DARDEN BUSINESS PUBLISHING
UNIVERSITY of VIRGINIA

UVA-ENT-0065
Rev. Feb. 19, 2009

WHAT MAKES ENTREPRENEURS ENTREPRENEURIAL?

Professionals who work closely with them and researchers who study them have often speculated about what makes entrepreneurs "entrepreneurial." Of course, entrepreneurs also love to hold forth on this topic. But while there are as many war stories and pet theories as there are entrepreneurs and researchers, gathering together a coherent theory of entrepreneurial expertise has thus far eluded academics and practitioners alike.

What are the characteristics, habits, and behaviors of the species *entrepreneur*? Is there a learnable and teachable "core" to entrepreneurship? In other words, what can today's entrepreneurs such as Rob Glaser and Jeff Bezos learn from old stalwarts such as Josiah Wedgwood and Leonard Shoen? Or even within the same period in history, what are the common elements that entrepreneurs across a wide variety of industries share with each other? In sum, is there such a thing as "entrepreneurial thinking" that can be applied across space, time, and technology?

In 1997, I set out on a rather perilous but exhilarating journey to investigate this question. Traveling across 17 states in the United States over several months, I met with 30 founders of companies ranging in value from $200 million to $6.5 billion and spanning a variety of industries including steel, railroad, teddy bears, semiconductors, and bio-tech. The idea behind the study was not merely to interview these founders, but to get behind their stories and understand how they reason about specific problems in transforming an idea into an enduring firm. The entrepreneurs worked their way through a 17-page problem set over two hours, talking aloud continuously as they each solved exactly the same 10 decision problems to build a company starting with exactly the same product idea. Rigorous analyses of the transcribed tapes led to rather surprising but eminently teachable principles. This set of principles, when put together, rested on a coherent logic that clearly established the existence of a distinct form of reasoning and thinking that we have all long recognized intuitively as "entrepreneurial." For reasons that will become clear in the next section, I have termed this type of rationality "effectual reasoning."

Effectual Reasoning: The Problem

The word "effectual" is the inverse of "causal." In general, in MBA programs across the world, students are taught causal or predictive reasoning—in every functional area of business. Causal rationality begins with a pre-determined goal and a given set of means, and seeks to identify the optimal—fastest, cheapest, most efficient, and so on—alternative to achieve the given goal. The make-versus-buy decision in production, or choosing the target market with the highest potential return in marketing, or picking a portfolio with the lowest risk in

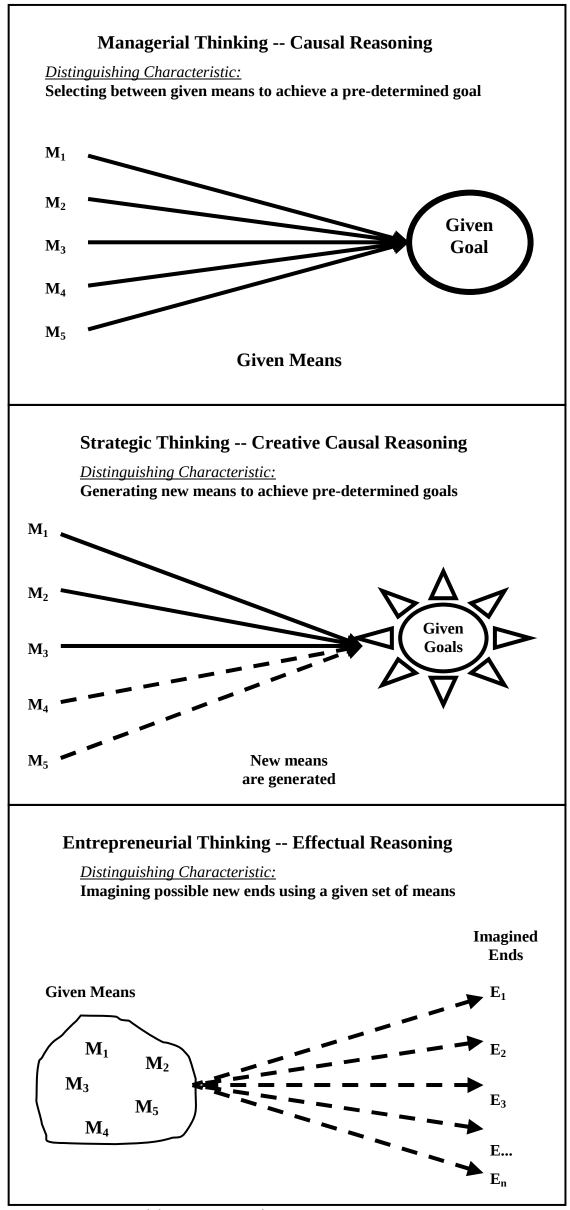
This case was prepared by Saras D. Sarasvathy, associate professor of business administration. It was written as a basis for class discussion rather than to illustrate effective or ineffective handling of an administrative situation.

finance, or even hiring the best person for the job in human resources management, are all examples of problems of causal reasoning. A more interesting variation of causal reasoning involves the creation of additional alternatives to achieve the given goal. This form of creative causal reasoning is often used in strategic thinking.

Effectual reasoning, however, does not begin with a specific goal. Instead, it begins with a given set of means and allows goals to emerge contingently over time from the varied imagination and diverse aspirations of the founders and the people they interact with. While causal thinkers are like great generals seeking to conquer fertile lands (Genghis Khan conquering two-thirds of the known world), effectual thinkers are like explorers setting out on voyages into uncharted waters (Columbus discovering the new world). It is important to point out, though, that the same person can use both causal and effectual reasoning at different times depending on what the circumstances call for. In fact, the best entrepreneurs are capable of both and do use both modes well. But they prefer effectual reasoning over causal reasoning in the early stages of a new venture, and arguably, most entrepreneurs do not transition well into latter stages requiring more causal reasoning. **Figure 1** depicts the different forms of reasoning discussed above.

While causal reasoning may or may not involve creative thinking, effectual reasoning is inherently creative. The simple task of cooking dinner may be used to contrast the two types of reasoning. A chef who is given a specific menu and has only to pick out his or her favorite recipes for the items on the menu, shop for ingredients, and cook the meal in their own well-equipped kitchens is an example of causal reasoning. An example of effectual reasoning would involve a chef who is not given a menu in advance, and is escorted to a strange kitchen where he or she has to explore the cupboards for unspecified ingredients and cook a meal with them. While both causal and effectual reasoning call for domain-specific skills and training, effectual reasoning demands something more—imagination, spontaneity, risk-taking, and salesmanship.

Figure 1



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Effectual Reasoning: The Process

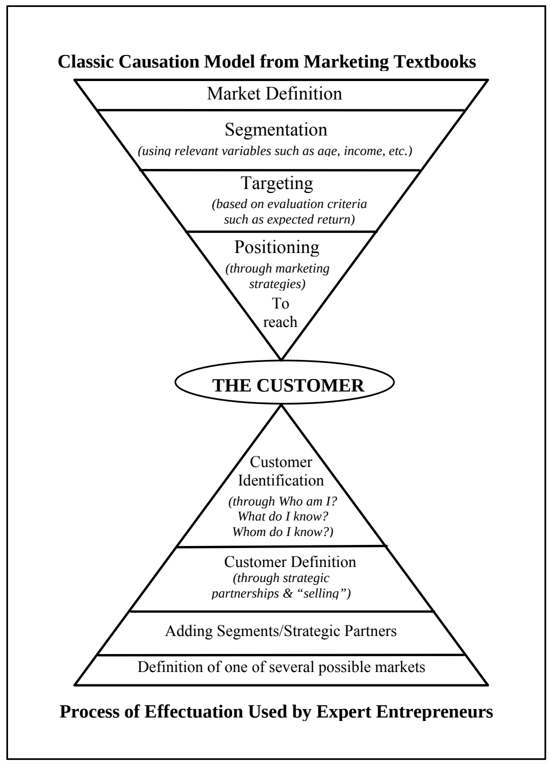
Thus the first principle of effectual reasoning is the bird in hand principle – namely work with readily available resources. But which resources? And what is the process through which these means are transformed into new ends?

All entrepreneurs begin with three categories of means: (1) who they are—their traits, tastes, and abilities; (2) what they know—their education, training, expertise, and experience; and, (3) whom they know—their social and professional networks. Using these means, the entrepreneurs begin to imagine and implement possible effects that can be created with them. Most often, they start very small with the means that are closest at hand, and move almost directly into action without elaborate planning. Unlike causal reasoning, which comes to life through careful planning and *subsequent* execution, effectual reasoning lives and breathes execution. Plans are made and unmade and revised and recast through action and interaction with others on a daily basis. Yet at any given moment, there is always a meaningful picture that keeps the team together, a compelling story that brings in more stakeholders and a continuing journey that maps out uncharted territories. Through their actions, the effectual entrepreneurs' set of means and consequently, the set of possible effects changes and gets reconfigured. Eventually, certain emerging effects coalesce into clearly achievable and desirable goals—landmarks that point to a discernible path beginning to emerge in the wilderness.

Yet, in our classrooms, we teach potential entrepreneurs an extremely causal process—the sequential progression from idea to market research, to financial projections, to team, to business plan, to financing, to prototype, to market, to exit, with the caveat, of course, that surprises will happen along the way. Seasoned entrepreneurs, however, know that surprises are not deviations from the path. Instead they are the norm, the flora and fauna of the landscape, *from* which a person learns to forge a path through the jungle. The unexpected is the stuff of entrepreneurial experience, and transforming the unpredictable into the utterly mundane is the special domain of the expert entrepreneur.

Let us consider how the two processes operate in the simple case of building a restaurant. Imagine an entrepreneur who wants to start an Indian restaurant. In the causal process that we teach, she would start with some market research into the restaurant industry in the city of her choice; select a location very carefully based upon the market research; segment the market in a meaningful way; select target segments based on estimates of potential return; design a restaurant to appeal to her target segments; raise the required funding; bring her team together; and finally, implement specific market strategies and manage daily operations to make her restaurant a success.

Figure 2



Source: Created by case writer.

But it could be equally plausible that the lunch business does not take off beyond the first few customers, but instead our entrepreneur discovers that the customers are actually interested in her ethnic philosophy and life experiences or Indian culture or other aspects of her personality, expertise, contacts, or interests. She could then decide to go into any one of several different businesses contingent upon the ensuing feedback. To cite but a few possibilities, her eventual successful enterprise could turn out to be in any one or all of the following industries: education, entertainment, travel, manufacturing and packaging, retail, interior decoration, or even self-help and motivation!

Figure 2 depicts and contrasts the causal marketing process with the effectual one.[1] Real-life examples of effectual processes in entrepreneurship abound. Indeed, the stories of effectuation permeate and saturate the history of entrepreneurship since at least as far back as the 18th century: In the 18th century, a potter named Josiah Wedgwood realized that pots could carry people's aspirations for social mobility; in the 20th, King Gillette began toying with the idea of creating something that customers would want to purchase over and over again; while shaving one morning, hit upon disposable razors as a possibility; Tom Fatjo, a respectable professional in Houston, practically got *dared* into founding the garbage giant BFI during a suburban subdivision meeting to solve the community's garbage disposal problems; and closer to the 21st century, while trying to build an interactive cable channel with progressive content, an ex-Microsoft executive named Rob Glaser fell in love with Mosaic, and set out to give voice to the mute Web in the form of RealNetworks; and so it goes.

Effectual Reasoning: The Principles

Does all this mean, though, that we are once again resorting to tales by the campfire? It turns out that all these stories have some common principles of reasoning that invert their counterparts in causal reasoning. Moreover, these principles tie together into a coherent logic that demonstrates that this is indeed a convincing alternative to causal rationality:

- Whereas causal reasoning focuses on expected return, effectual reasoning emphasizes affordable loss.
- Whereas causal reasoning depends upon competitive analyses, effectual reasoning is built upon a growing network partnerships.
- Whereas causal reasoning urges the planning, prediction, and avoiding surprises, effectual reasoning stresses the leveraging of contingencies and being open to surprises.

The affordable loss principle

While managers are taught to analyze the market and choose target segments with the highest potential return, entrepreneurs tend to find ways to reach the market with minimum expenditure of resources such as time, effort, and money. In the extreme case, the affordable loss principle translates into the zero resources to market principle. Several of the expert entrepreneurs I studied insisted that they would not do any traditional market research, but would take the product to the nearest possible potential customer even before it was built. To quote but one of them:

> I think I'd start by just...going...instead of asking all the questions I'd go and say...try and make some sale. I'd make some…just judgments about where I was going—get me and my buddies—or I would go out and start selling. I'd learn a lot you know…which people…what were the obstacles...what were the questions…which prices work better and just *do* it. Just try to take it out and sell it. Even before I have the machine. I'd just go try to sell it. Even before I started production. So my market research would actually be hands-on actual selling. Hard work, but I think much better than trying to do market research.

[1] It is easy to see that the inverted causal triangle at the top can be moved to the bottom below the upright effectual triangle and that would capture the marketing life cycle of most entrepreneurial firms. Once the market had been clearly identified and defined, one can now apply the traditional causal marketing process to capture market share and grow the company.

In finding the first customer within their immediate vicinity, whether within their geographic vicinity, within their social network, or within their area of professional expertise, entrepreneurs do not tie themselves to any theorized or preconceived "market" or strategic universe for their idea. Instead, they open themselves to surprises as to which market or markets they will eventually end up building their business in or even which new markets they will end up creating. Starting with exactly the same product, the entrepreneurs in the study ended up creating companies in 18 completely disparate industries!

The crazy quilt principle

The causal model evokes the jigsaw puzzle as a picture of entrepreneurship. The causal entrepreneur scans the environment for opportunities, finds gaps in the marketplace and fills it perfectly with the right business model at the right time. Effectual reasoning is more like stitching together a patchwork quilt – in particular a growing network of self-selected stakeholders, each of whom invests only what he or she can afford to lose, but each of whom partially shapes what the ensuing new venture and it new market/s will turn out to be.

Therefore effectual reasoning points to a focus on building partnerships rather than on doing a systematic competitive analysis. Since entrepreneurs tend to start the process without assuming the existence of a predetermined market for their idea, detailed competitive analyses do not seem to make any sense to them at the startup phase. As one of the subjects explained, "At one time in our company, I ordered people not to think about competitors. Just do your job. Think only of your work."[2] Instead, entrepreneurs focus on building partnerships right from the start. Indeed, the ideal beginning for a successful startup seemed to be the induction of customers into strategic partnerships. Again, to hear it from the horse's mouth, "Traditional market research says you do very broad-based information-gathering, possibly using mailings. I wouldn't do that. I would literally, target, as I said initially, key companies who I would call flagship, do a frontal lobotomy on them….The challenge then is really to pick your partners, and package yourself early on before you have to put a lot of capital out."

This crazy quilt principle with its emphasis on self-selected stakeholder partnerships dovetails very well with the affordable loss principle to bring the entrepreneurs' idea to market at really low levels of capital outlay. Furthermore, obtaining precommitments from key stakeholders helps reduce uncertainty in the early stages of creating an enterprise. Finally, since the entrepreneur is not wedded to any particular market for the idea, the expanding network of partnerships determines to a great extent which market or markets the company will eventually end up in.

The lemonade principle

In a way, the lemonade principle of effectual reasoning is the heart of entrepreneurial expertise—the ability to turn the unexpected into the profitable. It is evocative of the old American adage, 'When life throws lemons at you, make lemonade.' As one of the subjects in the study put it, "I always live by the motto of *Ready-fire-aim*. I think if you spend too much time doing ready-aim-aim-aim-aim, you're never gonna see all the good things that would happen if you actually start doing it and then aim. And find out where your target is."

Great entrepreneurial firms are products of contingencies. Their structure, culture, core competence, and endurance are all residuals of particular human beings striving to forge and fulfill particular aspirations through interactions with the space, time, and technologies they live

[2] He went on to add, "Now that isn't entirely possible. We do a lot of competitive research now." At the time of the study, his company was a $3 billion company. The evidence shows that as an entrepreneurial company grows beyond a critical size, effectual reasoning has to be supplemented with and even replaced at times by causal modes of thinking.

in. For example, we could speculate whether Wedgwood pottery would have been possible if the potter Josiah Wedgwood had not met the gentleman philosopher Thomas Bentley and wooed him into a partnership that created a brand and a great company that has lasted more than two centuries. The key to the Wedgwood fortune was the realization that people put their money where their aspirations are and that pots and vases could become vehicles of social mobility. Similarly, in our time, researchers speculate what Microsoft would have been if IBM had written a different type of a contract or if Gary Kildahl had not been out flying his airplane the day IBM came calling. Yet it is not the contingencies themselves that shaped the companies in the foregoing examples. It is how the entrepreneurs *leveraged* the contingencies that came upon them that must form the core of models of effectual reasoning. The realization that not all surprises are bad and that surprises, whether good or bad, can be used as inputs into the new-venture creation process differentiates effectual reasoning from causal reasoning, which tends to focus on the avoidance of surprises to the fullest extent possible.

Effectual Reasoning: The Logic

Underlying all the principles of effectual reasoning is a coherent logic that rests on a fundamentally different assumption about the future from that of causal reasoning. Causal reasoning is based on the following logic: *To the extent that we can predict the future, we can control it.* That is why both academics and practitioners in business today spend enormous amounts of brainpower and resources on developing predictive models. Effectual reasoning, however, is based on an alternative logic: *To the extent that we can control the future, we do not need to predict it.*

How does someone control an unpredictable future? The answer to this question depends on our beliefs about where the future comes from. Is the future largely a continuation of the past? To what extent can human action actually change its course? Although the future is always uncertain, not all uncertainties are the same. In fact, the simplest way we can model the different types of uncertainties is through the classic statistical model of the future as an urn containing different colored balls wherein the drawing of (say) a red ball, results in a reward (of say, $50). Assume the first urn contains 10 red balls and 10 green balls. In that case, the player can calculate the odds as an expected return of $25 on every draw since there is a 50-50 chance of winning $50. That is the model of a risky, but predictable, future. Entrepreneurs, as well as most human beings in the real world, however, usually have to operate without such predictability. The urn they have to deal with does not have a given number of balls of known colors. Instead it contains an unknown number of balls of unknown colors, but the game remains the same. In this case, the best strategy for the player is to draw balls randomly several times and to carefully note the result of each draw so that the distribution of balls in the urn can be *discovered* over time. That model of an uncertain, but learnable future becomes predictable over time. Using the causal logic—*to the extent we can predict the future, we can control it*—makes sense in both these cases.

But entrepreneurs choose to view the future through effectual logic. Consciously or unconsciously, they act as if they believe that the future is not "out there" to be discovered, but that it gets created through the very strategies of the players. In other words, the entrepreneur using effectual logic says: *Whatever the initial distribution of balls in the urn, I will continue to acquire red balls and put them in the urn. I will look for other people who own red balls and induce them to become partners and add to the red balls in the urn. As time goes by, there will be so many red balls in the urn that almost every draw will obtain one. On the other hand, if I and my acquaintances have only green balls, we will put them in the urn, and when there are enough, will create a new game where green balls win.* Of course, such a view may express hopes rather than realities, and many entrepreneurs in the real world do fail. But the fact remains that entrepreneurs use this logic to try and build new urns and devise new games all the time. Indeed, several of the expert entrepreneurs I studied explicitly stated that being in a market that could be predicted was not such a good idea, since there would always be someone smarter and with deeper pockets who would predict it better than they could. But being in an unpredictable market meant that the market could be shaped through their own decisions and actions working in conjunction with precommitted stakeholders and customer-partners. Together they could use contingencies along the way as part of the raw materials that constitute the very urn they are constructing.

Expert entrepreneurs are not usually in the ball-counting business or the gaming business. Instead they are actually in the business of creating the future, which entails having to work together with a wide variety of people over long periods of time. Sturdy urns of the future are filled with enduring human relationships that outlive failures and create successes over time.[3]

Embodied in a network of such enduring relationships, effectual logic is particularly useful and effective in domains such as the introduction of new products in new markets, an area often referred to as the suicide quadrant (**Figure 3**), exactly the area where traditional marketing techniques are ineffective.

That is because effectual logic is people-dependent, unlike causal logic, which is effect-dependent. In other words, when a particular effect has already been chosen, such as a target segment within an existing market, the people we hire and partner with will depend on the effect we want to create or the market we want to penetrate. Effectual logic, however, does not assume pre-existent markets and builds on the idea that the markets we create will be predicated on the people we are able to bring together. In fact, in effectual reasoning, markets are in essence stable configurations of critical masses of stakeholders who come together to transform the outputs of human imagination into the forging and fulfillment of human aspirations through economic means.

Experienced professionals in the entrepreneurial arena, whether they are bankers, lawyers, VCs, or other investors, have always agreed with successful entrepreneurs that finding and leading the right people is the key to creating an enduring venture. These entrepreneurs know that such "right" people are not merely applicants on the job market waiting for the jobs and incentives the entrepreneurs can offer them. Instead the "right" people need emotional ownership of the goals and objectives of the endeavor and can only be motivated by the belief that the effects they create will embody their deepest passions and aspirations while enabling them to achieve their best potential.

Figure 3

	Existing Market	**New Market**
Existing Product		
New product		**Suicide Quadrant**

But great entrepreneurs realize something more about the central role of people in shaping the urn. Using effectual logic, they understand that they too cannot wait around to find the "right" people all the time. Besides continually striving to attract the "right" people, they learn also to nurture and grow them in their own backyards. As Josiah Wedgwood wrote, "We have to make artists of mere men." And more recently, one of the founders of AES Corp., a multibillion-dollar electric power company with

[3] This is again a topic that is largely ignored in our entrepreneurship curricula, which tend to focus on market research, business planning, new venture financing, and legal issues. As far as I know, no entrepreneurship programs offer courses in creating and managing lasting relationships or stable stakeholder networks, or on failure management.

operations in dozens of countries around the world said, "[AES] is fun because the people who work here are fully engaged. They have total responsibility for decisions. They are accountable for results. What they do every day matters to the company, and it matters to the communities we operate in."

There is, however, a dark corollary to the use of effectual logic in entrepreneurial activity. Since they do not assume specific pre-existent goals or effects and let these effects emerge through the process, in using effectual logic to create products and markets, entrepreneurs and their partners may also end up creating harmful and problematic effects for the society they live in. The effects they create may reflect the ignorance and cupidity as well as the will and aspirations of the people who participate in the creation of new urns and games of the future. But our awareness of the existence of effectual reasoning should alert us more sharply to the role of entrepreneurs and the market system in shaping our future as a species, not merely as contributors to GDP.

The Creation of U-Haul: An Exemplar of Effectual Logic

In 1945, newly married, and with barely $5,000, Leonard Shoen set out on his effectual journey that led to the creation of U-Haul. By the end of 1949, it was possible to rent a trailer one-way from city to city throughout most of the United States. When we examine his journey, we find that it could not have been accomplished except through the use of effectual reasoning. When students today set out to write a business plan for this venture (using causal processes), they conclude that the plan is financially infeasible, or even psychologically infeasible, since it requires a large and risky capital outlay, most of which gets locked up in relatively worthless assets such as trucks and location rental. Moreover, the logistics of starting the business on a much smaller scale and growing it as fast as Shoen did overwhelms the analytical prowess of the best of causal thinkers. The final nail in the coffin usually is the complete lack of any entry barriers to imitators with deep pockets after the concept is proved on a smaller scale.

Shoen, however, did not do elaborate market research or detailed forecasting and fund-raising as we would define those terms today. Instead, using effectual means, (who he was, what he knew, and whom he knew), he plunged into action, creating the market as he grew the business. In his own words:

> Since my fortune was just about enough to make the down payment on a home and furnish it, and knowing that if I did this we would be sunk, we started the life of nomads by putting our belongings in a trailer and living between in-laws and parents for the next six months. I barbered part-time and bought trailers of the kind I thought we needed to rent from anybody who happened to have one at the price I thought was right. By the fall of 1945, I was in so deep into the trailer rental deal economically that it was either make it or lose the whole thing.

At that time he moved with his wife, Anna Mary Carty Shoen, and their young child to the Carty ranch in Ridgefield, Washington. There, with the help of the Carty family, the Shoens built the first trailers in the fall of 1945, painted in striking orange with the evocative name *U-Haul* on the sides, using the ranch's automobile garage (and milk house) as the first manufacturing plant. Shoen then practically gave away the initial trailers to renters so they could establish dealerships in cities they moved to. He would also purchase trailers and trucks and sell them to employees, family members, friends, and investors who would then lease them back to AMERCO, the parent company of U-Haul. He contracted with national gas station chains to utilize their unused space for parking and to manage the paperwork. Together, this vast network of stakeholders formed a substantial entry barrier to any imitator who would have to risk a large capital outlay to compete. Advertising was entirely limited to Yellow Pages and to the sudden and startling sight of growing numbers of distinctively painted vans being driven along the freeways of the country.

At any given moment, U-Haul could have failed, but the resulting financial fallout would not have been a disaster since the investments were spread across so many stakeholders. This brings us to the key implication of effectual reasoning for the success or failure of entrepreneurial ventures: Effectual reasoning may not necessarily increase the probability of success of new enterprises, but it reduces the *costs* of failure by enabling the failure to occur earlier and at lower levels of investment.

So, What Makes Entrepreneurs Entrepreneurial?

Entrepreneurs are entrepreneurial, as differentiated from managerial or strategic, because they think effectually; they believe in a yet-to-be-made future that can substantially be shaped by human action; and they realize that to the extent that this human action can control the future, they need not expend energies trying to predict it. In fact, to the extent that the future is shaped by human action, it is not much use trying to predict it—it is much more useful to understand and work with the people who are engaged in the decisions and actions that bring it into existence.