

Confirmation Bias in Entrepreneurship

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Research findings confirm that individuals seek confirmation for their decisions and discount data inconsistent with their beliefs. This confirmation bias—the tendency to trust, remember, and act only on information that supports what an individual already believes—is pernicious and wide-spread and may also contribute to the high failure rate of entrepreneurial ventures because of those biases. The purpose of this paper is to help entrepreneurs be aware of these biases and help them understand that bias can be moderated using System 2 thinking, which is characterized as reasoned, reflective, and conscious.

INTRODUCTION

“People are always clinging to what they want to hear, discarding the evidence that doesn’t fit with their beliefs, giving greater weight to evidence that does.”
— Paula Stokes, *The Key to Everything*

Confirmation bias appears to be pervasive throughout many aspects of life, from scientific research to political opinion and financial investing. Lazaroff (2016) finds that investors also tend to collect confirming evidence when making financial investment decisions rather than considering all existing information. The influence of confirmation bias is more significant with existing beliefs because you are more likely to acknowledge evidence that coincides with that existing belief and carefully examine evidence that questions it.

The late comic satirist, Walt Kelly, created the popular American comic strip, Pogo. Kelly often used the comic strip to engage in social and political derision through the adventures of its funny, animal characters. Kelly’s strips often told us about ourselves—and the world around us and that malevolent or upsetting forces exist within us, not always outside us. Kelly’s most famous quote was expressed by the porcupine, Pogo, in the poster Kelly created to promote awareness of the environment and help promote the first Earth Day observance, held on April 22, 1970: “We have met the enemy, and he is us.”

Similarly, entrepreneurs face many external challenges such as competitors, securing capital/funds, or overcoming governmental agencies that refuse to issue the required business licenses, but some of the most challenging internal obstacles entrepreneurs face may be those played on them by their psyches regarding cognitive errors. Cognitive biases have a positive impact because they can help entrepreneurs make decisions without putting too much burden on their time and cognitive resources. However,

cognitive biases may also lead to errors because people make less rational decisions and discount available information (Simon & Houghton, 2002). Such errors or biases are hard-wired unconscious errors of reasoning that distort a person's judgment of the world and often lead to serious mistakes. Ariely (2009) noted that because of the limitations of our cognitive system, our thinking is frequently not rational and is strongly influenced by emotions, assumptions, unfounded beliefs, and other factors not normally thought of as influencing human thinking. In his influential book, *Thinking, Fast and Slow*, Kahneman (2011) summarized a large body of evidence indicating that humans are saddled with many such forms of bias, which together often interfere with individuals' capacity to make accurate and effective decisions, judgments, and choices. There is growing consensus that such research demonstrates that human thinking is not nearly as rational as once commonly believed (Gilovich, Griffin, & Kahneman, 2002; Stanovich & West, 2000).

Research findings (Baron, 2012) indicate that entrepreneurs may likely depend on heuristic thinking, more so than other persons—thinking that relies heavily on quick "rules of thumb" for making decisions and planning future actions. In part, this is because such thinking is almost a necessity under a condition of high information overload and high uncertainty (Baron, 1998) characteristic of the entrepreneurial environment. In fact, entrepreneurs tend to engage in heuristic thought more frequently than persons in other fields (Busenitz & Barney, 1997) suggesting that entrepreneurs may be more susceptible to cognitive biases.

Moreover, it is common for people who are particularly prone to cognitive biases to believe that they are capable decision makers (Russo & Schoemaker, 2002). As Shakespeare (1599/1600) wrote, "The fool doth think he is wise, but the wise man knows himself to be a fool," and though cognitive biases continuously impact every aspect of life, they also have an especially negative effect on entrepreneurs' likelihood of success. Nickerson (1998) indicated, "If one were to attempt to identify a single problematic aspect of human reasoning that deserves attention above all others, the confirmation bias would have to be among the candidates for consideration" (p. 175), and Lilienfeld, Ammirati, and Landfield (2009) observed that confirmation bias "... should be among psychological sciences most pressing priorities" (p. 390). Confirmation bias predisposes people not merely to interpret evidence in a self-fulfilling manner but to seek out evidence supporting only one side of an issue. This flaw is particularly problematic for entrepreneurs who tend to believe or seek out information to preserve their opinions or beliefs which can cause a gap in how people reason and how they should reason which causes individuals to make bad decisions.

CONFIRMATION BIAS

Approximately 400 years ago English philosopher, Francis Bacon (1620/2014), described what has since become known as confirmation bias:

Once a human intellect has adopted an opinion (either as something it likes or as something accepted), it draws everything else in to confirm and support it. Even if there are more and stronger instances against it than there are in its favor, the intellect either overlooks these or treats them as negligible or does some line-drawing that lets it shift them out of the way and reject them. This involves a great and pernicious prejudgment through which the intellect's former conclusions remain inviolate (46).

More recently, Baron (2012) defined confirmation bias as the "tendency to notice, process, and store only information consistent with current beliefs" (p. 32); i.e., people tend only to seek out information that supports their existing preconceptions, beliefs, viewpoints, and opinions. In other words, individuals like to look for and interpret information in ways that justify (confirm) their expectations. Confirmation bias is an elaborate way of explaining the human inclination to see what people want to see and is often described as "believing is seeing." Glick (2017) likens it to the Texas sharpshooter fallacy, in which after s/he has made the shot, the shooter paints a target with the bull's-eye on the bullet hole. Unconsciously and consciously, people seek out opinions and information that confirm what they already believe. Moreover, they tend to avoid, dismiss, or discount new information that is not consistent with their

preconceptions and what they already believe (Parker, 2006). People are more willing to accept evidence they concur with at face value and hold evidence they do not agree with to a much higher standard. Confirmation bias can lead individuals to draw distorted conclusions regarding facts that run counter to their views.

It seems that individuals want the external world that they interact with to be congruent with their thoughts, opinions, and notions. Any information—or interpretation of information—that opposes their beliefs, views, or pre-conceived notions creates dissonance in their minds that leads to mental discomfort. Humans seem to be programmed to reduce, or if possible, eliminate this mental discomfort, which is where the confirmation bias enters. As a result, people become locked into what has been termed "inferential prisons" (Baron, 2012, p. 29) where external information that is inconsistent with their current thinking tends to be ignored or dismissed as unimportant and disregarded rather than change their thinking. Moreover, information that refutes those expectations may be ignored or dismissed as insignificant (Russo & Schoemaker, 2002). Additionally, because entrepreneurs as a group are very high in optimism and positive affect—the belief that events will generate positive outcomes (Hmieleski & Baron, 2009; Lowe & Ziedonis, 2006)—there is a tendency to ignore relevant, negative information that intensifies confirmation bias. Finally, action is central to entrepreneurship (McMullen & Shepherd, 2006) and this emphasis on action together with entrepreneur's high optimism inclines entrepreneurs to mentally reconstruct experiences to avoid contradictions and to act while discounting information inconsistent with their beliefs (Geers & Lassiter, 2002).

An elementary example of confirmation bias in daily life is the preference of conservatives to watch Fox News and of liberals to watch MSNBC. Iyengar and Morin (2006) conducted an experiment to test how Republicans and Democrats viewed news from a variety of broadcast news outlets. They took news stories reported by MSNBC and randomly labeled them as originating from CNN, National Public Radio (NPR), Fox News, or the BBC. Participants in the study were given a list of headlines marked by the corporate logo of the four news organizations, and then they were asked to choose which stories they would like to read. Democrats preferred CNN and NPR. Republicans flocked to the stories they thought came from Fox (even though these stories were no different from those purportedly produced by NPR, the BBC, or CNN). Having a Fox label on a story tripled the hits from Republican readers. Meanwhile, the chances that a Republican would pick a story labeled NPR or CNN were only one in ten. Republicans even preferred to read Fox's stories about possible vacation destinations. It seems that people do not believe what they see or hear if it is inconsistent with their beliefs.

A more overwhelming example of confirmation bias in the field of medical diagnosis could have life-and-death implications. Physicians are known to be prone to the confirmation bias when diagnosing patients (Klein, 2005). A physician may instinctively form an opinion of the diagnosis after only a few short minutes of questions and answers with a patient. From that point onward, their questions—and interpretation of the answers—will be geared towards confirming their diagnosis.

Drew, Vö, and Wolfe (2013) questioned a group of radiologists to scrutinize a series of chest x-rays, in the same way, they would if they were looking for lung cancer. However, the radiologists were unaware that the researchers had incorporated into the x-rays a picture of something a medical professional would never expect to see: a gorilla! The picture of the gorilla was not small; it was about 45 times the size of the average cancerous lung nodule—or about the size of a matchbook in a lung. Nevertheless, some 83 percent of the radiologists missed the gorilla—even though eye-tracking showed that most of them had looked right at it. Thus, even when observers are experienced, or even expert at a task, spotting what is obvious might be a challenge for them if it is very far from what they believe or expect.

Confirmation bias appears in many related manifestations in the literature (Nickerson, 1998). For example, myside bias occurs when people evaluate evidence or test hypotheses in ways biased towards supporting their attitudes (Stanovich, West, & Toplak, 2013). Consider also motivated reasoning which refers to the general phenomena whereby people often seek out, interpret, and evaluate evidence in ways that are partial to their pre-existing views. Such motivated information processing—which can involve selectively attending to, ignoring, or distorting information to support existing beliefs—is a hallmark of

human thinking across a variety of circumstances (Mercier & Sperber, 2011). Snelson (1993) referred to the “ideological immune system” as human’s coordinated system of psychological defenses against evidence that contradicts their entrenched views. Confirmation bias almost surely contributes to ideological certainty and even ideological fanaticism by insulating peoples’ ideological immune systems from potentially contrary evidence (see Tavriss & Aronson, 2007, for a variety of real-world examples). As Calhoun (2004) observed, ideological fanaticism is marked by “an epistemological position regarding the incontrovertible authority of one’s own opinion” and a “complete lack of epistemological humility” (p. 350).

If permitted to operate unrestrained, this cognitive bias and its various incarnations can prevent entrepreneurs from succeeding in their efforts to convert even very promising ideas into useful products, services, or other beneficial outcomes because it reduces the entrepreneur’s capacity to be flexible in the face of changing conditions, and ability to respond to negative or conflicting information.

CONFIRMATION BIAS AND ENTREPRENEURSHIP

In the world of entrepreneurship and business startups, being subject to the influence of confirmation bias can also involve problems such as overestimating the extent to which others accept their belief systems, refusing to challenge core assumptions, and neglecting to search for unintended consequences (Halberstam, 1972). Entrepreneurs are known to be extremely driven people and intensely focused on their goal. Therefore, they may be especially vulnerable to the destructive effect of confirmation bias, leading them to ignore evidence that goes against their preconceived notions in such areas as 1) identifying the real competitors of the start-up, 2) methodically and rigorously analyzing what the competition is doing and how it may affect the start-up, 3) understanding what the company’s current and prospective customers need and want (it is usually not what one originally thinks), and 4) estimating the resources needed by the company to achieve its stated goals.

In all of the above examples the entrepreneur who is susceptible to confirmation bias will seek out information and analyze it in a way that will yield: 1) fewer competitors rather than more, because it increases the viability of the start-up, 2) underestimation of the capabilities of competitors because stronger competitors will make business more difficult for the entrepreneur, 3) view of the company’s product as fully addressing the needs of the customer because otherwise the start-up is at a weaker position in the marketplace, and 4) need for fewer resources rather than more because it generally makes raising money easier.

Such misinterpretations of the market are constructed to minimize the gap between the entrepreneur’s preconceptions about his/her startup and its relationship with the marketplace, and his/her understanding of reality based on information s/he collected and analyzed to reduce the mental dissonance in mind. Entrepreneurs need to be cognizant of the danger of operating under the influence of confirmation bias and devise ways to diminish the negative effects of that cognitive error.

MITIGATING CONFIRMATION BIAS

Allinson, Chell, and Hayes (2000) found that entrepreneurs tend to bypass rigorous analysis of decisions and favor more instinctive methods associated with abundant cognitive biases because they are determined and understand the time value of money and the competitive nature of most markets and industries. Entrepreneurs, unlike scientists, are unlikely to make decisions based on orderly time-consuming rational analysis (Simon, 1987). Nevertheless, there appear benefits of addressing decisions more analytically and reducing cognitive biases.

A McKinsey & Company study (Lovallo & Sibony, 2010) of more than 1,000 major business investments showed that when organizations worked at reducing the effects of cognitive errors in their decision-making processes, they achieved returns up to seven points higher. Thus, reducing bias in decision making can make a difference.

Interestingly, when examining the literature on debiasing techniques, many of these techniques are designed to shift mental processing mainly from what Stanovich and West (2000) referred to as a System 1 method of thinking (automatic, heuristic) to a System 2 (controlled, rule-governed) manner of thinking (Lilienfeld et al., 2009). This shift may permit System 2 processing to overrule more automatic propensities to consider only one's point of view (Stanovich & West, 2000).

Although relatively few researchers have attempted to debias participants against confirmation bias per se, some have targeted related cognitive errors that bear implications for this bias (Parmley, 2006). Galinsky and colleagues have reported some success with using perspective taking as a means of diminishing outgroup stereotypes (Galinsky & Ku, 2004; Galinsky & Moskowitz, 2000). Others (e.g., Anderson, 1982; Anderson & Sechler, 1986; Hirt & Markman, 1995) have found that "consider-the-opposite" or "consider-an-alternative" strategies can be at least somewhat effective in combating confirmation bias and related biases. Using these approaches, researchers instruct participants to generate rival points of view or imagine counterfactual outcomes for a set of events (Koriat, Lichtenstein, & Fischhoff, 1980). Considering alternatives is important. Finklestein, Whitehead, and Campbell (2008) noted that in judgment failures primary decision makers often arrived at choices without considering any other possibilities.

In many respects, the above techniques bear similarities to Baron's (2008) goal of teaching "active open-mindedness"; that is, the capacity to thoughtfully consider arguments on multiple sides of an issue. Such approaches also delay decision making which researchers have found decreases confirmation bias. For example, Spengler, Strohmer, Dixon, and Shivy (1995) showed that deferred decision making reduces confirmation bias among clinicians asked to make diagnostic judgments. Encouraging practitioners to slow down and reflect on their decisions may permit them to consider and evaluate alternative viewpoints (Parmley, 2006).

Furthermore, such techniques tend to sow seeds of doubt in true believers (Shneour, 1998). Indeed, Shneour quoted Oliver Cromwell's famous 1650 plea, "I beseech you, in the bowels of Christ, think it possible you may be mistaken" (p. 40) as a realistic credo for critical thinking efforts aimed at people with firmly entrenched views. Shneour argued that instilling even mild doubts can often attenuate the intensity of fanatical beliefs and open the door to further questioning of these beliefs. It may also render individuals less willing to act on their opinions.

The checklist and premortem decision-making protocols presented below were selected as examples of more and less comprehensive approaches to enhance decision making and strategic choices by tempering cognitive biases. Note that in each approach the following actions were advanced (see Table 1).

TABLE 1
KEY BEHAVIORS ENCOURAGED IN TWO DEBIASING PROCEDURES

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1. Promoting less perfunctory processing of information.
 2. Generating rival points of view.
 3. Challenging ideas and choices
 4. Tempering optimism and sanctioning doubt
 5. Legitimizing conflict and debate
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A Comprehensive Checklist for Entrepreneurial Decision-Making

A more disciplined decision-making process is needed to counter confirmation bias. Kahneman, Lovallo, and Sibony (2011) have offered a three-part, 12-question checklist intended to assist executives and leaders thwart cognitive errors in strategic choices (see Table 2). Gawande (2009) observed that a checklist improves outcomes in a wide range of fields including medicine, aviation, construction, and investing and that the power of a checklist is not that it improves one's skill, but rather that it makes sure an individual applies their skill consistently. These checklist questions have been adapted for entrepreneurs to assist them in overcoming various cognitive errors and to enhance their judgment and

decision-making processes. By using this practical tool, entrepreneurs can build decision processes that over time reduce the effects of biases and upgrade the quality of their decisions. The questions fall into three categories:

1. Questions entrepreneurs should ask themselves.
2. Questions entrepreneurs can use to challenge the people proposing a course of action.
3. Questions aimed at evaluating proposals and recommendations.

TABLE 2
CHECKLIST FOR ENTREPRENEURIAL DECISION-MAKING

<i>Questions</i>	<i>Rationale</i>
I. Questions that entrepreneurs should ask themselves.	
1. Are errors driven by the self-interest of anyone?	It is important for the entrepreneur to identify hidden agendas and self-interests that may be influencing a strategic discussion.
2. Are individuals overly fond of the strategy that they are proposing?	When evaluating preferred courses of action, individuals tend to minimize its risks/costs and exaggerate its benefits.
3. Are there dissenting opinions?	Entrepreneurs should strive to create a climate where dissent and conflict are viewed as healthy.
II. Questions entrepreneurs should use to challenge the people proposing a course of action.	
4. If the recommended strategy overly influenced by an analogous situation?	People sometimes use past successes to argue for a similar program and the entrepreneur must ask whether the analogy is appropriate.
5. Have plausible options have been considered?	Entrepreneurs need to ask what other alternatives were considered and ask for more than one recommended course of action.
6. Would we make the same decision a year from now, when different information might be available?	This is designed to force an examination of the adequacy of the data presented.
7. Where did the numbers come from?	Entrepreneurs need to ask where the numbers came from and request solid evidence or new analysis.
8. Can we assume that because a person or approach was successful in one area, that they (or it) will be just as successful in another?	Entrepreneurs need to eliminate false inferences and ask individuals to seek additional comparable examples.
9. Is the strategic recommendation overly attached to past decisions?	People tend to go with past practices, and the entrepreneur needs to challenge that and ask for a thorough rationale as if the decision were being made for the first time.
III. Questions aimed at evaluating the proposal	
10. Is there evidence of overconfidence?	The entrepreneur should challenge persons to take a harder look and adopt an outsider's perspective, thinking through what could go wrong.

<i>Questions</i>	<i>Rationale</i>
11. Are individuals overly cautious because they fear consequences?	Entrepreneurs need to realign incentives or remove risks, so colleagues are not too conservative in their recommendations.
12. Are disasters being neglected?	The entrepreneur might conduct a premortem, imagining that the worst has happened and constructing a story explaining why this occurred.

*Kahneman et al., 2011

Although the checklist is wide-ranging and complete and addresses many cognitive errors, time-pressed and action-oriented entrepreneurs may be concerned with the seeming “paralysis of analysis” that such a comprehensive list suggests. Therefore, a shorter, yet valid, approach is also presented and follows what Klein (2007a) refers to as a premortem.

Premortem

The last item in Table 2 presents the idea of a premortem. On any new undertaking, people frequently overestimate their chances of success (Moore & Healy, 2008). This results from a tendency to focus too narrowly on evidence that supports their preferred initial hypothesis and to underweight contradictory evidence—confirmation bias. One fix was suggested by psychologist Gary Klein who developed a procedure based on “prospective hindsight” (Wheeler, 1987) in which people think about future events as if they had already occurred, and then provide explanations for the outcomes. When contemplating a past failure, even if only imaginary, people tend to identify potential causal paths that are not surfaced in foresight. Indeed, Mitchell, Russo, and Pennington (1989) found that envisaging that an event has already occurred increases the ability to correctly identify reasons for the future outcome by 30%. However, the reason is not the temporal setting per se, but the certainty inherent in the hindsight condition. When individuals know for sure that something has happened, they tend to be more motivated and use different cognitive strategies to explain it; they provide more and richer reasons in hindsight rather than foresight condition. Applied to uncertain future events, prospective hindsight makes possible “historical foresight” in place of over-confident optimism and therefore spur decision makers to plan for a range of possible contingencies.

Klein (2007b) adapted prospective hindsight into a technique called premortem; that is, explaining a possible future failure of a policy before it is adopted or even decided. A premortem is the hypothetical opposite of a postmortem. A postmortem in a medical setting allows health professionals and the family to learn what caused a patient's death. A premortem in a business setting is a managerial strategy in which a founder imagines that a startup has failed, and then works backward to determine what potentially could lead to the failure of the startup. It comes at the beginning of a project or venture rather than the end so that it can be improved instead of autopsied. Rather than someone being assigned the role of devil's advocate, all participants are asked to imagine that a plan or project has failed and try to explain why it collapsed. With everyone contributing reasons, participants realize that authentic dissent is valued, and everyone can contribute by identifying potential problems, especially by suggesting reasons that are more insightful. The premortem method tends to prevent individuals from “fixating on a plan it may have to change or fixating on goals it may have to replace” (Klein, 2009, p. 236).

Unlike a typical critiquing session, in which participants are asked what might go wrong, the premortem operates on the assumption that the strategy/initiative/plan has already collapsed, and so asks what did go wrong. The members' task is to generate plausible reasons for the strategic failure. The leader starts the exercise by asking everyone to imagine that it is now sometime in the future—say six months from now and the project or venture has been a disaster. Each team member has the next three minutes to write down all the reasons he/she can think of to explain what went wrong. Once the three minutes are up, each person shares one item on their list, and a facilitator captures on a flip chart for all to see what each team member wrote down. After each person has shared one reason for the failure, then the participants

are asked to continue sharing one item each time, until everyone has exhausted their lists. This results in a list of all concerns. The group addresses the two or three items of greatest concern and then schedules another meeting to generate ideas for avoiding or minimizing the other problems. The premortem reduces the kind of damn-the-torpedoes attitude often assumed by people who are overinvested in a certain choice. Confirmation bias pushes individuals to avoid people with opposing views but engaging with them in a premortem can make people less susceptible to this error.

Asking the question this way, Klein (2007b) explains, has an almost magical effect. The heart of this technique is to envision a future event with certainty which, in turn, produces descriptions that are more specific and concrete, which may reduce some of the cognitive biases. It also removes the pressure from those who are worried about seeming disloyal by voicing concerns; indeed, this technique practically creates a competition to find ever more convincing reasons for failure. As Klein once put it, “The premortem technique is a sneaky way to get people to do contrarian, devil’s advocate thinking without encountering resistance” (McKinsey & Company, 2010). Another advocate of “prospective hindsight” argues that it works because individuals find it easier to imagine the detailed causes of a single outcome than causes of multiple outcomes (Pavitt, 2016). Klein (2007b) focuses on hypothetical failure, as opposed to success because it is the failure that people are so unwilling to confront. Nobel prize winner Daniel Kahneman (2011) says, “The main virtue of the premortem is that it legitimizes doubt. Furthermore, it encourages even supporters of the decision to search for possible threats that they had not considered earlier” (p. 265). Such a view is also supported by Bandura and Locke (2003) who observed: “In preparing for challenging endeavors, some self-doubt about one’s performance efficacy provides incentives to acquire the knowledge and skills needed to master the challenges” (p. 96).

SUMMARY AND CONCLUSION

We suffer from confirmation bias primarily because our biological hardwiring allows us to understand confirming data more easily, especially when the contradictory data is framed negatively. Berra, former New York Yankees player, coach, and baseball Hall-of-Fame member was arguing with an umpire when he is reported to have said, “I wouldn’t have seen it if I hadn’t believed it.” While Yogi was a master of malapropisms that twist the English language around in odd ways, he may have been particularly astute with this observation of confirmation bias.

While the rule of science is “seeing is believing,” the possibility that “believing is seeing” similarly occurs (e.g., Caruso, Mead, & Balcetis, 2009; Halberstadt, Winkielman, Niedenthal, & Dalle, 2009). A meta-analysis conducted by Hart et al. (2009 [samples from the U.S./Canada, Germany, Australia, and Italy]) pointed out that confirmation bias is a widespread phenomenon and can lead to errors in decision making for individuals, including entrepreneurs. Indeed, entrepreneurs sometimes display this error, overestimating the extent to which others accept their belief systems, refusing to challenge core assumptions, and neglecting to probe for unintended consequences (Halberstam, 1972).

Confirmation bias is caused, in part, by a person’s unconscious tendency to ignore, avoid, or distort information that would show a preconception to be wrong. This is because, in general, individuals are much more likely to notice when something happens than when something does not happen. By forcing themselves to pay attention to all relevant information in such situations, individuals are more likely to realize when their preconceptions are inaccurate. It is an automatic (unconscious) tendency to seek out and readily accept information that agrees with (confirms) their preconceptions and to disregard or discount information that contradicts (disconfirms) them. Confirmation bias serves to maintain and strengthen their initial opinions: they are much more likely to perceive and remember experiences that confirm their prior beliefs and to overlook or reinterpret those that disconfirm them. Thus, over time, the confirmation bias results in these beliefs becoming so well established in people’s minds that eventually they consider them to be common sense and obviously true.

If individuals wish to minimize the effects of confirmation bias, they must force themselves to look for and examine closely both confirming and disconfirming evidence. Two systematic, disciplined strategies were presented which may reduce the deleterious effects of confirmation bias in the

entrepreneurial context. The more comprehensive process to counteract several cognitive errors involves entrepreneurs addressing 12 key questions before deciding on final choice, while a more abbreviated method, referred to as the premortem protocol, requires that entrepreneurs project themselves into the future, imagine the worst has already happened, and make up a story about how such a debacle happened. Both approaches function by asking entrepreneurs to look for ways that challenge what they think they see and to seek out information from a range of sources, and to consider situations from multiple perspectives.

Finally, to assist entrepreneurs in addressing confirmation bias it may be helpful to remind them of the ancient fable of "The Blind Men and the Elephant" where each of the men approaches the elephant from a different angle, and, using only their sense of touch, discusses what they find. "It's a rope," says the man holding the tail. "No, it's a snake," says the one holding the trunk. The man holding the tusk thinks it's a spear, and on they go. The men then began arguing among themselves. Each blind man insisted that their description was correct and that everyone else was wrong. Only when they paused and took the time to listen to each other and combine their knowledge, were they able to develop a complete picture of the elephant.

There are several lessons to be learned from this story, but the one most relevant to this discussion is "confirmation bias". In other words, we are all biased to some extent. It is part of being human. But confirmation bias often prevents us from growing and making positive changes in our lives. The lesson, of course, is that people see what they want or expect to see and tend to disregard evidence that does not support their own opinion or preconceived notions and are limited by their perceptions and life experiences that can lead to limited access and overreaching misinterpretations. Understanding that those differences exist and being able to consider the world from other's viewpoint is an indispensable part of developing successful strategies and overcoming the confirmation bias.

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