe is an opportunity. Because opportunities exist in (or create and/or generate) high uncertainty, entrepreneurs must use their judgment about whether or not to act. However, doubt can undermine entrepreneurial action. Therefore, a key to understanding entrepreneurial action is being able to assess the amount of uncertainty perceived to surround a potential opportunity and the individual’s willingness to bear that uncertainty. The individual’s prior knowledge can decrease the amount of uncertainty, and his or her motivation indicates a willingness to bear uncertainty.

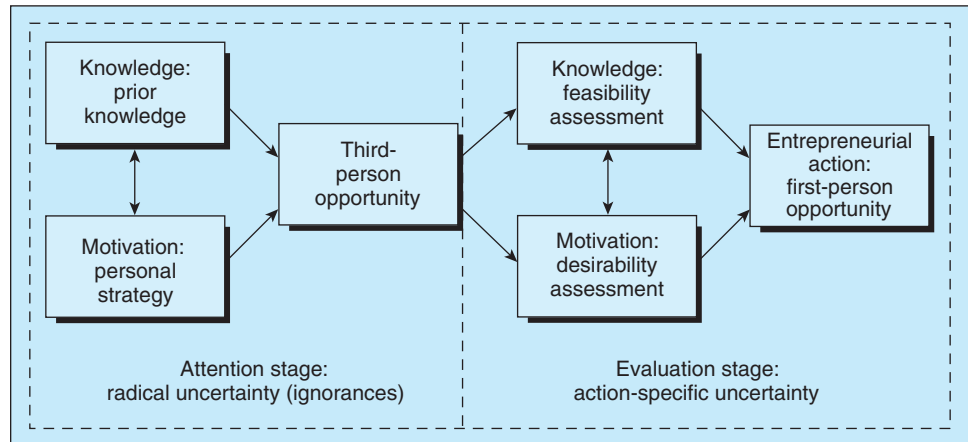
As illustrated in Figure 1.1, the McMullen-Shepherd model explains how knowledge and motivation influence two stages of entrepreneurial action. Signals of changes in the environment that represent possible opportunities will be noticed by some individuals but not others. Individuals with knowledge of markets and/or technology are more capable of detecting changes in the external environment, and if they are also motivated, they will allocate further attention to processing this information. Others, however, will remain ignorant of the possibility. The result of Stage 1 is an individual’s realization that an opportunity exists for someone. The individual then needs to determine whether it represents an opportunity for him or her (Stage 2). This involves assessing whether it is feasible to successfully exploit the opportunity given one’s knowledge and whether it is desirable given one’s motivation. In other words, does this opportunity for someone (third-person opportunity belief) represent an opportunity for me (first-person opportunity belief)? If the individual overcomes enough doubt to form (1) the belief that the situation represents an opportunity for someone in general, and then (2) the belief that the opportunity for someone is an opportunity for himself or herself personally, this individual may act.

Therefore, to be an entrepreneur is to act on the possibility that one has identified an opportunity worth pursuing.³ It involves *entrepreneurial thinking*—individuals’ mental processes of overcoming ignorance to decide whether a signal represents an opportunity for someone and/or reducing doubt as to whether an opportunity for someone is also an opportunity for them specifically, and/or processing feedback from action steps taken. To explain these processes more fully, we now turn to different forms of entrepreneurial thinking.

entrepreneurial opportunities Those situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their cost of production

entrepreneurial action Action through the creation of new products/processes and/or the entry into new markets, which may occur through a newly created organization or within an established organization

entrepreneurial thinking Individuals’ mental processes of overcoming ignorance to decide whether a signal represents an opportunity for someone and/or reducing doubt as to whether an opportunity for someone is also an opportunity for them specifically, and/or processing feedback from action steps taken

FIGURE 1.1 Entrepreneurial Action

Reprinted with permission from McMullen, J. and Shepherd, D. A. (2006). Entrepreneurial Action and the Role of Uncertainty in the Theory of the Entrepreneur. *Academy of Management Review*. 31: 132–142.

HOW ENTREPRENEURS THINK

Entrepreneurs think differently from nonentrepreneurs. Moreover, an entrepreneur in a particular situation may think differently from when faced with some other task or decision environment. Entrepreneurs must often make decisions in highly uncertain environments where the stakes are high, time pressures are immense, and there is considerable emotional investment. We all think differently in these strained environments than we do when the nature of a problem is well understood and we have time and rational procedures at hand to solve it. Given the nature of an entrepreneur’s decision-making environment, he or she must sometimes (1) think structurally, (2) engage in bricolage, (3) effectuate, and (4) cognitively adapt.

Think Structurally

Forming opportunity beliefs often requires creative mental leaps. These creative mental leaps are launched from a source—one’s existing knowledge. In the case of entrepreneurial opportunities, an example of a creative mental leap is from knowledge about existing markets to a new technology that could lead to products/services that satisfy that market. Alternatively, the creative mental leap could be from knowledge about a technology to a new market that could benefit from its introduction. Making these connections between a new product (or new service, new business model, or new technology) and a target market where it can be introduced is aided by the superficial and structural similarities between the source (e.g., the market) and the destination (e.g., technology). *Superficial similarities* exist when the basic (relatively easy to observe) elements of the technology resemble (match) the basic (relatively easy to observe) elements of the market. In contrast, *structural similarities* exist when the underlying mechanisms of the technology resemble (or match) the underlying mechanisms of the market. The entrepreneurial challenge often lies in making creative mental leaps based on *structural* similarities. This is best illustrated with an example based on a real case that Denis Gregoire from Syracuse University and me (Dean Shepherd from Indiana University) used as part of a study of entrepreneurial thinking.⁴

superficial similarities

Exist when the basic (relatively easy to observe) elements of the technology resemble (match) the basic (relatively easy to observe) elements of the market

structural similarities

Exist when the underlying mechanisms of the technology resemble (or match) the underlying mechanisms of the market

The example is a technology developed by space and computer engineers at NASA's Langley Research Center. It involves big and bulky flight simulators used by space shuttle pilots. As such, the technology's superficial elements are very similar to a market for airline pilots training in flight simulators. In contrast, it has little superficial similarity with a target market of K–12 school children and their parents. The technology underlying the superficial situations includes attaching sensors to individuals' forefingers to monitor the electric conductivity of their skin to send signals to computer processors in another machine with which the individual interacts. Ultimately, these one-to-one relationships (skin to sensor and sensor to computer) culminate into a network of higher order relationships that reflect the overall capabilities of the technology, its aims, and/or its uses. Therefore, the technology is capable of helping shuttle pilots (or airline pilots, or teenage drivers) improve their abilities to focus, pay attention, and concentrate for an extended period. Looked at in a new light, however, the technology shares high levels of structural similarities with the target market of parents who seek nonpharmaceutical alternatives to treat attention deficit (ADHD). This opportunity to apply the technology to the market of parents seeking nonpharmaceutical alternatives to treat ADHD was not obvious to individuals who were distracted from the deeper structural similarities by the superficial mismatch between the technology and the new market.

Thus, individuals who can see or create structural matches between a technology and a target market, especially in the presence of superficial mismatches, are more likely to recognize entrepreneurial opportunities. Knowledge specific to a technology and/or a market can facilitate this ability,⁵ and the good news is that this skill can also be enhanced through practice and training.

Bricolage

Entrepreneurs often lack resources. As a result, they either seek resources from others to provide the “slack” necessary to experiment and generate entrepreneurial opportunities, or they engage in bricolage. By *bricolage* we mean that some entrepreneurs make “do by applying combinations of the resources at hand to new problems and opportunities.”⁶ This involves taking existing resources (those at hand) and experimenting, tinkering, repackaging, and/or reframing them so they can be used in a way for which they were not originally designed or conceived.⁷ From this process of “making do,” entrepreneurs can create opportunities. Baker and Nelson (2005: 341–42) offer the following example of bricolage.

Tim Grayson was a farmer whose land was crisscrossed by abandoned coal mines. He knew that the tunnels—a nuisance to farmers because of their tendency to collapse, causing mammoth sinkholes in fields—also contained large quantities of methane. Methane is another nuisance, a toxic greenhouse gas that poisons miners and persists in abandoned mines for generations. Grayson and a partner drilled a hole from Grayson's property to an abandoned mine shaft, then acquired a used diesel generator from a local factory and crudely retrofitted it to burn methane. During the conversion process, Grayson was repeatedly blown off his feet when the odorless, colorless gas exploded. His bricolage produced electricity, most of which he sold to the local utility company using scavenged switchgear. Because Grayson's generator also produced considerable waste heat, he built a greenhouse for hydroponic tomatoes, which he heated with water from the generator's cooling system. He also used electricity generated during off-peak hours to power special lamps to speed plant growth. With the availability of a greenhouse full of trenches of nutrient-rich water that were heated “for free,” Grayson realized he might be able to raise tilapia, a tropical delicacy increasingly popular in the United States. He introduced the fish to the waters that bathed the tomato roots and used the fish waste as fertilizer. Finally, with abundant methane still at hand, Tim began selling excess methane to a natural gas company. As you can

bricolage Entrepreneurs making do by applying combinations of the resources at hand to new problems and opportunities

see from this example, bricolage is a resourceful way of thinking and behaving that represents an important source of entrepreneurial opportunities.

Effectuation

As potential business leaders you are trained to think rationally and perhaps admonished if you do not. This admonishment might be appropriate given the nature of the task, but it appears that there is an alternate way of thinking that entrepreneurs sometimes use, especially when thinking about opportunities. Professor Saras Sarasvathy (from Darden, University of Virginia) has found that entrepreneurs do not always think through a problem in a way that starts with a desired outcome and focuses on the means to generate that outcome. Such a process is referred to as a *causal process*. But, entrepreneurs sometimes use an *effectuation process*, which means they take what they have (who they are, what they know, and whom they know) and select among possible outcomes. Professor Saras is a great cook, so it is not surprising that her examples of these thought processes revolve around cooking.

causal process A process that starts with a desired outcome and focuses on the means to generate that outcome

effectuation process A process that starts with what one has (who they are, what they know, and whom they know) and selects among possible outcomes

Imagine a chef assigned the task of cooking dinner. There are two ways the task can be organized. In the first, the host or client picks out a menu in advance. All the chef needs to do is list the ingredients needed, shop for them, and then actually cook the meal. This is a process of causation. It begins with a given menu and focuses on selecting between effective ways to prepare the meal.

In the second case, the host asks the chef to look through the cupboards in the kitchen for possible ingredients and utensils and then cook a meal. Here, the chef has to imagine possible menus based on the given ingredients and utensils, select the menu, and then prepare the meal. This is a process of effectuation. It begins with given ingredients and utensils and focuses on preparing one of many possible desirable meals with them.⁸

Sarasvathy's Thought Experiment #1: Curry in a Hurry

In this example I [Sarasvathy] trace the process for building an imaginary Indian restaurant, "Curry in a Hurry." Two cases, one using causation and the other effectuation, are examined. For the purposes of this illustration, the example chosen is a typical causation process that underlies many economic theories today—theories in which it is argued that artifacts such as firms are inevitable outcomes, given the preference orderings of economic actors and certain simple assumptions of rationality (implying causal reasoning) in their choice behavior. The causation process used in the example here is typified by and embodied in the procedures stated by Philip Kotler in his *Marketing Management* (1991: 63, 263), a book that in its many editions is considered a classic and is widely used as a textbook in MBA programs around the world.

Kotler defines a market as follows: "A market consists of all the potential customers sharing a particular need or want who might be willing and able to engage in exchange to satisfy that need or want" (1991: 63). Given a product or a service, Kotler suggests the following procedure for bringing the product/service to market (note that Kotler assumes the market exists):

1. Analyze long-run opportunities in the market.
2. Research and select target markets.
3. Identify segmentation variables and segment the market.
4. Develop profiles of resulting segments.
5. Evaluate the attractiveness of each segment.
6. Select the target segment(s).
7. Identify possible positioning concepts for each target segment.
8. Select, develop, and communicate the chosen positioning concept.
9. Design marketing strategies.

10. Plan marketing programs.
11. Organize, implement, and control marketing effort.

This process is commonly known in marketing as the STP—segmentation, targeting, and positioning—process.

Curry in a Hurry is a restaurant with a new twist—say, an Indian restaurant with a fast food section. The current paradigm using causation processes indicates that, to implement this idea, the entrepreneur should start with a universe of all potential customers. Let us imagine that she wants to build her restaurant in Pittsburgh, Pennsylvania, USA, which will then become the initial universe or market for Curry in a Hurry. Assuming that the percentage of the population of Pittsburgh that totally abhors Indian food is negligible, the entrepreneur can start the STP process.

Several relevant segmentation variables, such as demographics, residential neighborhoods, ethnic origin, marital status, income level, and patterns of eating out, could be used. On the basis of these, the entrepreneur could send out questionnaires to selected neighborhoods and organize focus groups at, say, the two major universities in Pittsburgh. Analyzing responses to the questionnaires and focus groups, she could arrive at a target segment—for example, wealthy families, both Indian and others, who eat out at least twice a week. That would help her determine her menu choices, decor, hours, and other operational details. She could then design marketing and sales campaigns to induce her target segment to try her restaurant. She could also visit other Indian and fast food restaurants and find some method of surveying them and then develop plausible demand forecasts for her planned restaurant.

In any case, the process would involve considerable amounts of time and analytical effort. It would also require resources both for research and, thereafter, for implementing the marketing strategies. In summary, the current paradigm suggests that we proceed inward to specifics from a larger, general universe—that is, to an optimal target segment from a predetermined market. In terms of Curry in a Hurry, this could mean something like a progression from the entire city of Pittsburgh to Fox Chapel (an affluent residential neighborhood) to the Joneses (specific customer profile of a wealthy family), as it were.

Instead, if our imaginary entrepreneur were to use processes of effectuation to build her restaurant, she would have to proceed in the opposite direction (note that effectuation is suggested here as a viable and descriptively valid alternative to the STP process—not as a normatively superior one). For example, instead of starting with the assumption of an existing market and investing money and other resources to design the best possible restaurant for the given market, she would begin by examining the particular set of means or causes available to her. Assuming she has extremely limited monetary resources—say \$20,000—she should think creatively to bring the idea to market with as close to zero resources as possible. She could do this by convincing an established restaurateur to become a strategic partner or by doing just enough market research to convince a financier to invest the money needed to start the restaurant. Another method of effectuation would be to convince a local Indian restaurant or a local fast food restaurant to allow her to put up a counter where she would actually sell a selection of Indian fast food. Selecting a menu and honing other such details would be seat-of-the-pants and tentative, perhaps a process of satisficing.⁹

Several other courses of effectuation can be imagined. Perhaps the course the entrepreneur actually pursues is to contact one or two of her friends or relatives who work downtown and bring them and their office colleagues some of her food to taste. If the people in the office like her food, she might get a lunch delivery service going. Over time, she might develop enough of a customer base to start a restaurant or else, after a few weeks of trying to build the lunch business, she might discover that the people who said they enjoyed her food did not really enjoy it so much as they did her quirky personality and conversation, particularly her rather unusual life perceptions. Our imaginary entrepreneur might now decide to give up the lunch business and start writing a book, going on the lecture circuit and eventually building a business in the motivational consulting industry!

Given the exact same starting point—but with a different set of contingencies—the entrepreneur might end up building one of a variety of businesses. To take a quick tour of some possibilities, consider the following: Whoever first buys the food from our imaginary Curry in

a Hurry entrepreneur becomes, by definition, the first target customer. By continually listening to the customer and building an ever-increasing network of customers and strategic partners, the entrepreneur can then identify a workable segment profile. For example, if the first customers who actually buy the food and come back for more are working women of varied ethnic origin, this becomes her target segment. Depending on what the first customer really wants, she can start defining her market. If the customer is really interested in the food, the entrepreneur can start targeting all working women in the geographic location, or she can think in terms of locating more outlets in areas with working women of similar profiles—a “Women in a Hurry” franchise?

Or, if the customer is interested primarily in the idea of ethnic or exotic entertainment, rather than merely in food, the entrepreneur might develop other products, such as catering services, party planning, and so on—“Curry Favors”? Perhaps, if the customers buy food from her because they actually enjoy learning about new cultures, she might offer lectures and classes, maybe beginning with Indian cooking and moving on to cultural aspects, including concerts and ancient history and philosophy, and the profound idea that food is a vehicle of cultural exploration—“School of Curry”? Or maybe what really interests them is theme tours and other travel options to India and the Far East—“Curryland Travels”?

In a nutshell, in using effectuation processes to build her firm, the entrepreneur can build several different types of firms in completely disparate industries. This means that the original idea (or set of causes) does not imply any one single strategic universe for the firm (or effect). Instead, the process of effectuation allows the entrepreneur to create one or more several possible effects irrespective of the generalized end goal with which she started. The process not only enables the realization of several possible effects (although generally one or only a few are actually realized in the implementation) but it also allows a decision maker to change his or her goals and even to shape and construct them over time, making use of contingencies as they arise.¹⁰

Our use of direct quotes from Sarasvathy on effectuation is not to make the case that it is superior to thought processes that involve causation; rather, it represents a way that entrepreneurs sometimes think. Effectuation helps entrepreneurs think in an environment of high uncertainty. Indeed organizations today operate in complex and dynamic environments that are increasingly characterized by rapid, substantial, and discontinuous change.¹¹ Given the nature of this type of environment, most managers of firms need to take on an entrepreneurial mind-set so that their firms can successfully adapt to environmental changes.¹² This *entrepreneurial mind-set* involves the ability to rapidly sense, act, and mobilize, even under uncertain conditions.¹³ In developing an entrepreneurial mind-set, individuals must attempt to make sense of opportunities in the context of changing goals, constantly questioning the “dominant logic” in the context of a changing environment and revisiting “deceptively simple questions” about what is thought to be true about markets and the firm. For example, effective entrepreneurs are thought to continuously “rethink current strategic actions, organization structure, communications systems, corporate culture, asset deployment, investment strategies, in short every aspect of a firm’s operation and long-term health.”¹⁴

To be good at these tasks individuals must develop a *cognitive adaptability*. Mike Haynie, a retired major of the U.S. Air Force and now professor at Syracuse University, and me (Dean Shepherd from Indiana University) have developed a number of models of cognitive adaptability and a survey for capturing it, to which we now turn.¹⁵

Cognitive Adaptability

Cognitive adaptability describes the extent to which entrepreneurs are dynamic, flexible, self-regulating, and engaged in the process of generating multiple decision frameworks focused on sensing and processing changes in their environments and then acting on them. Decision frameworks are organized on knowledge about people and situations that are used to help someone make sense of what is going on.¹⁶ Cognitive adaptability is

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AS SEEN IN *ENTREPRENEUR* MAGAZINE

WHAT ME WORRY? HOW SMART ENTREPRENEURS HARNESS THE POWER OF PARANOIA

Depending on whom you're talking to, paranoia is: (1) a psychotic disorder characterized by delusions of persecution, (2) an irrational distrust of others, or (3) a key trait in entrepreneurial success.

Sound crazy? Not according to Andrew S. Grove, president and CEO of Intel Corp. in Santa Clara, California, and author of *Only the Paranoid Survive* (Doubleday/Currency). The title of Grove's book comes from an oft-repeated quote that has become the mantra of the chip king's rise to the top of the technology business.

"I have no idea when I first said this," Grove writes, "but the fact remains that, when it comes to business, I believe in the value of paranoia." To those who suffer from clinical delusions of persecution, of course, paranoia is neither a joke nor a help. However, in a business context, the practice of voluntarily being highly concerned about potential threats to your company has something of a following.

"If you're not a little bit paranoid, you're complacent," says Dave Lakhani, an entrepreneur in Boise, Idaho, who offers marketing consulting to small businesses. "And complacency is what leads people into missed opportunities and business failure."

PICK YOUR PARANOIA

Being paranoid, according to Grove, is a matter of remembering that others want the success you have, paying attention to the details of your business, and watching for the trouble that inevitably awaits. That basically means he is paranoid about everything. "I worry about products getting screwed up, and I worry about products getting introduced prematurely," Grove writes. "I worry about factories not performing well, and I worry about having too many factories."

For Grove, as for most advocates of paranoia, being paranoid primarily consists of two things. The first is not resting on your laurels. Grove calls it a "guardian attitude" that he attempts to nurture in himself and in Intel's employees to fend off threats from outside the company. Paranoia in business is also typically defined as paying very close attention to the fine points. "You need to be detail-oriented about the most important things in your business," says Lakhani. "That means not only making sure

you're working in your business but that you're there every day, paying attention to your customers."

As an example of paranoia's value in practice, Lakhani recalls when sales began slowly slumping at a retail store he once owned. He could have dismissed it as a mere blip. Instead, he worried and watched until he spotted a concrete cause. "It turned out one of my employees had developed a negative attitude, and it was affecting my business," Lakhani says. "As soon as I let him go, sales went back up."

The main focuses of most entrepreneurs' paranoia, however, are not so much everyday internal details as major competitive threats and missed opportunities. Situations in which competition and opportunity are both at high levels are called "strategic inflection points" by Grove, and it is during these times, typically when technology is changing, that his paranoia is sharpest.

Paranoia is frequently a welcome presence at major client presentations for Katharine Paine, founder and CEO of The Delahaye Group Inc. In the past, twinges of seemingly unfounded worry have caused Paine to personally attend sales pitches where she learned of serious problems with the way her firm was doing business, she says. The head of the 50-person Portsmouth, New Hampshire, marketing evaluation research firm traces her paranoid style to childhood days spent pretending to be an Indian tracking quarry through the forest. When she makes mental checklists about things that could go wrong or opportunities that could be missed, she's always keeping an eye out for the business equivalent of a bent twig. "If you are paranoid enough, if you're good enough at picking up all those clues, you don't have to just react," says Paine, "you get to proact and be slightly ahead of the curve."

PARANOID PARAMETERS

There is, of course, such a thing as being too paranoid. "There are times when it doesn't make any sense," acknowledges Lakhani. Focusing on details to the point of spending \$500 in accounting fees to find a \$5 error is one example of misplaced paranoia. Worrying obsessively about what every competitor is doing or what every potential customer is thinking is also a warning sign, he says. Lack of balance with

interests outside the business may be another. “If your whole life is focused around your work, and that’s the only thing you’re thinking about 24 hours a day, that becomes detrimental,” Lakhani says.

For Paine, failing to act is a sign that you’re going past beneficial paranoia and into hurtful fear. “Fear for most of us results in inaction—absolute death for an entrepreneur,” she says. “If we feared the loss of a paycheck or feared entering a new market, none of our businesses would have gotten off the ground.”

All this may be especially true for small-business owners. While paranoia may be appropriate for heads of far-flung enterprises, some say entrepreneurs are already too paranoid. It’s all too easy for entrepreneurs to take their desire for independence and self-determination and turn it into trouble, says Robert Barbato, director of the Small Business Institute at the Rochester Institute of Technology in Rochester, New York. Typically, entrepreneurs take the attitude that “nobody cares as much about this business as I do” and exaggerate it to the point of hurtful paranoia toward employees and even customers, he says. “They’re seeing ghosts where ghosts don’t exist,” warns Barbato.

That’s especially risky when it comes to dealing with employees. Most people—not just entrepreneurs—do their work for the sense of accomplishment, not because they are plotting to steal their employer’s success, Barbato says. He acknowledges this may be a difficult concept for competition-crazed entrepreneurs—especially those who have never themselves been employees—to understand. “People who own their own business are not necessarily used to moving up the ranks,” Barbato notes. Entrepreneurs must learn to trust and delegate if their businesses are to grow.

PRACTICAL PARANOIA

No matter how useful it is, paranoia may be too loaded a label for some entrepreneurs. If so, critical evaluation or critical analysis are the preferred terms of Stephen Markowitz, director of governmental

and political relations of the Small Business Association of Delaware Valley, a 5,000-member trade group. The distinction is more than name-deep. “When I say ‘critically evaluate,’ that means look at everything,” Markowitz explains. “If you’re totally paranoid, the danger is not being able to critically evaluate everything.”

For example, Markowitz says a small retailer threatened by the impending arrival of a superstore in the market would be better served by critically evaluating the potential for benefit as well as harm, instead of merely worrying about it. “If you’re paranoid,” he says, “you’re not going to critically evaluate how it might help you.”

Whatever name it goes by, few entrepreneurs are likely to stop worrying anytime soon. In fact, experience tends to make them more confirmed in their paranoia as they go along. Paine recalls the time a formless fear led her to insist on going to a client meeting where no trouble was expected. She lost the account anyway. “The good news is, my paranoia kicked in,” she says. “The bad news is, it was too late. That made me much more paranoid in the future.”

ADVICE TO AN ENTREPRENEUR

A friend who has just become an entrepreneur has read the above article and comes to you for advice:

1. I worry about my business; does that mean that I am paranoid?
2. What are the benefits of paranoia and what are the costs?
3. How do I know I have the right level of paranoia to effectively run the business and not put me in the hospital with a stomach ulcer?
4. Won’t forcing myself to be more paranoid take the fun out of being an entrepreneur?

Source: Reprinted with permission of Entrepreneur Media, Inc., “How Smart Entrepreneurs Harness the Power of Paranoia,” by Mark Henricks, March 1997, *Entrepreneur* magazine: www.entrepreneur.com.

reflected in an entrepreneur’s metacognitive awareness, that is, the ability to reflect upon, understand, and control one’s thinking and learning.¹⁷ Specifically, metacognition describes a higher-order cognitive process that serves to organize what individuals know and recognize about themselves, tasks, situations, and their environments to promote effective and *adaptable* cognitive functioning in the face of feedback from complex and dynamic environments.¹⁸

How cognitively adaptable are you? Try the survey in Table 1.1 and compare yourself to some of your classmates. A higher score means that you are more metacognitively aware,

TABLE 1.1 Mike Haynie's "Measure of Adaptive Cognition"

How Cognitively Flexible Are You? On a scale of 1 to 10, where 1 is "not very much like me," and 10 is "very much like me," how do you rate yourself on the following statements?

Goal Orientation

I often define goals for myself.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I understand how accomplishment of a task relates to my goals.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I set specific goals before I begin a task.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I ask myself how well I've accomplished my goals once I've finished.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
When performing a task, I frequently assess my progress against my objectives.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me

Metacognitive Knowledge

I think of several ways to solve a problem and choose the best one.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I challenge my own assumptions about a task before I begin.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I think about how others may react to my actions.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I find myself automatically employing strategies that have worked in the past.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I perform best when I already have knowledge of the task.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I create my own examples to make information more meaningful.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I try to use strategies that have worked in the past.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I ask myself questions about the task before I begin.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I try to translate new information into my own words.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I try to break problems down into smaller components.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I focus on the meaning and significance of new information.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me

Metacognitive Experience

I think about what I really need to accomplish before I begin a task.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I use different strategies depending on the situation.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I organize my time to best accomplish my goals.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me

I am good at organizing information.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I know what kind of information is most important to consider when faced with a problem.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I consciously focus my attention on important information.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
My “gut” tells me when a given strategy I use will be most effective.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I depend on my intuition to help me formulate strategies.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me like me
Metacognitive Choice	
I ask myself if I have considered all the options when solving a problem.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I ask myself if there was an easier way to do things after I finish a task.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I ask myself if I have considered all the options after I solve a problem.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I re-evaluate my assumptions when I get confused.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I ask myself if I have learned as much as I could have after I finish the task.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
Monitoring	
I periodically review to help me understand important relationships.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I stop and go back over information that is not clear.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I am aware of what strategies I use when engaged in a given task.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I find myself analyzing the usefulness of a given strategy while engaged in a given task.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I find myself pausing regularly to check my comprehension of the problem or situation at hand.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me
I ask myself questions about how well I am doing while I am performing a novel task. I stop and re-read when I get confused.	Not very much—1 2 3 4 5 6 7 8 9 10—Very much like me

Result—A higher score means that you are more aware of the way that you think about how you make decisions and are therefore more likely to be cognitively flexible.

Source: Reprinted with permission from M. Haynie and D. Shepherd, “A Measure of Adaptive Cognition for Entrepreneurship Research,” *Entrepreneurship, Theory and Practice* 33, no. 3 (2009), pp. 695–714.

and this in turn helps provide cognitive adaptability. Regardless of your score, the good news is that you can learn to be more cognitively adaptable. This ability will serve you well in most new tasks, but particularly when pursuing a new entry and managing a firm in an uncertain environment. Put simply, it requires us to “think about thinking which requires,

and helps provide, knowledge and control over our thinking and learning activities—it requires us to be self-aware, to think aloud, to reflect, to be strategic, to plan, to have a plan in mind, to know what to know, to self-monitor.¹⁹ We can achieve this by asking ourselves a series of questions that relate to (1) comprehension, (2) connection, (3) strategy, and (4) reflection.²⁰

comprehension questions

Questions designed to increase entrepreneurs' understanding of the nature of the environment

connection tasks Tasks designed to stimulate entrepreneurs to think about the current situation in terms of similarities to and differences from situations previously faced and solved

strategic tasks Tasks designed to stimulate entrepreneurs to think about which strategies are appropriate for solving the problem (and why) or pursuing the opportunity (and how)

reflection tasks Tasks designed to stimulate entrepreneurs to think about their understanding and feelings as they progress through the entrepreneurial process

1. *Comprehension questions* are designed to increase entrepreneurs' understanding of the nature of the environment before they begin to address an entrepreneurial challenge, whether it be a change in the environment or the assessment of a potential opportunity. Understanding arises from recognition that a problem or opportunity exists, the nature of that situation, and its implications. In general, the questions that stimulate individuals to think about comprehension include: What is the problem all about? What is the question? What are the meanings of the key concepts? Specific to entrepreneurs, the questions are more likely to include: What is this market all about? What is this technology all about? What do we want to achieve by creating this new firm? What are the key elements to effectively pursuing this opportunity?
2. *Connection tasks* are designed to stimulate entrepreneurs to think about the current situation in terms of similarities to and differences from situations previously faced and solved. In other words, these tasks prompt the entrepreneur to tap into his or her knowledge and experience without overgeneralizing. Generally, connection tasks focus on questions like: How is this problem similar to problems I have already solved? Why? How is this problem different from what I have already solved? Why? Specific to entrepreneurs, the questions are more likely to include: How is this new environment similar to others in which I have operated? How is it different? How is this new organization similar to the established organizations I have managed? How is it different?
3. *Strategic tasks* are designed to stimulate entrepreneurs to think about which strategies are appropriate for solving the problem (and why) or pursuing the opportunity (and how). These tasks prompt them to think about the what, why, and how of their approach to the situation. Generally, these questions include: What strategy/tactic/principle can I use to solve this problem? Why is this strategy/tactic/principle the most appropriate one? How can I organize the information to solve the problem? How can I implement the plan? Specific to entrepreneurs, the questions are likely to include: What changes to strategic position, organizational structure, and culture will help us manage our newness? How can the implementation of this strategy be made feasible?
4. *Reflection tasks* are designed to stimulate entrepreneurs to think about their understanding and feelings as they progress through the entrepreneurial process. These tasks prompt entrepreneurs to generate their own feedback (create a feedback loop in their solution process) to provide the opportunity to change. Generally, reflection questions include: What am I doing? Does it make sense? What difficulties am I facing? How do I feel? How can I verify the solution? Can I use another approach for solving the task? Specific to the entrepreneurial context, entrepreneurs might ask: What difficulties will we have in convincing our stakeholders? Is there a better way to implement our strategy? How will we know success if we see it?

Entrepreneurs who are able to increase cognitive adaptability have an improved ability to (1) adapt to new situations—i.e., it provides a basis by which a person's prior experience and knowledge affect learning or problem solving in a new situation; (2) be creative—i.e., it can

lead to original and adaptive ideas, solutions, or insights; and (3) communicate one's reasoning behind a particular response.²¹ We hope that this section of the book has not only provided you a deeper understanding of how entrepreneurs can think and act with great flexibility, but also an awareness of some techniques for incorporating cognitive adaptability in your life.

We have discussed how entrepreneurs make decisions in uncertain environments and how one might develop an ability to be more cognitively flexible. It is important to note that entrepreneurs not only think but they also intend to act.

THE INTENTION TO ACT ENTREPRENEURIALLY

Entrepreneurial action is most often intentional. Entrepreneurs intend to pursue certain opportunities, enter new markets, and offer new products—and this is rarely the process of unintentional behavior. Intentions capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert to perform the behavior. As a general rule, the stronger the intention to engage in a behavior, the more likely should be its performance.²² Individuals have stronger intentions to act when taking action is perceived to be *feasible* and *desirable*. *Entrepreneurial intentions* can be explained in the same way.

The perception of feasibility has much to do with an entrepreneur's self-efficacy. *Entrepreneurial self-efficacy* refers to the conviction that one can successfully execute the behavior required; people who believe they have the capacity to perform (high self-efficacy) tend to perform well. Thus, it reflects the perception of a personal capability to do a particular job or set of tasks. High self-efficacy leads to increased initiative and persistence and thus improved performance; low self-efficacy reduces effort and thus performance. Indeed, people with high self-efficacy think differently and behave differently than people with low self-efficacy.²³ Self-efficacy affects the person's choice of action and the amount of effort exerted. Entrepreneurship scholars have found that self-efficacy is positively associated with the creation of a new independent organization.²⁴

Not only must an individual perceive entrepreneurial action as feasible for entrepreneurial intention to be high, the individual must also perceive this course of action as desirable. *Perceived desirability* refers to an individual's attitude toward entrepreneurial action—the degree to which he or she has a favorable or unfavorable evaluation of the potential entrepreneurial outcomes.²⁵ For example, creative actions are not likely to emerge unless they produce personal rewards that are perceived as relatively more desirable than more familiar behaviors.²⁶

Therefore, the higher the perceived desirability and feasibility, the stronger the intention to act entrepreneurially. We next investigate the background characteristics of entrepreneurs to understand why some individuals are more likely to engage in entrepreneurship than other individuals. That is, we examine how background characteristics provide an indication of whether certain individuals are more or less likely to perceive entrepreneurial action as feasible and/or desirable and therefore whether they are more or less likely to intend to be entrepreneurs.

ENTREPRENEUR BACKGROUND AND CHARACTERISTICS

Education

Although some may feel that entrepreneurs are less educated than the general population, research findings indicate that this is clearly not the case. Education is important in the upbringing of the entrepreneur. Its importance is reflected not only in the level of

entrepreneurial intentions The motivational factors that influence individuals to pursue entrepreneurial outcomes

entrepreneurial self-efficacy The conviction that one can successfully execute the entrepreneurial process

perceived desirability The degree to which an individual has a favorable or unfavorable evaluation of the potential entrepreneurial outcomes

education obtained but also in the fact that it continues to play a major role in helping entrepreneurs cope with the problems they confront. Although a formal education is not necessary for starting a new business—as is reflected in the success of such high school dropouts as Andrew Carnegie, William Durant, Henry Ford, and William Lear—it does provide a good background, particularly when it is related to the field of the venture. For example, entrepreneurs have cited an educational need in the areas of finance, strategic planning, marketing (particularly distribution), and management. The ability to communicate clearly with both the written and the spoken word is also important in any entrepreneurial activity.

Even general education is valuable because it facilitates the integration and accumulation of new knowledge, providing individuals with a larger opportunity set (i.e., a broader base of knowledge casts a wider net for the discovery or generation of potential opportunities), and assists entrepreneurs in adapting to new situations.²⁷ The general education (and experiences) of an entrepreneur can provide knowledge, skills, and problem-solving abilities that are transferable across many different situations. Indeed, it has been found that while education has a positive influence on the chance that a person will discover new opportunities, it does not necessarily determine whether he will create a new business to exploit the discovered opportunity.²⁸ To the extent that individuals believe that their education has made entrepreneurial action more feasible, they are more likely to become entrepreneurs.

Age

The relationship of age to the entrepreneurial career process also has been carefully researched.²⁹ In evaluating these results, it is important to differentiate between entrepreneurial age (the age of the entrepreneur reflected in his or her experience) and chronological age (years since birth). As discussed in the next section, entrepreneurial experience is one of the best predictors of success, particularly when the new venture is in the same field as the previous business experience.

In terms of chronological age, most entrepreneurs initiate their entrepreneurial careers between the ages of 22 and 45. A career can be initiated before or after these ages, as long as the entrepreneur has the necessary experience and financial support, and the high energy level needed to launch and manage a new venture successfully. Also, there are milestone ages every five years (25, 30, 35, 40, and 45) when an individual is more inclined to start an entrepreneurial career. As one entrepreneur succinctly stated, “I felt it was now or never in terms of starting a new venture when I approached 30.” Generally, male entrepreneurs tend to start their first significant venture in their early 30s, while women entrepreneurs tend to do so in their middle 30s. However, an entrepreneurial career is quite popular later in life when the children have left home, there are fewer financial concerns, and individuals start to think about what they would really like to do with the rest of their lives.³⁰

Work History

work history The past work experience of an individual

Work history can influence the decision to launch a new entrepreneurial venture, but it also plays a role in the growth and eventual success of the new venture. While dissatisfaction with various aspects of one’s job—such as a lack of challenge or promotional opportunities, as well as frustration and boredom—often motivates the launching of a

new venture, previous technical and industry experience is important once the decision to launch has been made. Experience in the following areas is particularly important: financing, product or service development, manufacturing, and the development of distribution channels.

As the venture becomes established and starts growing, managerial experience and skills become increasingly important. Although most ventures start with few (if any) employees, as the number of employees increases, the entrepreneur's managerial skills come more and more into play. In addition, entrepreneurial experiences, such as the start-up process, making decisions under high levels of uncertainty, building a culture from "scratch," raising venture capital, and managing high growth, are also important. Most entrepreneurs indicate that their most significant venture was not their first one. Throughout their entrepreneurial careers, they are exposed to many new venture opportunities and gather ideas for many more new ventures.

Finally, previous start-up experience can provide entrepreneurs with expertise in running an independent business as well as benchmarks for judging the relevance of information, which can lead to an understanding of the "real" value of new entry opportunities, speed up the business creation process, and enhance performance.³¹ Previous start-up experience is a relatively good predictor of starting subsequent businesses.³² To the extent that start-up experience provides entrepreneurs with a greater belief in their ability to successfully achieve entrepreneurial outcomes, this increased perceived feasibility will strengthen entrepreneurial intentions.

ROLE MODELS AND SUPPORT SYSTEMS

role models Individuals whose example an entrepreneur can aspire to and copy

One of the most important factors influencing entrepreneurs in their career path is their choice of a *role model*.³³ Role models can be parents, brothers or sisters, other relatives, or other entrepreneurs. Successful entrepreneurs frequently are viewed as catalysts by potential entrepreneurs. As one entrepreneur succinctly stated, "After evaluating Ted and his success as an entrepreneur, I knew I was much smarter and could do a better job. So I started my own business." In this way, role models can provide important signals that entrepreneurship is feasible for them.

Role models can also serve in a supportive capacity as mentors during and after the launch of a new venture. An entrepreneur needs a strong support and advisory system in every phase of the new venture. This support system is perhaps most crucial during the start-up phase, as it provides information, advice, and guidance on such matters as organizational structure, obtaining needed financial resources, and marketing. Since entrepreneurship is a social role embedded in a social context, it is important that an entrepreneur establish connections and eventually networks early in the new venture formation process.

As initial contacts and connections expand, they form a network with similar properties prevalent in a social network—density (the extensiveness of ties between the two individuals) and centrality (the total distance of the entrepreneur to all other individuals and the total number of individuals in the network). The strength of the ties between the entrepreneur and any individual in the network is dependent upon the frequency, level, and reciprocity of the relationship. The more frequent, in-depth, and mutually beneficial a relationship, the stronger and more durable the network between the entrepreneur and the individual.³⁴ Although most networks are not formally organized, an informal network for moral and professional support still greatly benefits the entrepreneur.

moral-support network
Individuals who give psychological support to an entrepreneur

Moral-Support Network

It is important for each entrepreneur to establish a *moral-support network* of family and friends—a cheering squad. This cheering squad plays a critical role during the many difficult and lonely times that occur throughout the entrepreneurial process. Most entrepreneurs indicate that their spouses are their biggest supporters and allow them to devote the excessive amounts of time necessary to the new venture.

Friends also play key roles in a moral-support network. Not only can friends provide advice that is often more honest than that received from other sources, but they also provide encouragement, understanding, and even assistance. Entrepreneurs can confide in friends without fear of criticism. Finally, relatives (children, parents, grandparents, aunts, and uncles) also can be strong sources of moral support, particularly if they are also entrepreneurs. As one entrepreneur stated, “The total family support I received was the key to my success. Having an understanding cheering squad giving me encouragement allowed me to persist through the many difficulties and problems.”

professional-support network
Individuals who help the entrepreneur in business activities

Professional-Support Network

In addition to encouragement, the entrepreneur needs advice and counsel throughout the establishment of the new venture. This advice can be obtained from a mentor, business associates, trade associations, or personal affiliations—all members of a *professional-support network*.

Most entrepreneurs indicate that they have mentors. How does one find a mentor? This task sounds much more difficult than it really is. Since a mentor is a coach, a sounding board, and an advocate—someone with whom the entrepreneur can share both problems and successes—the individual selected needs to be an expert in the field. An entrepreneur can start the “mentor-finding process” by preparing a list of experts in various fields—such as in the fundamental business activities of finance, marketing, accounting, law, or management—who can provide the practical “how-to” advice needed. From this list, an individual who can offer the most assistance should be identified and contacted. If the selected individual is willing to act as a mentor, he or she should be periodically apprised of the progress of the business so that a relationship can gradually develop.

Another good source of advice can be cultivated by establishing a network of business associates. This group can be composed of self-employed individuals who have experienced starting a business; clients or buyers of the venture’s product or service; experts such as consultants, lawyers, or accountants; and the venture’s suppliers. Clients or buyers are a particularly important group to cultivate. This group represents the source of revenue to the venture and is the best provider of word-of-mouth advertising. There is nothing better than word-of-mouth advertising from satisfied customers to help establish a winning business reputation and promote goodwill.

Suppliers are another important component in a professional-support network. A new venture needs to establish a solid track record with suppliers to build a good relationship and to ensure the adequate availability of materials and other supplies. Suppliers also can provide good information on the nature of trends, as well as competition, in the industry.

In addition to mentors and business associates, trade associations can offer an excellent professional-support network. Trade association members can help keep the new venture competitive. Trade associations keep up with new developments and can provide overall industry data.

Finally, personal affiliations of the entrepreneur also can be a valuable part of a professional-support network. Affiliations developed with individuals through shared

hobbies, participation in sporting events, clubs, civic involvements, and school alumni groups are excellent potential sources of referrals, advice, and information. Each entrepreneur needs to establish both moral- and professional-support networks. These contacts provide confidence, support, advice, and information. As one entrepreneur stated, “In your own business, you are all alone. There is a definite need to establish support groups to share problems with and to obtain information and overall support for the new venture.”

Therefore, it is important to recognize that entrepreneurial activity is embedded in networks of interpersonal relationships. These networks are defined by a set of actors (individuals and organizations) and a set of linkages between them, and they provide individuals access to a variety of resources necessary for entrepreneurial outcomes.³⁵ These resources may assist in efforts to discover and exploit opportunities, as well as in the creation of new independent organizations.³⁶ The trust embedded in some of these networks provides potential entrepreneurs the opportunity to access highly valuable resources. For example, business networks are composed of independent firms linked by common interests, friendship, and trust and are particularly important in facilitating the transfer of difficult-to-codify, knowledge-intensive skills that are expensive to obtain in other ways.³⁷ These networks also create opportunities for exchanging goods and services that are difficult to enforce through contractual arrangements, which facilitates the pursuit of opportunities.³⁸ To the extent that a network provides an individual greater belief in his or her ability to access resources critical to the successful achievement of entrepreneurial outcomes, this increased perceived feasibility will strengthen entrepreneurial intentions. This can include intentions for sustainable entrepreneurship.

SUSTAINABLE ENTREPRENEURSHIP

Sustainable development is perhaps the most important issue of our time, and entrepreneurship can have a positive impact on this issue. That is, entrepreneurial action can help us both sustain and develop. Specifically, *sustainable entrepreneurship* is focused on preserving nature, life support, and community (sustainability) in the pursuit of perceived opportunities to bring future products, processes, and services into existence for gain (entrepreneurial action) where gain is broadly construed to include economic and non-economic benefits to individuals, the economy, and society (development).³⁹

Based on the McMullen-Shepherd model, we know that entrepreneurial action is driven by knowledge and motivation. Those with greater knowledge of the natural environment—the physical world, including the earth, biodiversity, and ecosystems⁴⁰—are more likely to notice changes in that environment that form opportunity beliefs than those with less knowledge. However, we cannot underestimate the role of entrepreneurial knowledge of markets, technologies, and/or opportunity exploitation; without entrepreneurial knowledge, opportunities for sustainable development are unlikely to become a reality.

For entrepreneurial actions that preserve nature to be considered sustainable entrepreneurship, they must also develop gains for the entrepreneur, others, and/or society. It has long been accepted that entrepreneurs can generate economic wealth for themselves, but their impact on development can be far greater. They can generate gains for others that are economic, environmental, and social, including employment opportunities, improved access to quality/valuable goods, and revenues for the government(s). The environmental gain generated for others could be reduced air pollution, improved air quality, improved drinking-water quality, and other enhanced living conditions. The social gains include improved child survival rates, longer life expectancy, superior education, equal opportunity, and so on. For example, individuals who were knowledgeable about cooking practices in

sustainable entrepreneurship

Entrepreneurship focused on preserving nature, life support, and community (sustainability) in the pursuit of perceived opportunities to bring future products, processes, and services into existence for gain (entrepreneurial action) where gain is broadly construed to include economic and noneconomic benefits to individuals, the economy, and society (development)

COMPANY'S CODE OF ETHICS

The financial scandals of 2002 [and 2008] have already led to increased action by legislators and associations, and many companies are beginning to develop a code of ethics for all employees.

There are a number of advantages to implementing a code of ethics. The more your employees are aware of proper conduct, the more likely they are to do the right thing. They'll better understand their responsibilities and expectations and assume the appropriate level of accountability when identifying and managing business risks. A code of ethics is more than just a formal document outlining related policies. It's about integrating positive values throughout an organization. Here are some key components to an effective program:

Leaders Set the Example: Employees often model their own behavior after executives, managers, and others who've succeeded in the company. Therefore, everyone at every level must adhere to the firm's guidelines. What seems like a small action—discussing confidential financial information with a colleague, for instance—can have a ripple effect throughout all staff. If the members of senior management do not follow the highest ethical standards at all times, they shouldn't be surprised when those who report to them fail to do so.

Ethics Is a Core Value: Companies known for their ethical business practices make ethics a key element of their corporate culture. Conducting yourself with integrity is considered as important as bottom-line results. Ethical standards are applied any time a decision is made or an action is taken, not just during controversial situations. A recent survey

by our company found that more organizations are taking ethics into account when hiring employees. Fifty-eight percent of chief financial officers polled said the qualities that impress them most about applicants, aside from ability and willingness to do the job, are honesty and integrity. That's a substantial increase from only 32 percent in 1997.

Employees Feel Safe to Share Concerns: The work environment must be one in which people feel they can deliver bad news to management without fear of repercussions. In an ethics-driven company, staff members can report any type of wrongdoing—whether it is false information on an expense report or major financial fraud—and feel confident they will not suffer negative career consequences. Once supervisors are made aware of a potential problem, they need to take immediate action. Failure to follow through on even minor issues can undermine the success of an ethics program.

Having a code of ethics will not prevent every crisis, but it will ensure that staff members have a clear understanding of expectations. Collaborate with employees on defining the rules, and make sure everyone is aware of the requirements. Then take steps to instill core values throughout the organization. With regular reinforcement, ethics will guide every decision your team makes and become a central element in the way your company conducts business.

Source: From Max Messmer, "Does Your Company Have a Code of Ethics?" *Strategic Finance*, April 2003. Excerpted with permission from Strategic Finance published by the Institute of Management Accountants, Montvale, NJ.

developing countries were able to recognize opportunities for hybrid stoves that substantially reduced particle pollutants in households but were consistent with traditional recipes.⁴¹ It is not just the natural environment that can be sustained, though; communities also need to be preserved. Indeed, knowledge of indigenous groups' cultures has led to the pursuit of opportunities that serve to sustain these cultures.

We recognize that our explanation of sustainable entrepreneurship could be considered highly idealistic. However, it is consistent with thinking of entrepreneurial action as a tool (e.g., a hammer) that can be used for good (e.g., to build a community center) or for bad (e.g., as a weapon for harming others). We do believe, however, that there are many people in the world today who are motivated to use the tool of entrepreneurial action to sustain the natural environment and communities and develop gains for others. Perhaps you are one of these people.

IN REVIEW

SUMMARY

Entrepreneurship involves action. Before action individuals use their knowledge and motivation to overcome ignorance to form a belief that there exists an opportunity for someone. They then need to determine if this opportunity for someone matches their knowledge and motivation—is it an opportunity for them? Individuals engaging in the entrepreneurial task think differently from those engaged in other tasks, such as managerial tasks. The process requires that the individual and the firm have an entrepreneurial mind-set. We started our discussion of this mind-set with the concepts of thinking structurally and effectually, which challenges traditional notions of the way that entrepreneurs think about their tasks.

By thinking structurally and not being distracted by superficial features, entrepreneurs are able to identify opportunities by making connections between a technology and a market that may not be obvious. Furthermore, although entrepreneurs think about some tasks in a causal way, they also are likely to think about some tasks effectually (and some entrepreneurs more so than other entrepreneurs). Rather than starting with the desired outcome in mind and then focusing on the means to achieving that outcome, entrepreneurs sometimes approach tasks by looking at what they have—their means—and selecting among possible outcomes. Who is to say whether the “causal chef” who starts with a menu or the “effectual chef” who starts with what is in the cupboard produces the best meal? But we can say that some expert entrepreneurs think effectually about opportunities. Thinking effectually helps entrepreneurs make decisions in uncertain environments. Entrepreneurs are often situated in resource-scarce environments but are able to make do with (and recombine) the resources they have at hand to create opportunities.

The external environment can also have an impact on performance and therefore the entrepreneur needs to be able to adapt to changes in the environment. In this chapter we introduced the notion of cognitive flexibility and emphasized that it is something that can be measured and learned. By asking questions related to comprehension, connection, strategy, and reflection, entrepreneurs can maintain an awareness of their thought process and in doing so develop greater cognitive adaptability.

Individuals become entrepreneurs because they intend to do so. The stronger the intention to be an entrepreneur, the more likely it is that it will happen. Intentions become stronger as individuals perceive an entrepreneurial career as feasible and desirable. These perceptions of feasibility and desirability are influenced by one’s background and characteristics, such as education, personal values, age and work history, role models and support systems, and networks.

The outcome of entrepreneurial action can be economic gain for the entrepreneur and his or her family. But this may not be the only motivation for the intention to be an entrepreneur. Some individuals exploit opportunities that sustain (the natural environment and/or communities) and generate gains for others. We call this process sustainable entrepreneurship.

RESEARCH TASKS



1. Speak to people from five different countries and ask what entrepreneurship means to them and how their national culture helps and/or hinders entrepreneurship.

2. Ask an entrepreneur about his business today and ask him to describe the decisions and series of events that led the business from start-up to its current form. Would you classify this process as causal, effectual, or both?
3. Ask two entrepreneurs and five students (not in this class) to fill out the Haynie-Shepherd “Measure of Adaptive Cognition” (see Table 1.1). How do you rate relative to the entrepreneurs? Relative to your fellow students?
4. When conducting a homework exercise for another class (especially a case analysis), ask yourself comprehension questions, connection questions, strategy questions, and reflection questions. What impact did this have on the outcome of the task?
5. What impact does entrepreneurship have on your natural environment? What impact does it have on sustaining local communities? Use data to back up your arguments.

CLASS DISCUSSION



1. List the content that you believe is necessary for an entrepreneurship course. Be prepared to justify your answer.
2. Do you really think that entrepreneurs think effectually? What about yourself—do you sometimes think effectually? In what ways is it good? Then why are we taught in business classes to always think causally? Are there particular problems or tasks in which thinking causally is likely to be superior to effectuation? When might effectuation be superior to causal thinking?
3. To be cognitively flexible seems to require that the entrepreneur continually question himself or herself. Doesn't that create doubt that can be seen by employees and financiers such that success actually becomes more difficult to achieve? Besides, although flexibility is a good thing, if the firm keeps changing based on minor changes in the environment, the buyers are going to become confused about the nature of the firm. Is adaptation always a good thing?
4. Do you believe that sustainable development should be part of an entrepreneurship course, or did the textbook authors just include a section on it to be “politically correct”?
5. Provide some examples of the mental leaps that entrepreneurs have taken.
6. What excites you about being an entrepreneur? What are your major concerns?

SELECTED READINGS

Baker, Ted; and Reed Nelson. (2005). Something from Nothing: Resource Construction through Entrepreneurial Bricolage. *Administrative Science Quarterly*, vol. 50, no. 3, pp. 329–66.

In this article the authors studied 29 firms and demonstrated that entrepreneurs differ in their responses to severe resource constraints. Some entrepreneurs were able to render unique services by recombining elements at hand for new purposes that challenged institutional definitions and limits. They introduce the concept of bricolage to explain many of these behaviors of creating something from nothing by exploiting physical, social, or institutional inputs that other firms rejected or ignored. Central to the study's contribution is the notion that companies engaging in bricolage refuse to enact the limitations imposed by dominant definitions of resource environments; rather they create their opportunities. (from journal's abstract)

Baron, Robert. (1998). Cognitive Mechanisms in Entrepreneurship: Why and When Entrepreneurs Think Differently Than Other People. *Journal of Business Venturing*, vol. 13, no. 4, pp. 275–95.

In this conceptual article, the author presents information on a study that examined the possible differences in the thinking of entrepreneurs and other people. This paper offers a number of implications of a cognitive perspective for entrepreneurship research.

Busenitz, Lowell; and Jay Barney. (1997). Differences between Entrepreneurs and Managers in Large Organizations: Biases and Heuristics in Strategic Decision Making. *Journal of Business Venturing*, vol. 12, no. 1, pp. 9–30.

In this article the authors explore the differences in the decision-making processes between entrepreneurs and managers in large organizations. In particular they focus on a number of biases, such as the overconfidence bias, but also point out some benefits from the use of biases and heuristics.

Davidsson, Per; and Benson Honig. (2003). The Role of Social and Human Capital among Nascent Entrepreneurs. *Journal of Business Venturing*, vol. 18, pp. 301–31.

This study examines nascent entrepreneurship by comparing individuals engaged in nascent activities with a control group and finds that social capital is a robust predictor for nascent entrepreneurs, as well as for advancing through the start-up process. With regard to outcomes like first sale or showing a profit, only one aspect of social capital, viz., being a member of a business network, had a statistically significant positive effect. The study supports human capital in predicting entry into nascent entrepreneurship, but only weakly for carrying the start-up process toward successful completion.

Gaglio, Connie Marie; and Jerome Katz. (2001). The Psychological Basis of Opportunity Identification: Entrepreneurial Alertness. *Small Business Economics*, vol. 16, pp. 95–111.

In this article the authors describe a model of entrepreneurial alertness and propose a research agenda for understanding opportunity identification. They investigate the origin of the entrepreneurial alertness concept and the notion of the psychological schema of alertness.

Gregoire, Denis; and Dean A. Shepherd. (In press). Technology Market Combinations and the Identification of Entrepreneurial Opportunities. *Academy of Management Journal*, <http://www.aom.pace.edu/amj/inpress>.

Integrating theoretical work on the nature of entrepreneurial opportunities with cognitive science research on the use of similarity comparisons in making creative mental leaps, the authors develop a model of opportunity identification that examines the independent effects of an opportunity idea's similarity characteristics and the interaction of these characteristics with an individual's knowledge and motivation. They test this model with an experiment where they asked entrepreneurs to form beliefs about opportunity ideas for technology transfer. They found that the superficial and structural similarities of technology-market combinations impact the formation of opportunity beliefs, and that individual differences in prior knowledge and entrepreneurial intent moderate these relationships. (from journal's abstract)

Haynie, J. Michael; Dean A. Shepherd; Elaine Mosakowski; and Christopher Earley. (2010). A Situated Metacognitive Model of the Entrepreneurial Mindset. *Journal of Business Venturing*, vol. 25, issue 2, pp. 217–29.

The authors develop a framework to investigate the foundations of an "entrepreneurial mindset"—described by scholars as the ability to sense, act, and mobilize under uncertain conditions. They focus on metacognitive processes that enable the entrepreneur to think beyond or reorganize existing knowledge structures and heuristics, promoting adaptable cognitions in the face of novel and uncertain

decision contexts. They integrate disparate streams of literature from social and cognitive psychology toward a model that specifies entrepreneurial metacognition as situated in the entrepreneurial environment. They posit that foundations of an entrepreneurial mindset are metacognitive in nature, and subsequently detail how, and with what consequence, entrepreneurs formulate and inform “higher-order” cognitive strategies in the pursuit of entrepreneurial ends. (from journal’s abstract)

Haynie, J. Michael; and Dean A. Shepherd. (2011). Toward a Theory of Discontinuous Career Transition: Investigating Career Transitions Necessitated by Traumatic Life-Events. *Journal of Applied Psychology*, vol. 96, pp. 501–24.

Career researchers have focused on the mechanisms related to career progression. Although less studied, situations in which traumatic life events necessitate a discontinuous career transition are becoming increasingly prevalent. Employing a multiple case study method, the authors offer a deeper understanding of such transitions by studying an extreme case: soldiers and Marines disabled by wartime combat. Their study highlights obstacles to future employment that are counterintuitive and stem from the discontinuous and traumatic nature of job loss. Effective management of this type of transitioning appears to stem from efforts positioned to formulate a coherent narrative of the traumatic experience and thus reconstruct foundational assumptions about the world, humanity, and self. These foundational assumptions form the basis for enacting future-oriented career strategies, such that progress toward establishing a new career path is greatest for those who can orientate themselves away from the past (trauma), away from the present (obstacles to a new career), and toward an envisioned future career positioned to confer meaning and purpose through work. (from journal’s abstract)

Hitt, Michael; Barbara Keats; and Samuel DeMarie. (1998). Navigating in the New Competitive Landscape: Building Strategic Flexibility and Competitive Advantage in the 21st Century. *Academy of Management Executive*, vol. 12, pp. 22–43.

The article cites the importance of building strategic flexibility and a competitive advantage for organizations to survive in the face of emerging technical revolution and increasing globalization. The nature of the forces in the new competitive landscape requires a continuous rethinking of current strategic actions, organization structure, communication systems, corporate culture, asset deployment, and investment strategies—in short, every aspect of a firm’s operation and long-term health.

Hmieleski, Keith; and Andrew Corbett. (2006). Proclivity for Improvisation as a Predictor of Entrepreneurial Intentions. *Journal of Small Business Management*, vol. 44, pp. 45–63.

This study examines the relationship between improvisation and entrepreneurial intentions and finds that entrepreneurial intentions are associated with measures of personality, motivation, cognitive style, social models, and improvisation. The strongest relationship is found between entrepreneurial intentions and improvisation.

Ireland, R. Duane; and Michael Hitt. (1999). Achieving and Maintaining Strategic Competitiveness in the 21st Century: The Role of Strategic Leadership. *Academy of Management Executive*, vol. 13, pp. 43–55.

In this article the authors acknowledge that effective strategic leadership practices can help firms enhance performance while competing in turbulent and unpredictable environments. They then describe six components of effective strategic leadership. When the activities called for by these components are completed successfully, the firm’s strategic leadership practices can become a source of competitive advantage. In turn, use of this advantage can contribute significantly to achieving strategic competitiveness and earning above-average returns in the next century.

Keh, Hean; Maw Der Foo; and Boon Chong Lim. (2002). Opportunity Evaluation under Risky Conditions: The Cognitive Processes of Entrepreneurs. *Entrepreneurship: Theory and Practice*, vol. 27, pp. 125–48.

This study uses a cognitive approach to examine opportunity evaluation, as the perception of opportunity is essentially a cognitive phenomenon. The authors present a model that consists of four independent variables (overconfidence, belief in the law of small numbers, planning fallacy, and illusion of control), a mediating variable (risk perception), two control variables (demographics and risk propensity), and the dependent variable (opportunity evaluation). They find that illusion of control and belief in the law of small numbers are related to how entrepreneurs evaluate opportunities. Their results also indicate that risk perception mediates opportunity evaluation.

Krueger, Norris. (2000). The Cognitive Infrastructure of Opportunity Emergence. *Entrepreneurship: Theory and Practice*, vol. 24, pp. 5–23.

In this article the author argues that seeing a prospective course of action as a credible opportunity reflects an intentions-driven process driven by known critical antecedents. On the basis of well-developed theory and robust empirical evidence, he proposes an intentions-based model of the cognitive infrastructure that supports or inhibits how individuals perceive opportunities. The author also shows the practical diagnostic power this model offers to managers.

Kuemmerle, Walter. (May 2002). A Test for the Fainthearted. *Harvard Business Review*, pp. 122–27.

Starting a business is rarely a dignified affair. The article discusses what really makes an entrepreneur; what characteristics set successful entrepreneurs apart, enabling them to start ventures against all odds and keep them alive even in the worst of times; and finally, whether, if you don't possess those characteristics, they can be developed.

McGrath, Rita; and Ian MacMillan. (2000). *The Entrepreneurial Mindset: Strategies for Continuously Creating Opportunity in an Age of Uncertainty*. Cambridge, MA: Harvard Business School Press.

In this book the authors provide tips on how to achieve an entrepreneurial mindset. For example, they discuss the need to focus beyond incremental improvements to entrepreneurial actions, assess a business's current performance to establish the entrepreneurial framework, and formulate challenging goals by using the components of the entrepreneurial framework.

McMullen, Jeffery S.; and Dean Shepherd. (2006). Entrepreneurial Action and the Role of Uncertainty in the Theory of the Entrepreneur. *Academy of Management Review*, vol. 31, pp. 132–52.

By considering the amount of uncertainty perceived and the willingness to bear uncertainty concomitantly, the authors provide a conceptual model of entrepreneurial action that allows for examination of entrepreneurial action at the individual level of analysis while remaining consistent with a rich legacy of system-level theories of the entrepreneur. This model not only exposes limitations of existing theories of entrepreneurial action but also contributes to a deeper understanding of important conceptual issues, such as the nature of opportunity and the potential for philosophical reconciliation among entrepreneurship scholars.

Mitchell, Ron; Lowell Busenitz; Theresa Lant; Patricia McDougall; Eric Morse; and Brock Smith. (2002). Toward a Theory of Entrepreneurial Cognition: Rethinking the People Side of Entrepreneurship Research. *Entrepreneurship: Theory and Practice*, vol. 27, no. 2, pp. 93–105.

In this article the authors reexamine "the people side of entrepreneurship" by summarizing the state of play within the entrepreneurial cognition research stream,

and by integrating the five articles accepted for publication in a special issue focusing on this ongoing narrative. The authors propose that the constructs, variables, and proposed relationships under development within the cognitive perspective offer research concepts and techniques that are well suited to the analysis of problems that require better explanations of the distinctly human contributions to entrepreneurship.

Sarasvathy, Saras. (2001). Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency. *Academy of Management Review*, vol. 26, no. 2, pp. 243–64.

In this article, the author argues that an explanation for the creation of artifacts such as firms/organizations and markets requires the notion of effectuation. Causation rests on a logic of prediction, effectuation on the logic of control. The author illustrates effectuation through business examples and realistic thought experiments, examines its connections with existing theories and empirical evidence, and offers a list of testable propositions for future empirical work.

Sarasvathy, Saras. (2006). *Effectuation: Elements of Entrepreneurial Expertise*. Cheltenham, UK: Edward Elgar Publishers.

This book gives the history of the development of effectuation and provides provocative new applications and future research directions.

Sarasvathy, Saras. www.effectuation.org.

This Web site provides an up-to-date collection of works on effectuation.

Shepherd, Dean A.; and Holger Patzelt. (2011). Sustainable Entrepreneurship: Entrepreneurial Action Linking “What is to be Sustained” with “What is to be Developed.” *Entrepreneurship: Theory and Practice*, vol. 1, pp. 137–63.

Informed by the sustainable development and entrepreneurship literatures, the authors offer the following definition: Sustainable entrepreneurship is focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and noneconomic gains to individuals, the economy, and society. (from journal’s abstract)

END NOTES

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