CHAPTER 7

Crafting Rational Faith

Do you wish us then to set down two forms of persuasion, one that provides belief without knowing, and one that provides knowledge?[1]

—SOCRATES

The Goal of Faith

A NUMBER OF YEARS ago I flew into Pittsburgh late at night, rented a car, and drove to a hotel for a short rest. As I left for work the next morning, I was plagued by a growing suspicion that something wasn't quite right. Finally succumbing to my concerns, I pulled over after a few blocks and discovered a receipt confirming that I was driving a car rented by someone else![2] Returning to the hotel, I found my car just where I had left it the previous evening and executed a quick swap before someone could spot my mistake and possibly conclude that I was a thief.

Now it is not unusual for folks occasionally to mistake someone else's car for their own and even to go so far as to try to unlock it but seldom does one successfully drive away in the other vehicle. In any event, this scenario suggests an analogy to help set the stage for our considerations of faith and reason. Let's call this sort of behavior "transportation faith" and let our confidence that some particular vehicle belongs to us and constitutes our

1. Plato, *Gorgias*, 36.

2. Although I believed that I was driving away in the car I had rented, the probability value of that belief was less than 1.0. In everyday language, I had doubts. But doubt can only arise in the context of faith. In fact, *doubt is faith—in the other side*.

personalized mode of transportation represent a more general belief that a certain course of action is the best way to move us from one position to another in some space of possibilities (perhaps involving relationships, education, career, health, skill acquisition, or whatever). You might, for example, engage in some relationship with the conviction that doing so will transport you from an emotional abyss to a euphoric high or spend countless hours practicing tennis thinking that your efforts will earn you a spot on the team.

This analogy makes it easy to identify four important variables associated with any and all applications of faith, typified by the types of examples just suggested. These variables are:

1. the objects of one's faith
2. the significance of those objects
3. the probabilities associated with faith in those objects
4. the accuracy of the probabilities

As apparently innocent mistakes in vehicle identification suggest, faith can be misplaced—that is, placed in the wrong objects—even when (as in my unusual case) most of the signs indicate it is correct. Divorce, disastrous career moves, significant time expenditures with no perceivable benefit, financial investment failures, and so forth are all testimony to this fact. Naturally, misplaced faith need not be in objects as momentous as these. Realizing that a class one thought would be easy is not, finding that a new recipe tastes terrible, learning that, although one is an excellent skier, snowboarding cannot be mastered overnight, or making any of a practically unlimited number of comparable discoveries indicate that our faith about even the most mundane of things can be wrong.

As we've already seen, faith in anything does not have to be absolute. Because faith is a matter of probabilities, even a misplaced belief can be partial. My own "transportation faith" described above was sufficient to make me drive away in the wrong car but not so great that I didn't eventually acknowledge its limitations and look for evidence to raise or lower its probability value. Upon discovering the other renter's receipt, one probability (that I was in the right car) plummeted while another (that my car was still at the hotel) skyrocketed. What I hope you see from this example and its analogous extensions to virtually all areas of life in which belief is operative—which means all areas of life—is that just thinking the probability is high does not and cannot guarantee the validity of a belief. Just because something strikes us as reasonable, it can still be wrong. If faith is to be sound, rational, coherent, and justifiable, the probabilities must be accurate.

They do not, however, have to be high. A justifiable probability for obtaining heads when flipping a balanced coin is 0.5 (i.e., a fifty-fifty chance) and there is no merit (except to a casino owner) in your assuming a higher (or lower) value. Ultimately, it is the accuracy of the probabilities associated with one's beliefs that makes them better or worse than another's (or that distinguishes them from one's own beliefs at other times).

In short, even though all faith is based on some reasons, the reasons are not always good and the strength of a belief is not enough. Given sufficiently strong beliefs, we will accept something, promote it, engage it, or do it even if it is wrong—merely believing that it is right will be adequate incentive. Sometimes those erroneous beliefs will have notable consequences (as with the thalidomide-induced deformities in newborns in the mid-1900s) while others are held with little noticeable effect for a lifetime or even across multiple generations and may be seen only in retrospect to have any real importance (e.g., belief in a geocentric universe). We have already noted, however, that we can seldom be certain about the ultimate importance of things—that assessment itself being an act of faith—so it seems appropriate to want to maximize the accuracy of our beliefs.[3]

I believe it is in this spirit that Barbara Taylor defines faith as, "a radical openness to the truth, whatever it may turn out to be."[4] Such a fundamental embrace of the search for truth, however, is less a definition of faith and more a description of the essential ingredient for achieving the proper probabilities for our beliefs; for making faith substantive. It is this openness to truth that can, in very real ways, set us free.[5]

Whether we want that freedom or not is an entirely different question. Most of us have to look no further than ourselves to find examples of people who take such comfort in one belief or another as to protect it at all costs. In those cases, the truth is the last thing we want.[6] In light of our usual desire to

3. Because our appraisal of the significance of a belief is itself a belief (i.e., a belief about a belief), that significance is, therefore, just another object of belief and all four of the variables discussed apply in that application of faith as well. (This also applies to our belief about the accuracy of the probability we assign to a belief.) You might detect a recursive nature to this scenario (i.e., we can have beliefs about beliefs about beliefs and so on), but we typically are not competent to process the probabilities or even identify relevance of these beliefs beyond the second level (i.e., belief about a belief) without significant effort and in many cases we don't even get that far.

4. Taylor, *Luminous Web*, 6.

5. Although Jesus' claim that "the truth will set you free" (John 8:32) was provided in a specific theological context, it is relevant to any domain in which we are subject to being enslaved by false beliefs.

6. Or as Jack Nicholson bluntly remarks to Tom Cruise in the movie *A Few Good Men*, "You can't handle the truth." This might extend to the truth about self,

appear rational, however, this is a most curious state of affairs and it is hard to see much long-term advantage in adopting or holding onto an unreasonable faith in anything.[7]

Consequently, this chapter is predicated on the idea that maximizing the accuracy of one's beliefs (i.e., increasing their truth content) is a worthwhile objective.[8] Believing that such a goal has value is, of course, itself an act of faith[9] but being correct about our beliefs seems preferable to being incorrect and this is how we will proceed. In the course of exploring this goal, we will find it helpful to contrast faith with wishful thinking, consider the extent to which the pursuit of rational faith is within our control, analyze the requirements for acquiring and maintaining rational faith, and identify various impediments to such a quest.

Wishful Thinking

It is common practice for many religious folks to ask a blessing prior to consuming their cholesterol-laden meals but one has to wonder how much faith is warranted in such a request. Considering what we now know about the content of our daily fare and the health consequences of consuming its ingredients, it might be a tad presumptuous to believe God would spare us from something we do to ourselves. Yet the idea that I can eat whatever I want without potentially harmful repercussions is really not faith at all, but wishful thinking. Unfortunately, faith and wishful thinking are easily

relationships, or other beliefs held dear.

7. Reason cannot exist without faith but faith can and often does exist without reason ("reason" in the sense of rationality, not unsubstantiated or irrational "reasons"). The quest for rationality seems to be behind the following remarks by psychiatrist Carl Jung: "I don't believe. I must have a reason for a certain hypothesis" ("Face to Face"). Jung's "reason," of course, is really just a way to change the probabilities so as to make a "belief" take on the persona of irrefutable knowledge. Even what Jung claims to "know" is still a belief.

8. I'm distilling thousands of years of epistemology into the simple equation *truth = what is correct* (i.e., what really happened; the right explanation; what can be verified) quite aware that all of these other terms require explication. But we must have some materials with which to work and this is a starting point.

9. Pirsig identifies this role of faith but takes a less positive view of rationality (*Zen and the Art*, 275–6). However, although exalting rationality may not be popular with everyone, it seems preferable to promoting irrationality (which apparently thrives without much conscious help on anyone's part). Even Pirsig's analysis of a "qualityless" world has a rational flavor to it.

confused. If we are interested in obtaining and maintaining sound faith, however, it is imperative that we distinguish between the two.[10]

"Wishful thinking" (or "hope") is what we want to happen. Our hopes are a reflection of how things would be if we were in charge. Consequently, we can hope that something is true or that some event will transpire without any significant belief that it actually will. We sometimes hear the claim that some people just believe what they want to believe but it is more accurate to say that those people hope what they want to believe. Many people, for example, play the lottery with high hopes that they will win, but the odds of actually doing so are the only sound measure of a legitimate faith in winning and that faith must necessarily be low. An accurate faith is hardly sufficient to motivate the gambler—only hope can do that.[11]

For instance, the only legitimate quantitative measure for faith in the outcome for the roll of a balanced die is 1/6 so one would need a motivating boost from hope if contemplating a bet. One part faith and five parts hope may be adequate inducement for a gambler but it is hard to call such an optimist rational. The appearance of improved odds is, for sure, just an illusion but it is the same type of illusion that is always produced when wishful thinking is conflated with faith.[12]

The effects of fusing (and thereby confusing) faith and hope are as far-reaching as the areas in which we do so, which is to say all areas. In the face of an 80 percent chance of precipitation we will sometimes schedule an outdoors event anyway in the hope that it won't rain on our party, even though the rational component of our decision only stands at 20 percent. We may excuse ourselves by questioning the forecast accuracy[13] but, unless we know the prediction history of the meteorologist, we are merely falling back on hope. The anticipated outcomes of asking for a date, taking an

10. *The Wit's Dictionary* (Bowles) defines faith as "Throwing your heart over the bar and letting your body follow." Although this characterizes the way many people view faith, it is really a description of wishful thinking (blind faith).

11. Many people who understand the probabilities but still gamble claim to be motivated by pleasure. Perhaps—there may be a number of arguable minute contributions to any motivation. But, if there was no hope of winning, any other factors would quickly evaporate (i.e., the pleasure is intimately connected to the hope). If you doubt this, contemplate the pleasure involved in putting a match to a twenty dollar bill (i.e., where there is no hope of a positive return).

12. The gambler may maintain that he has a high level of faith in his chances but, no matter what he calls it, anything he estimates beyond a one-in-six chance is wishful thinking (or blind, poor probability faith). Unlike contrived examples, however, one is seldom able to know the actual probability that should be associated with some belief.

13. The National Weather Service has discovered a way to make forecasts with complete certainty. Consider the following infallible snow forecast: "chance of accumulation less than one-half inch possible."

exam, or following a physician's prescription are all gauged on some mixture of faith and wishful thinking—what we can honestly expect to happen and what we hope will happen. Religious thinking can also have this character though it need not always do so.

Despite the fact that it is often difficult and perhaps even painful to identify the relative components of faith and hope in our perspectives on any particular subject, it is an important undertaking. Although there will inevitably be those who try to live in a dream-world, we are, presumably, more successful attempting to conduct our lives on the basis of accurate predictions about what we can expect than on what we simply hope will happen. I may hope that my salary doubles in the next year, that I garner a Nobel prize for my scientific research and a Templeton prize for my contributions to thinking on science and religion, that enrollment in my department quadruples with the next incoming class, that I live to be 500 years old in perfect health, and so forth but the only high probability event associated with any rigid plans I might make based on those hopes is that I will appear a fool to those who know me.

Correctly distinguishing between faith and hope thus enhances our prospects for leading rational, successful lives but it also enables us to identify areas in which we can attempt to change the probabilities associated with our existing faith. I'll have more to say about this shortly but the thing to note here is that hope is a powerful motivator. Recognizing that what we have been calling faith is really just wishful thinking can encourage and inspire our efforts to increase our faith. This is all part of the search for truth but any honest effort in this regard acknowledges that the faith in question might well decrease. The results, then, may be nothing like we had hoped, but that is sometimes to be expected when wishful thinking is the primary motivator.

Occasionally we are so hostile to this idea that we will go to great lengths to protect our hopes. Wishful thinking can cause people to try to convince themselves of a probability for something and to ignore the actual probabilities supported by evidence. But attempts at rationalization are frequently irrational and trying to disguise wishful thinking by masquerading it as belief is not to our credit. It is not unusual, for example, to find individuals living in the hope that they do not have some particular health problem (such as cancer), despite the fact that they possess a variety of symptoms and have managed to find creative ways to rationalize each of them. When the diagnosis finally comes, the difference in reasonable belief based on dispassionate evaluation of the evidence stands in stark contrast to what is then clearly seen to have been wishful thinking. In other cases it may prove equally easy to fabricate (rather than ignore) evidence to support some particular hope.

None of this is to demean hope per se. Hope is an important part of our humanity and is a well known motivator for all sorts of heroic and otherwise memorable deeds in the face of overwhelming odds.[14] But, despite their intimate relationship, faith and hope are not the same. In fact, that relationship can take on all sorts of values.[15] Faith can be accurate or not and the accompanying hope may be intense or weak. A range of combinations is conceivable and the interaction can be productive or destructive.[16] In general, however, the more accurate our faith the less prone we are to what can easily become an unhealthy reliance on hope. Indeed, rational faith can generate hopes with improved chances of being fulfilled.

Does Faith Just Happen?

Faith Happens is the name of a movie[17] and at least two websites[18] but is the sentiment correct? Earthquakes and hurricanes happen, cancer happens, accidents happen, and, lest we be too morbid, plenty of good things happen. For example, I recently spotted a billboard (for a casino) proclaiming, "Winning happens" (losing does too but losers lack the funds with which to erect billboards). So, does faith happen? Do marriages? Does getting a degree? Certainly all these things happen but I hope that, even in my short list, you detect the two fundamentally different ways in which they do. Some things, as we know from bitter or sweet experience, appear to be well beyond our control. Many others, however, seem at least partially subject to our thoughts and actions. Where does faith fit in this picture? In what sense does faith happen?

The strict determinist, obviously, believes that nothing is really within our control. From such a perspective, faith happens to us (or not) pure and simple[19] and even that belief (or lack thereof) is not our doing. I must con-

14. We might, however, question Petersen's claim that "hope shapes the future as much as anything else" (*Minding God*, 188). Peterson suggests that the basis for hope is "what we believe should happen" (ibid.). Perhaps this is frequently the same as what we want to happen (i.e., how I have defined hope), but although most of us probably believe that speeding motorists should be fined, our hope is that we, personally, are not.

15. When choice is involved, a sometimes useful way to consider the relationship is: motivation = faith + hope.

16. When the probability between two options is nearly even, the choice might be based on hope.

17. Garside, *Faith Happens*.

18. At the time of writing.

19. This seems to be the Calvinist perspective in (one line of) Christian theology but it is characteristic of any fatalistic viewpoint, religious or not.

fess that I don't have much use for strict determinism, as it provides little in the way of logical (or hopeful) suggestions as to why or how we might consider trying to progress as humans[20] but there are at least two senses in which it is correct to note that faith is outside our control.

In the first place, we have no choice about whether we will or will not have and use faith. Much of our discussion so far has emphasized emphatically that faith is not something we take or leave. Faith is not an optional cognitive accessory but is integral to who and what we are. In that sense, faith is beyond our control. Furthermore, as we noted in the chapter on faith and brains, both the operation of neurons and the status of the environment in which those operations occur are largely outside our control. Consequently, in many (if not most) circumstances, we sub-consciously form the probabilities that compose our faith. From this perspective, our conscious role in the process appears to be minimal. We may, for instance, occasionally be asked to characterize our belief about something and be surprised to discover that we can readily state and perhaps even defend a point of view even though we have never consciously considered the issue.

If that were the extent of the story, we might as well be zombies but there is more to say than this. In a very real sense we can play an active role in the pursuit of reasonable faith—that is, faith that can stand up to serious scrutiny or challenges to its validity. Every time we consciously determine to engage in a task that holds the potential to modify the confidence with which we hold a belief, we exercise some measure of control over how faith "happens" in our lives. From this perspective, aspects of our environments outside our direct control may yet be within our ability to influence indirectly. For example, we have little say over the facts, figures, and viewpoints presented in any specific lecture, speech, sermon, play, movie, or book but the choice to attend a particular college or church, to take this or that course from one instructor or another, to regularly watch a select movie genre, to read specific authors, or to avoid certain venues at all costs indirectly affect what will ultimately play a potentially significant role in shaping our beliefs. In short, there are important ways in which the quality of our faith is up to us. We can't help but have faith but we can help the faith we have.

20. If we think deity or destiny is manipulating our choices then what we believe, think, or do is already determined. A strict deterministic perspective, then, may not eliminate faith but it does make it superfluous.

The Quest for a Reasonable, Rational Faith

Presumably one could undertake the pursuit of an unreasonable, irrational faith but if we are content just to let faith happen, that will occur automatically with no special assistance from us. In any case, I will proceed in the hope (which, because I don't know you, is the best I can do) that you have more lofty ambitions. But be forewarned: I do not use the word "quest" lightly. Building a defendable faith can require significant commitment, beginning with the choice of where to concentrate one's efforts. Due to various limitations discussed in the previous chapter, we can't expect to attain the same high level of rational justification for all of our beliefs, and choosing focal points is itself an act of faith about what is of real importance. This is, of course, a dynamic process in which changes to a belief can cause us to reevaluate the perceived importance of the belief itself. Such feedback may lead us to divert our energies elsewhere.

The pursuit of rational faith is affected by a number of factors including our heritage, the quantity and quality of evidence involved, the approach we take toward such a task, and various obstacles that can impede our progress. Our goal in the following sections is to investigate each of these factors in order to gain insights that can contribute to a successful quest.

Recognizing the Context in Which Faith Forms

Despite its many positive benefits, what we can call "cultural inertia" is often to blame, both for the character of our thoughts and behaviors as well as our difficulty in escaping them when they are in error.[21] However, although acknowledging that one's heritage plays a significant role in shaping belief is important, just knowing it is not enough. Our hopes of achieving a rational faith with respect to any subject are contingent on keeping this constantly before us. The vehemence with which we often cling to cherished beliefs is testimony to the difficulty and reluctance we have in doing so.

I want to make it perfectly clear from the outset I am not suggesting that those cherished beliefs are wrong—only that they might be. Unless we recognize that, the quest for rational faith is stillborn. Furthermore, this is not a one-time concession. Even closely held beliefs that are the result of a long, careful process involving considerable research and reflection are

21. Consider: "Childhood acculturation strongly influences adult behavior; it shapes both our expectations and our sensory experience of the world in which we live." McNamara, *Evolution, Culture, and Consciousness*, 131.

acquired within some particular scientific, religious, or cultural paradigm. Paradigms themselves, however, are subject to change.

Several hundred years ago our ancestors learned that commonly accepted beliefs about the structure of the universe were wrong. Less than two hundred years ago sufficient evidence had accumulated to suggest that creation was an extended, dynamic process. It has been only a little over a century since people were faced with the knowledge that long-held beliefs about the absolute nature of motion, length, mass, and time didn't stand up to scientific scrutiny. Even more recently, behaviorism has yielded to cognitive science.[22] Changing views on slavery, gender roles, and ethnic equality are testaments both to changing beliefs and the difficulty associated with making those changes in socio-cultural contexts. The multiplicity of religions suggest that competing paradigms may exist for significant periods of time regarding matters of supreme importance, but even within any specific religion one can find diverse and changing views.[23]

Kuhn notes that new paradigms often take hold fully only after the proponents of the older paradigms have died off.[24] I hope you find this a sobering thought. His observation is undoubtedly true in areas other than science and applies to issues not large enough to count as paradigms. Most pointedly, it suggests that some folks are so bad at recognizing and correcting the grip of a flawed belief that only death can break its hold.

We often recognize the defect in others, asserting that they are stuck in a rut, narrow-minded, or old-school. At the same time we excuse our own blindness, calling it common sense or professional integrity, announcing that we will not yield to pressure, or merely protesting that you can't teach an old dog new tricks. I am inclined to suspect the beliefs of anyone who sees himself as an old dog but organ donation or some heroic act seem more profitable ways for one's death to contribute to the progress of mankind than the mere removal of one more instance of faulty and outdated beliefs.

For these insights to be useful, however, generalities will not suffice. To really appreciate the extent to which our beliefs are the product of the environments in which we find ourselves it is necessary to engage in specific

22. The classic look at paradigm shifts in science, including some of the ones mentioned here, is provided by Kuhn (*Structure*). Building on Kuhn's insights, Barker (*Discovering the Future*) shows how the paradigm concept can be extended to other domains and how easy it is to become so wedded to a paradigm that one misses significant possibilities.

23. The Protestant Reformation is a fine example. Barbour (*Religion and Science*) devotes an entire chapter to a discussion of similarities between models and paradigms in science and religion.

24. Kuhn, *Structure*.

personal analysis. This can be disconcerting but is a necessary first step along the path of rational faith. To get started, take a look at Figure 1 and complete the following sentence for as many of the areas shown in the cloud callout as you have courage to try: "If I had been born in _____ (place) in _____ (time), I would probably believe _____."

Figure 1. Contemplating the role of environmental context in shaping beliefs

For instance, you might say, "If I had been born in Ireland in 1824 I would probably not believe that humans could fly"[25] or "If I had been born in India in AD 300 I would probably believe in reincarnation."[26] Play around with different countries; contemplate ancient and modern eras. The exercise will be most beneficial if you are as specific as possible but don't feel too constrained by the template. The place and time of our existence are clearly crucial to the content of our beliefs but so are our gender, race, socio-economic status, and so forth. The offspring of aristocrats might, for example, believe that a monarchy is the most desirable form of government

25. Actually, this is tantamount to what William Thompson (aka Lord Kelvin), born in 1824, did seem to believe. Consider the following excerpt from his December, 1896 letter to Baden Powell: "I have not the smallest molecule of faith in aerial navigation other than ballooning or of expectation of good results from any of the trials we hear of. So you will understand that I would not care to be a member of the aeronautical Society" (Lienhard, "Baden-Powell"). Kelvin's view probably made it difficult for him to entertain any beliefs about frequent flyer miles.

26. Which, presumably, opens the door to a variety of flight possibilities not entertained by Kelvin.

while peasant children could conceivably be swayed otherwise, regardless of the country or era in which they live.

It is impossible to make a serious attempt to follow through with this exercise without squarely facing the prospect that beliefs underlying practices that the majority of humans currently consider abhorrent—slavery, cannibalism, kamikaze attacks, human sacrifice to appease some deity, plundering and pillaging—have been considered by others acceptable and in certain cases even sacred duties. Clearly there are some people who still see them so. Only disbelief in the power of environment can prevent us from admitting that, in another place and time, we could be those very people and that any immunity we think we have from such beliefs has its own environmental origin.

Believing that slavery, cannibalism, and the like are acceptable may seem far removed from our current beliefs but if you and I are, in principle, capable of believing any of these, what might we not believe?[27] If environment can exert so dominant an influence in matters of such consequence, all of our beliefs must surely be susceptible to its influence.[28]

The mental image I hope you are creating is of multiple hypothetical instances of you, a collection of virtual clones, each with a unique set of beliefs about what it means to be human, the source of meaning, the nature of God, how to find truth, the extent of human limitations, and also those myriad day to day circumstances and behaviors that receive the majority of our attention. One version of you votes Republican, another Democrat. Some versions have no chance to vote but believe that is the way things should be. Three instantiations of you are Hindu, five Islamic, and six are Christian. Several have no specific religious beliefs. Each individual embodies your beliefs as they would exist in a different time and place. There is one you that hates another you. Still another believes it is wrong to hate.

If this is too abstract, imagine that you and your spouse produce a large number of children who, immediately after birth, are shipped off to all

27. In his intriguing look at customs, many of which would appear to all but the practitioners as exceedingly peculiar, Montaigne asks: "What power does she (i.e., habit) not have in our judgments and in our beliefs?" (*Essays*, 79). Psychologist Richard Bentall, for example, notes that "people see ghosts because they believe in them" ("Why There Will Never be a Convincing Theory of Schizophrenia," in Rose, *Brains to Consciousness*, 132). For a humorous look at belief formation in American society, see Miner, "Body Ritual Among the Nacirema."

28. Kaufman refers to "a world-picture that will be largely taken for granted in all future acting, thinking, planning, exploring, meditating, and ongoing living" (*Jesus and Creativity*, 82). Of course I am hoping (and Kaufman too, I think) that we can see the extent to which we take things for granted and find the wherewithal not to do so in such a perfunctory manner.

corners of the globe. For many years they are raised by surrogate parents, educated and otherwise steeped in the culture in which they have landed, but having no contact with you. When you eventually decide to hold a family reunion, what can you expect to find? Well, we all know what to expect because it would be quite close to what we actually observe with the large number of infants from other cultures who are adopted by U.S. parents and grow up sharing the basic belief systems prevalent in their new environment.

Among the myriad possibilities for beliefs, each of us has materialized in a specific environment that promotes the acceptance of one particular sub-set. It is inconceivable that all of those beliefs we call our own are correct. Recognition of this fact can entail two quite different responses. One is to worship at the altar of cultural relativism, exalting the diversity of beliefs and thinking that, in some fundamental way, they are more or less equivalent or at least that there is little hope for distinguishing their relative merits. The alternative is based on the assumption that all beliefs are not equally meritorious. This approach embraces the search for truth and acknowledges that environment is not the whole story. It concedes that we cannot escape our environment but that we can learn how to interpret it. Both approaches are themselves beliefs, certainly, but whereas the first suggests resignation, the latter offers promise that we can discover a justifiable sub-set of beliefs (including beliefs about what really matters).

The Importance of Evidence

Imagine that you have been summoned to jury duty. Here are the prosecutor's sole remarks:

> Your honor, the defendant is undoubtedly guilty. He has the look and demeanor of a scoundrel. I feel it, your honor! In all my experience there has never been anyone whom I believed more clearly to be at fault. Why, last night, I even dreamed that he was guilty. Take my word for it, he's the culprit. What more need I say?

I daresay you would be astounded if your fellow jurors voted to convict on the basis of those remarks. How could there be no reasonable doubt in their minds? Where is the evidence? You may question whether the prosecutor passed the bar, perhaps even feeling confident that he stopped at one on his way to trial because, without evidence relating the accused to the crime, there is no way you (or your peers) would consider him guilty. A juror's assignment is to arrive at a conclusion about the truth of a matter

and those bogus legal comments above strike us as bizarre precisely because they neglect the evidence we expect and consider essential for doing so. God may have explained to the lawyer that the defendant was guilty but unless we overheard that conversation we would expect some other kind of corroboration. Unfortunately, what seems so obvious in court often escapes us elsewhere.

Consider the tendency to discount the need for evidence. We learn in high school physics (or earlier) that, in a vacuum, falling objects accelerate toward the earth at the same rate. Yet if Aristotle had been our teacher, we would have been instructed otherwise.[29] We might well wonder how such a sage could get it so wrong but Galileo, who helped rectify the erroneous belief, made it clear: "I greatly doubt that Aristotle ever tested by experiment whether it be true."[30] The evidence was there for the taking but was left untouched, not only by Aristotle but, apparently, by everyone else for the next nineteen hundred years. Did they, like our cartoon lawyer, merely "feel" the truth of their beliefs?

I hope it strikes you as a matter of some concern that if distinguished Greek philosophers can appear to have disregarded the need for evidence it does not bode especially well for the rest of us. The tendency of all those people living in the period between Aristotle and Galileo to do so was no doubt partly due to the context Aristotle bequeathed them, but blaming others for our own failures to look for or consider the importance of evidence does little to solve the problem. It is not that most of us make a conscious decision to overlook evidence, although that can happen. The fundamental problem is that we usually just fail to make any conscious efforts not to ignore it. Such disregard is a passive byproduct of the failure to fully appreciate its importance.

Francis Bacon was an early and persuasive spokesman for the role of evidence in the sciences, as well as the need to handle it well. He looked to nature, first and foremost, for the evidence he saw to be essential to its proper interpretation,[31] a sentiment echoed eloquently several hundred years later by the theologian Henry Drummond:

> The danger of philosophy putting in the ends is that she cannot convince everyone that they are the right ones. And what is the valid answer? Of course, that Nature has put in her own ends if we would take the trouble to look for them. . . . The philosopher

29. Aristotle, *Physics*, book IV, Part 8.

30. Galilei, *Two New Sciences*. As Ferris notes, "We can live by dogma or discovery" (*Science of Liberty*, 261).

31. Bacon, *Great Instauration*, Preface.

> requires fact, phenomenon, natural law, at every turn to keep him right; and without at least some glimpse of these, he may travel far afield.[32]

I suspect that most of us deem many of our other convictions to be at least as important as what we think about nature, so why we would be satisfied with any less rigor in those non-scientific beliefs is something of a mystery.

Even when the evidence is clear, we may choose not to follow it—sometimes with serious consequences. Confirmation of this disrespect for evidence is all around us. Though few argue with the validity of the Surgeon General's warning about smoking, the perils of texting and driving, or the odds of successful gambling, lives are frequently ruined because people behave as though there was no supporting evidence.

But this is not only a matter of picking and choosing which evidence we will consider and which we will not. Sometimes it simply involves settling for something inferior. For example, in deference to his otherwise significant contributions to our thinking, one might be inclined to give Aristotle the benefit of the doubt and believe that he merely relied on inferior evidence for his conclusions about the effects of gravity. Yet, the simplicity of Galileo's demonstrations suggests that any such "evidence" couldn't have been too substantial. The best we can say for Aristotle in this case is that, despite the flaws in his thinking, at least he was doing so.

It is easy, however, to deceive ourselves about the depth of the thinking we do. This is one of the dangers of rationalization. As the handy servant of wishful thinking, rationalization can frequently be seen as a sad attempt to justify a belief at all costs. Although that is far from rational, there is a cure. It is called evidence.

However, even when we appear to be thinking, our beliefs can take a prearranged path. Many times we follow the evidence to a foregone conclusion—a destination to which we have determined ahead of time it will take us. This is part of the problem with theories that are not "falsifiable," a term popularized a number of years ago by philosopher of science Karl Popper in his attempts to characterize legitimate scientific theories.[33] A theory that can be falsified is one for which it is possible, in principle, to show that it is wrong. If there is no conceivable evidence that could falsify the theory, according to Popper it cannot be labeled scientific. Consequently, Popper considered Marx's economic theory and Freud's psychoanalytic theory non-scientific because any observations one might make can be worked into the framework

32. Drummond, *Ascent of Man*, 19.

33. Popper, *Philosophy of Science* in Mace, 155–91.

of their hypotheses. There is no way to prove them wrong, not because they are necessarily incorrect but because they are too general—they take no risks. Popper is careful to note this does not mean they are in fact wrong—he believed there was merit to Freud's ideas, for example—but that their inability to stand up to the falsification criteria saps them of any claim to scientific legitimacy. A genuine scientific theory, in contrast, makes predictions that could, due to some observation (e.g., perhaps via experiment), be undermined. Even Aristotle's hypothesis about falling objects was falsifiable, though it took hundreds of years for the necessary observations to be made.

When a theory is not falsifiable, it entails the adoption of a foregone conclusion. As a result—as Popper noted[34]—anything subsequently considered from the perspective of that theory will only appear to confirm it. Even in theories deemed falsifiable it is possible to insert components that are not. For example, it is easy to attribute the bright red plumage of a male cardinal to its adaptive evolutionary advantage for attracting potential mates. That perspective, it then seems, makes the transitory coloration of the chameleon appear problematic. How is it to be found by its would-be suitors? On the other hand, the ability of the chameleon to match its color to that of its environment can be considered a protective adaptive evolutionary advantage that enables it to avoid predators. But doesn't the bright coloration of the cardinal attract its enemies? The problem here is not with the theory of evolution in general[35] but in making it too general. If the theory was nothing more than a vacuous truism that survivors survive, it would have little to offer in the way of useful explanation and practically anything could be made to fit its preconceptions.

But I am not primarily concerned here with scientific theory alone. I have used this example because what can occur in association with a presumably rigorous discipline such as science can easily take place in other areas of our thinking where we are subject to interpret things in the darkness of our foregone conclusions. Even the very evidence that could and sometimes should encourage us to revise our perspectives is all too easily worked into the framework of existing beliefs.

Mark's account of Jesus healing a deformed man[36] suggests that medical intervention of that nature might meet with some sense of awe, espe-

34. Ibid.

35. The discovery of a (presumably fossilized) pre-Cambrian rabbit is supposed to be the falsification criterion for evolution suggested by evolutionary biologist J. B. S. Haldane. (Charlesworth and Charlesworth, *Evolution*) Actually, it would only falsify certain aspects of the theory but the point is that key components are falsifiable.

36. Mark 3:1–6. I alluded to this incident earlier when discussing misconceptions about faith.

cially when the physician is not board-certified. That the observers used the event as incentive to plot Jesus' death indicates that when one is "looking for a reason"[37] to support an existing mindset, it is difficult for evidence, no matter how dramatic, to have much impact.[38] Stubbornness may have redeeming qualities in some contexts but not when it extends to the exclusion of evidence.

No wonder Jesus was distressed. That is a typical reaction when we see anyone attempt to make evidence fit their foregone conclusions to the exclusion of a more logical interpretation. No wonder Galileo had little patience with those who hoped the new evidence he provided could somehow still fit their old ideas about the appropriate structure of the cosmos. No wonder biologists are mystified by an obstinate refusal on the part of some to even consider how biological and geological evidence support evolution better than it does other ideas. Yet none of us are immune. Idealization of a particular type of government leads to a tendency to justify whatever it does. Lovers can deem otherwise irritating quirks endearing. How we interpret the biblical story above will reflect preconceptions about its credibility. Our default operating mode, apparently, is to make evidence fit the belief rather than make belief fit the evidence. But this is not the road to rationality. Might we hope for something better?

Syndicated columnist Cal Thomas, writing in the wake of celebrated atheist Christopher Hitchens's untimely death, remarked that, "Evidence alone has never moved anyone from unbelief to faith."[39] Clearly, as we've been noting, evidence can be ignored or minimized, but has it "never" been responsible for a change in one's belief? To be fair, Thomas's statement refers to "evidence alone" so there is a sense in which he must be right because there is never any such thing as "evidence alone." Anything we call evidence must always be apprehended in some context and will be processed in light of our wishes and desires. But, if evidence cannot do it, what can? It is not likely that the absence of evidence will substantially raise or lower the probabilities associated with any given belief (although it will not prevent one from holding onto one that is ill-founded). If evidence alone couldn't change

37. Ibid., 2.

38. According to Mlodinow, "When we are in the grasp of an illusion—or for that matter, whenever we have a new idea—instead of searching for ways to prove our ideas wrong, we usually attempt to prove them correct. Psychologists call this the confirmation bias . . ." (*Drunkard's Walk*, 189). Mlodinow goes on to quote Bacon on this (Bacon, *Great Instauration*, "Novum Organum," aphorism XLVI).

39. Thomas, "Hitchens Smart." Thomas thinks that it is God's gift of faith that makes it possible for some people to believe in him. This is not the place to review the theological issues of freedom but Thomas might also want to consider that Jesus suggested to his disciples and others that they look to the evidence (cf. John 14:11; 10:37–38).

a belief, why did Jesus tell a doubting Thomas (not Cal!) to put his hand into the hole in his side?[40] If evidence is not central, the bachelor trying to convince his girl to marry him can safely quit proclaiming and showing his love, secure in the knowledge that she will just know it.

In summary, faith must ultimately be verified if it is to have any real merit. Evidence is the source for that confirmation and forms the basis for sound probabilistic reasoning. It is the means by which we avoid the problems associated with blind faith. An evidence workout is the primary means of firming up what Montaigne calls "softer" minds,[41] which are prone to think without confirmation and to focus on what could have been versus what was, or on what might be versus what is.[42]

What Counts as Evidence?

Even when we accept the importance of evidence, are driven to pursue it, and work hard not to follow it to a foregone conclusion, we are still faced with the task of deciding whether some observation counts as evidence. Should we believe a manufacturer who makes certain claims intended to convince us to purchase a particular product? Is a successful senatorial career evidence that a person will make a good president? Can we count on the veracity of a witness who is closely related to a defendant? What can make a defendant's own testimony dubious? Why is it that courts frown on hearsay or information obtained by illegal means? I suspect it is clear by now that ulterior motives, poor application of logic, wishful thinking, and taking things out of proper context can all affect the credibility of something that might otherwise count as evidence.

However, even if something is deemed evidential, we are still frequently faced with the task of deciding toward what specific belief that evidence should apply. Is the fact that you got sick one evening after eating seafood evidence for an allergy, an incidental stomach virus, or poorly prepared food? Does a knocking in your car's engine signal imminent failure or does it just mean there is some water in the gasoline? Is a rash of airline crashes evidence that there are problems with pilot training, the aircraft control system, maintenance of the planes themselves, or terrorist activities? Are

40. John 20:24–29.

41. Whose "belief has been so strongly seized that they think they see what they do not see" (Montaigne, *Essays*, 70).

42. The problems identified in this section plague many religious beliefs but are also manifest in other domains of thinking, including science (cf. Lindley, *End of Physics*, 20).

weeds in my yard evidence of a disregard for horticultural esthetics or an indication that I spent the time during which I could have been mowing thinking about examples that indicate how something might be evidence for one belief but not another?

The significance of information is always subject to alteration by additional information. For example, poor marks in school are evidence of something, but what? Is the student incapable of handling specific subject matter or just poorly prepared in earlier classes? Did illness, loss of a family member, or a broken relationship create a set of extenuating circumstances that made it impossible to concentrate on the coursework? Knowing that the student had high scores on standardized tests (e.g., the SAT) might suggest that the low grades were a passing aberration. On the other hand, we might learn that the student has a playboy mentality or is addicted to computer games. Then we would be less inclined to think his poor performance would not be repeated.

The bottom line is that few things, if any, count for evidence in isolation. We have already noted the importance of quality but the quantity of evidence is no less significant. The creation of sound beliefs depends upon collecting as much evidence as possible. Yet, even volumes of information collected from a single source can be suspect. Consequently, justifiable beliefs must almost always also rely on evidence from multiple sources. Obtaining the truth, the whole truth, and nothing but the truth entails consideration of the whole body of evidence (and nothing but the evidence). The more observations we make and information we obtain and the more sources we use, the more likely it is that we will detect contradictions between things that we might otherwise count as evidence. This process also improves our chances for identifying credible sources of evidence.[43]

As we saw earlier, faith always forms in some context, so it is not surprising that the things we are willing to count as evidence also depend upon context. In the world of science, the veracity of scientific statements is accepted to the extent that those statements are capable of being directly and repeatedly verified. This is the context the scientist is accustomed to expect. Historic events, however, are by definition non-repeatable but that doesn't prevent us from sometimes accepting historic statements as evidence of the events they are meant to describe. The historian's criteria for acceptable evidence will have many of the same attributes as the scientist's, but repeatability and (except in limited cases) direct observation are not among

43. Nobody is claiming this will be easy. The next time a drug is advertised on television, pay close attention to the disclaimers. All those potential side effects constitute part of the overall body of evidence that must be considered in deciding whether the drug will really be beneficial.

them. And, despite the fact that history doesn't repeat itself, historians usually expect that any alleged evidence will have a similar character to that accompanying comparable events. This is the context the historian is accustomed to expect.

Both scientists and historians are interested in the pursuit of truth but when things don't fit the relevant context, there is less willingness to accept them as evidence. One of the reasons that there are still misgivings in some quarters about evolution of species and certain cosmological theories is because there is no known way to provide direct verification—conclusions must be formed via inference. If the resulting evidence is more palatable to the historian than the scientist, it is easy to see why.

Despite all this, scientists are willing to count the testimony of fossilized animals or the witness of background radiation and red shifted spectra of receding stars as confirmation of their beliefs (and there are good reasons for doing so). With comparable need the historian acknowledges that, just because an event is extraordinary, the evidence for it need not necessarily be less genuine (although that is sometimes the case). Both concessions betray a willingness to extend the preferred criteria for what counts as evidence when circumstances are deemed to warrant it, but that decision itself is impossible unless one first determines that there is evidence in its favor.

These considerations are important when it comes to deciding what counts as evidence in exceptional circumstances. Most religions, for example, have components that, because they are historic, are subject to the same types of evaluation that accompany other purported events of the past. What makes many religious assertions problematic is that the types of things claimed are frequently outside the normal realm of experience. This would be what Bierce meant by "things without parallel,"[44] something I'll address in a later chapter. However, although every event is unique and nonrepeatable, we often focus on event attributes categorically when evaluating the probability that a reported event is factual. Believing that Washington crossed the Delaware is well within the scope of our usual experiences but we may find it more difficult to accept religious visions (or, say, relativistic accounts of length contraction) because they are not. Reports of events that fall somewhere in between (e.g., walking on the moon) may be met with various degrees of skepticism.[45]

44. Bierce, *Devil's Dictionary*, 40.

45. One of the reasons people like science is because verification is sometimes relatively easy. However, although the scientific approach provides a worthy standard for the evaluation and acquisition of evidence, it maintains its aura of evidential invincibility in part by a hesitancy to even consider certain matters. Yet many of those concerns are quite important and we may be unwilling to ignore them (cf. Robinson, *Absence of*

None of this is intended to suggest that what counts as evidence for religious claims should be immune from the general rigor expected in other domains. However, it seems only fair that the same concessions we grant to science and history should also be extended to religion. How far we should go requires careful consideration. For example, the intensely personal feelings that accompany religious experiences are hard to verify for any but the practitioner but this is also true of most of the phenomenal aspects of consciousness. Despite this, we are quite willing to count reports of sensations and emotions as evidence that some phenomena has occurred.[46] Of course, it is one thing for Sam to believe that Sue had a religious experience and quite another to count it as evidence for the religion itself. But consider that if Sue tells Sam she feels she is in love with him, he will be inclined to interpret that as evidence that she really is (and not merely as evidence that she had the feeling).

One thing is clear: something cannot count as evidence for a particular belief if that belief is thought to be false. This presents us with a Catch-22 situation where we need to know whether to count something as evidence that supports a particular belief but until we know that the belief is true we don't know that we should do so. Given the recursive nature of belief formation, however, this should not surprise us. For example, someone tells us that there are no fish in a pond. Should we count that as evidence that there are not? Surely we will consider the source, ask other people, and seek other evidence but, if we throw in a hook and line and pull out a fish, we will know for sure that the pessimist's statement was really no evidence at all. If we fail to catch a fish, however, we must continue to wonder about the veracity of the claim—perhaps the fish weren't hungry.

The Role of Assumptions

I once spent a significant part of a long day wandering around on a glacier in the mistaken belief that I was on my way to the highest peak in Wyoming. That was many years ago but I have wondered on a number of occasions since then how, topographic map in hand, I managed to miss the ascent to the pass that would have taken me to my destination. The route I chose certainly looked like I thought it should. Whatever the reason, it is probably safe to say that I was enticed by one or more faulty assumptions (not the least of which must have been related to my map-reading skills at the time).

Mind; Ross, *More Than a Theory*).

46. Dennett (*Sweet Dreams*) suggests making something like this an integral part of a scientific approach ("heterophenomenology") to studying consciousness.

But each of us routinely wanders through a bewildering space of beliefs.[47] Yet as we saw in the last chapter, faultless logic can only take one so far—beliefs rise and fall with the quality of the assumptions on which they are founded. Galileo saw this clearly as he promoted his view of the cosmos in the following fanciful dialogue:

> Simplicio: Aristotle gives a hundred proofs that the universe is finite, bounded, and spherical.
>
> Salviadi: Which are later all reduced to one, and that one to none at all. For if I deny him his assumption that the universe is movable all his proofs fall to the ground . . .[48]

Obviously, Galileo had no choice but to employ his own set of assumptions. As Maritain has noted, "every science, except the highest, bases its demonstrations on postulates or data it is incapable of explaining or defending. For instance, mathematics does not inquire what is the nature of quantity, number, or extension, nor physics what is the nature of matter."[49] The highest science for the philosopher Maritain was not, sadly, physics or even computer science, but (surprise!) philosophy. But isn't Maritain's statement itself an assumption? Even philosophy needs postulates, premises, and hypotheses. Yet philosophers need not feel badly about this—faith of every form and faith in anything, from theories of the cosmos to the choice of the most palatable entrée at a restaurant, requires assumptions.

Because many of our beliefs are based on the authority of others, we should acknowledge that our trust in that authority also involves assumptions. Many of those assumptions are quite natural, perhaps even warranted, but they are not always valid. This can mean that, sometimes, our beliefs are incorrect because the sources we trust to inform those beliefs are themselves off track. Consider this example from a National Geographic tome entitled (unfortunately, in this case) *The Knowledge Book*. See if you can spot the problem:

> 51 Pegasi is the first sunlike star that was discovered to have an orbiting planet . . . Its distance from the star is equal to 20 times the distance between the Earth and the sun. Therefore the planet may be as hot as 1832°F (1000°C). It takes only 4.2 days

47. Taking a cue from the old Christmas hymn, we might do a bit more wondering as we wander.

48. Galilei, *Two Chief World Systems*.

49. Maritain, *Introduction to Philosophy*, 72.

> to complete an orbit around the star . . . 51 Pegasi is comparable to the sun in mass and size.[50]

If you are asking yourself how a planet that far away from its star could it be so hot or wondering if its rate of revolution should be much less than that given, you are on the right track. Apparently the correct distance is more like 1/20th of that from the earth to the sun,[51] a figure of which you might also be suspicious (but at least it makes sense in context of the other values). Certainly it is easy to attribute this to a simple typographic error but that would be to miss the point. Although the source of a false belief may be carelessness, ignorance, or deliberate fraud on the part of an authority we have assumed we could trust, it behooves us to be mindful about our assumptions regarding that authority.

There is something more important in Maritain's remarks, however, than a basic observation about the need for assumptions. Although it may have once been true, particle physicists of today would likely dispute Maritain's assertion that physics does not inquire into the nature of matter.[52] I don't mention this to criticize Maritain—he made his observation many years ago—but to emphasize the hesitancy we should have, not just about accepting an assumption but even about accepting that something is (or should be considered) an assumption. Such an attitude was part of Bacon's vision for the proper conduct of science: "I also sink the foundations of the sciences deeper and firmer; and I begin the inquiry nearer the source than men have done heretofore, submitting to examination those things which the common logic takes on trust."[53] In the case of assumptions, what is good for science is good for every area of our thinking.

How Much Evidence is Enough?

Lest we look like blind men attempting to describe an elephant,[54] it is helpful to keep in mind how the various factors already considered affect any reasonable answer to this question. We could let it go at that but there are other useful ways to contemplate whether our beliefs are sound. Even when standards for evidence are high, the truth is that any amount of evidence that

50. Grogan, *Knowledge Book*, 17.

51. Cf. http://www.exoplaneten.de/51peg/english.html.

52. The large hadron collider in Switzerland provides compelling evidence for this counterclaim (cf. Radowitz, "Back to the Beginning").

53. Bacon, *Great Instauration*, "Arguments of the Several Parts".

54. Saxe, *Poems*.

pushes the probability associated with a belief past 0.5 is probably sufficient to make us behave as though we really do believe it. Of course, that doesn't mean we should. The key is to distinguish between how much evidence is enough to make us believe that something is true whether it is or not, and how much is necessary to make us believe that something is true which, in fact, really is true.

Consider, for example, that you are trying to determine whether to believe that some particular event occurred. Unbeknownst to you, there are seven pieces of evidence indicating that the event did occur and three suggesting that it did not. We'll call the evidence in the first category confirming evidence and that in the second, disconfirming evidence. For the sake of further simplifying the example, imagine that all evidence carries the same weight. Now, how much evidence is enough to make you believe that the event did or did not occur?

In the absence of other factors and if you had no confirming evidence, even a single piece of disconfirming evidence could be sufficient to convince you that the event never happened. In fact, as long as you believe that the ratio of disconfirming evidence to confirming evidence is greater than 0.5, you will be inclined to also believe the event did not occur, even though (in our example) there is plenty of evidence available to suggest that it did. The overwhelming evidence for the occurrence of the event is not enough if that evidence is not in your possession or if it is ignored.

Let's define the "belief probability" for this example as the probability that the evidence in your possession will be sufficient for you to believe what the confirming evidence is supposed to support. This is a function of the confirming and disconfirming evidence.[55] If we plot this function for our example (as in Figure 2), we can visualize how the belief probability changes with various combinations of evidence types. Points on the plotted surface having belief probability values above 0.5 (indicated by a plane halfway up the vertical belief probability axis) represent cases where there is more confirming than disconfirming evidence. In this contrived example, where the pool of confirming evidence is greater than the pool of disconfirming evidence, there are obviously more ways in which the belief probability can be biased in favor of the belief in question than there are ways in which it can be biased against the belief but this need not be the case in general.

55. Belief probability = confirming evidence / (confirming evidence + disconfirming evidence).

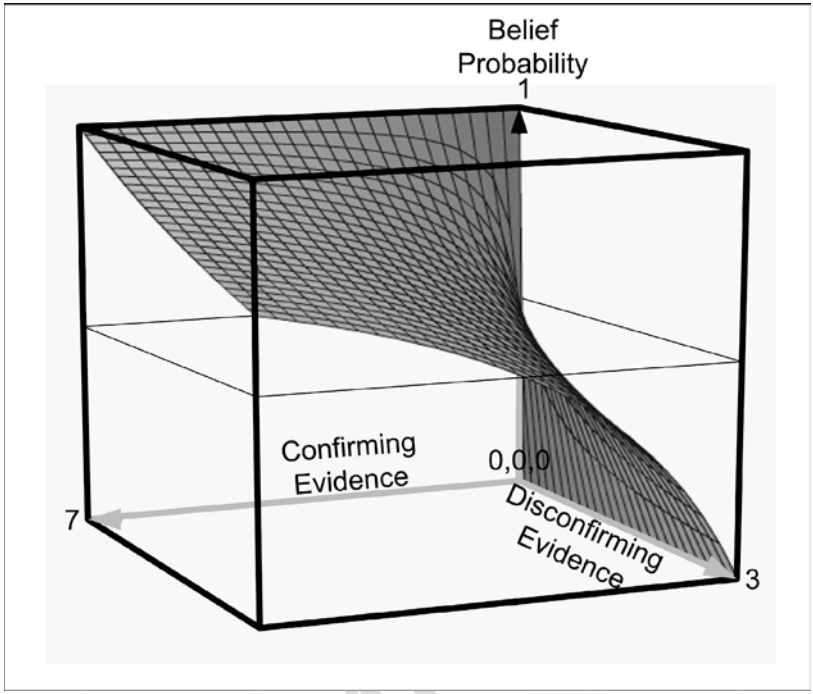

Figure 2. Belief probability as a function of accepting various combinations of confirming and disconfirming evidence. In the plot shown here there are seven possible pieces of confirming evidence and three possible pieces of disconfirming evidence.

Obviously this is a grossly oversimplified example[56] but the same issue arises in real life—it is just more difficult to see. Yet as bad as it is to fail to possess available evidence, things can be worse. With a predetermined desire for something to be true, even a preponderance of available disconfirming evidence might go unheeded. We have all run across situations in which it seemed apparent that no amount of evidence would be adequate to cause a change of mind. Unless that mind is our own, such situations are usually puzzling and we wonder how anyone could be so obtuse. If the obstinacy belongs to us, however, we can be quick to excuse ourselves—we don't acknowledge or believe that any contrary evidence really exists, we cannot imagine any other possibility, and so forth. Perhaps we are correct. It is less convenient to concede that we might be mistaken on all counts; that we are so closed even to the possibility of being wrong that our only "rationale" is feeling or fear or wishful thinking. In such a case, when no

56. Most obviously, weighting all the pieces of evidence equally.

amount of evidence is enough, it is time to reevaluate the belief. From a practical standpoint, we need only be concerned to do so in matters of real importance. Yet, as we've already seen, making that determination (i.e., what is really important) might be the very belief that requires reevaluation.

Due to our limitations, of course, there will seldom be enough evidence to give us absolute (as opposed to partial) certainty about most beliefs. Knowing this is vital to a proper understanding of faith and knowing what to expect from evidence. Theologian Keith Ward provides a nice account of how this works with regard to belief in God by remarking that even though we cannot obtain "total theoretical certainty" in the existence of a particular type of God, we "can have good reasons for thinking there is such a God."[57] Someone else might wish to say that we can have good reasons for thinking there is not but the belief itself is not of concern here. The function of evidence is to help us get the probabilities right and a belief is justified when the evidence does so.[58] That is how much evidence is enough.

I've noted before that we can never even be certain of something so basic as whether a particular individual really loves us. However, we can still be justified in believing they do. We submit as evidence their words of affection, remarks of praise to others, caresses, gifts, and sacrifices on our behalf. We point out the high frequency with which those signs appear and the quality of each one. We also notice the lack of evidence which would suggest that the gestures are not merely a pretense based on some desire to maximize the inheritance or keep receiving financial support. Although we acknowledge the acting skills of others and are aware of the potential for our own gullibility, the gradual accumulation of such evidence continually raises the probability that our belief is sound. But getting as much evidence as we need is not the same as getting as much as we want. Neither is it essential that we get all we want. Rational faith is a function of how we handle the evidence we do manage to get.

In scenarios like the one above, however, we only have enough evidence for the moment. If at any time we become aware that our "loved one" has taken out a large life insurance policy on us or sold our toys while we are away, we might be inclined to change the probabilities of our belief. Deciding when we have enough evidence to do so is a dynamic proposition and requires a dynamic mindset. It is the mindset of an explorer.

57. Ward, *Divine Action*, 14.

58. Ibid. Ward's claims regarding what we "cannot be justified in believing" seem to be misstated in this regard.