

Y6 – Your Hopes & Their Priorities

Dear: Still another “loose end” that I want to tie up is a big one I left dangling, dealing with hope. You might recall that, in **H2** (entitled “Hope = Expected Value”), I tried to show you how Webster’s definition of ‘hope’ (viz., “a feeling that what is wanted will happen; desire accompanied by expectation”) could be stated more quantitatively by equating ‘hope’ with *expected value* (i.e., the value of any ‘want’ multiplied by the probability of its realization). For example, if you had been walking in the desert for two days without a drink and knew that the liquid in essentially all cacti will make you extremely ill (if not kill you), then you’d very much *want* some water. If you then see some lush vegetation, you’d probably *expect* that some water will be nearby. Your mind will multiply that *want* with that *expectation* to provide you with your *hope* that you’ll soon have water.

When making decisions, we commonly adopt as our highest priority goal the option with the highest expected value, i.e., the option that provides us with greatest hope. While that may sound simple, in many cases it’s not possible (and in some cases, it’s essentially impossible) to develop realistic estimates for the expected values – and therefore, to adopt realistic hopes. Sometimes it’s difficult to place values on our ‘wants’; usually, however, the greatest difficulty is to develop realistic estimates for the probabilities of their realization. In particular, the “loose end” that I previously left dangling was to attempt to estimate the probability of realization of “eternal life” – which most people apparently “want” and which is sold as a “hope” in Hinduism, in some sects of Judaism, and in Christianity, Islam, and Mormonism.

As I’ve tried to show you earlier in this book, there’s substantial evidence to support the indictment that the dominant religions of our culture are in the business of selling hope, at a typical down-payment cost (by no means the total cost!) of 10% of people’s income (paying their tithes). If you want to begin to investigate this evidence, Dear, then I invite you to type “Bible” or “Koran” (or “Quran”) or “Book of Mormon” into any internet search engine, let that lead you to sites that allow you to search through those “holy books”, and then search for matches for (or references to) the word “hope”. I expect that you’ll be astounded at the number of results you’ll find. Below, I’ll list just a few such results (and I’ll exclude the Jewish religion’s hope of a future “messiah”, who will show followers “the way”). In the quotations below, I’ve added the italics.

From the *Old Testament* of Judaism:

- “Happy the man...whose *hopes* are in the LORD his God...” [**Psalms 146**, 5]
- “Blessed is the man that trusteth in the LORD, and whose *hope* the LORD is.” [**Jeremiah 17**, 7]

From the *New Testament* of Christianity:

- “Let us exult in the *hope* of the divine splendor that is to be ours. More than this: let us exult in our present sufferings, because we know that suffering trains us to endure, and endurance brings proof that we have stood the test, and this proof is the ground of *hope*.” [**Romans 5**, 2]
- “From Paul, servant of God and apostle of Jesus Christ, marked as such by faith and knowledge and *hope* – the faith of God’s chosen people, knowledge of the truth as our religion has it, and the *hope* of eternal life. Yes, it is eternal life that God, who cannot lie, promised long ages ago, and now in his own good time he has openly declared...” [**Titus 1**, 1]

From the *Quran* (or *Qur’an* or *Koran*) of Islam:¹

- “And who believe in the Revelation sent to thee [Muhammad] and sent before thy time, and (in their hearts) have the assurance [or *hope*] of the Hereafter.” [**Quran 2**, 2]
- “Surely they who recite the Book of Allah and keep up prayer... secretly and openly, *hope* for a gain which will not perish.” [**The Originator 35**, 29]

From the *Book of Mormon* of Mormonism:

- “While many thousands of others truly mourn for the loss of their kindred, yet they rejoice and exult in the *hope*, and even know, according to the promises of the LORD, that they are raised to dwell at the right hand of God, in a state of never-ending happiness.” [**Alma 28**, 12]
- “And what is it that ye shall *hope* for? Behold I say unto you that ye shall have *hope* through the atonement of Christ and the power of his resurrection, to be raised unto life eternal...” [**Moroni 7**, 41]

¹ As I’ve mentioned before, the Koran is divided into 114 chapters, each of which is called a *Surah*, and therefore, sometimes the references in the Koran are given as, e.g. for the first reference, **Surah 2**, 2.

What I'm particularly concerned about, Dear, is that following your mother's lead (who in turn, followed her mother's), you haven't adequately evaluated the expected value (and therefore the hope) of "eternal bliss in paradise". In an attempt to show you how to estimate the expected value of "eternal bliss" (i.e., in an attempt to show you how to develop a realistic hope for life after death), I'll start by digging into details of the similar case of "winning the jackpot" that's sold in state lotteries.

For state lotteries (as in the religious "lottery" for eternal life) it appears, at first glance, that only a small investment provides a potentially huge payback, which in our state's case, is normally \$1 million (and then increases if the previous draw wasn't won).² To win this money, the gambler must choose the same six numbers, from among the numbers from 1 to 49, as are drawn by state "lottery officials". To begin to estimate the probability of such a match-up, notice that the number of possible ways to draw six numbers from 49 is: 49 (ways of choosing the first number) x 48 (ways of choosing the second number, because the lottery official won't draw the same number twice) x 47 x 46 x 45 x 44 (ways of choosing the sixth number) = 10,068,347,520, i.e., approximately 10 billion ways!

Of these 10 billion ways of drawing any six numbers from 49 numbers, quite a few ways will be the same as drawn by the lottery officials, because you can win the jackpot no matter the order in which you choose the correct numbers. For example, if the winning numbers are 34, 12, 25, 27, 41, and 5, then you win even if you choose those six numbers in a different order. That's why, sometimes, there's more than one winner per drawing. Now, the number of ways of choosing any six numbers is 6 (ways of choosing the first number) x 5 x 4 x 3 x 2 x 1, normally written as 6! (read that as "six factorial"), which is 720. Thus, Dear, for our state's lottery, of the approximately 10 billion ways to choose 49 numbers, 720 will be winners. Consequently, the probability that a player will choose the correct set of six numbers is the number of ways of winning (= 6! = 720) divided by the total number of possible outcomes, i.e., (49x48x47x46x45x44).

This probability is normally written differently by dividing numerator (i.e., 6!) and denominator by 6! and by noticing that

$$49 \times 48 \times 47 \times 46 \times 45 \times 44 = 49! / 43! = 49! / (49-6)!$$

² Dear: I wrote this when we were living in Washington; I've left its description as "our state".

Therefore, the probability of drawing 6 numbers from 49 numbers is usually given as 1 chance in $49! / [6! \times (49-6)!] = 13,983,816$, which is approximately 1 chance in 14 million.

Actually, let me push this example a little further to evaluate the “expected value” of this gamble, which in turn is the *hope* that a rational person would assign to winning the jackpot. In our state, with a purchase of a \$1 ticket, a player receives (or chooses) two sets of six numbers, so the player’s chance of winning is then twice the above, i.e., approximately 1 in 7 million (which, in fact, is what is stated in small print on each lottery ticket). That is, Dear, on average, if you were to buy 7 million lottery tickets – at a cost of \$7 million! – then you should expect to win the \$1 million jackpot! And yes, Dear, I wrote that correctly: the “expected payback” for our state lottery is approximately 1/7, i.e., only 14¢ on the dollar!

Actually, there are some other details of our state lottery that I’m tempted to ignore, but I’d like to show you a few, because as I’ll show you later in this chapter, the “jackpot” sold in most religions (i.e., eternal life) is analogous to our state lottery even in such details. Thus, the player of our state lottery can receive some payback (some “consolation prize”) even if all six numbers are not chosen correctly, namely (depending on the winnings during prior drawing) approximately \$300 for 5 numbers drawn correctly, \$30 for 4, and \$3 for 3. If the probabilities are then estimated as in the previous paragraph, the average (or “expected”) payback from a \$1 “investment” (or gamble!) for two chances is then seen to be twice the value of

$$\frac{\$1 \times 10^6}{\left\{ \frac{49!}{6!(49-6)!} \right\}} + \frac{\$300}{\left\{ \frac{49!}{5!(49-5)!} \right\}} + \frac{\$30}{\left\{ \frac{49!}{4!(49-4)!} \right\}} + \frac{\$3}{\left\{ \frac{49!}{3!(49-3)!} \right\}},$$

which, however, adds only a tiny fraction to the previous answer, i.e., the expected payback is still essentially 14¢ on the dollar.

Still other details make calculation of the payback in our state’s lottery even more complicated – in fact, essentially impossible, without access to some needed data. In particular, complications follow because if there’s more than one winner for a specific drawing, then the jackpot is divided equally among the winners, and if there is no winner for a specific drawing, then a million dollars is added to the jackpot for the next drawing. To see some of

* Go to other chapters *via*

the resulting complications, consider the limiting case in which, once the jackpot reached \$7 million, you became the only player: in this case, if you bought \$7 million worth of chances, then your expected return on each \$1 that you bet would be \$1. To determine your expected return when there are more players, you need to know the number of players.

Further, in our state's case, the payback is less, because the state awards you only the promised \$1 million if you choose to have it paid out over 20 years (during which time the state earns interest on the money). If, instead, you choose to take the money in cash, the payback is only approximately half the stated jackpot, reducing the payback to 7¢ on the dollar. Further, of course you must pay federal income taxes on the winnings (in our state, we don't pay state income taxes), and therefore, depending on your tax rate and how many players there are, expect that for each \$1 you give to the cashier to purchase a \$1 million lottery ticket, then on average you're just trading the cashier \$1 for about a nickel – a very bad gamble!

You can improve the expected payback to “even money” if you bet only when the jackpot has reached about \$20 million. But should you ever choose to buy lottery tickets when the jackpot is this large, don't forget that, on average, you'll get your money back only after you buy 20 million tickets! And as you might expect, as the state-lottery officials have learned (and as religious con artists have known for thousands of years), the bigger the promised payoff, the more players who participate (and therefore, in the case of the lottery), the greater the likelihood that you would need to share the winnings with others.

Actually, there are other features of state lotteries that are useful to consider before comparing them with the “life-after-death lottery” sold by the organized religions of our culture. Thus, one of the features of state lotteries is that the states increase their tax revenues (that is, they keep six of every seven million dollars they collect!) by selling “hope”. In the case of the state lottery, the argument can be made that essentially all money of every seven million dollars bet is returned to the players (save for operating expenses), because the players are also the beneficiaries of the additional taxes collected; thereby, it can be argued that states sell hope at relatively little cost.

Further, although state lotteries are basically a tax on the gullible, I doubt that anyone who “works for a living” hasn't spent time “hoping to win” and

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“day dreaming” about what to do with a million dollars. Maybe just this bit of hope, this day dreaming, is worth the \$1 paid for the lottery ticket! After all, on average, one of the seven million betters is going to win – and who among the seven million is more deserving than you! Yet, I remember a janitor at a university where I taught who would spend \$50 every week (\$2500 per year, which was approximately 10% of his salary) not just hoping but “convinced” he would win the lottery! And if he should live so long, then after he spent about \$7 million, he would have a fairly good chance of winning \$1 million (☺).

And if you think that this example illustrates why the clerics of organized religions are so commonly opposed to state lotteries and other forms of gambling, then I’m sorry, Dear, but the cynic in me says: they don’t want the competition in selling hope to the hopeless! Every janitor who spends 10% of his income on the state lottery is 10% of someone’s income that the clerics want people to pay to play their game. The rest of us shake our heads, pitying that poor janitor – just as “free thinkers” shake their heads at the foolish people who bet their lives on the biggest gamble of all: the one that promises the payoff of “eternal bliss”. Compared to religions, state lotteries look like “kids’ play”, dealing in pocket change. And as an added incentive to play the religious con game, if you refuse to play, then you get “eternal damnation”. In contrast, at least our state doesn’t threaten to throw us into jail (or other punishment) if we don’t play their lottery!

Now, Dear, the mathematics behind the scam that the religious con artists are peddling is the same as for the state lotteries, but if ever there were a case where it was true, the devil is definitely in the details. To show you some of these details, I’ll use the same math, but for reasons that I trust you’ll soon see, it’s much better to use symbols rather than numbers.

Thus, let the symbol “H” represent the religious jackpot (i.e., the Hope or “Heaven” or “nirvana” or “paradise” or “eternal bliss” or “becoming a god” or whatever else is promoted as the jackpot). Further, let the symbols “i”, “j”, “k”, “l”, and so on, represent any “consolation prizes” that are offered, e.g., “i” = idolatry (the worship of idols, which apparently is desired by some people), “j” = justification (or purpose for the player’s living), “k” = kinship, “l” = love, and so on, with (if desired) each consolation prize identified by its value (say in dollars) that you decide it’s worth. Finally, with the symbol “P” (with an appropriate identification in parentheses) used for the probability of winning each of these “prizes”, then just as for the case

of the state lottery (compare the formula above), the payback on a player's investment (i.e., the payback for living one's life the way the clerics dictate, including paying tithes, which is a fancy way of saying that the cost of their lottery ticket is 10% of one's income) is just the sum of the magnitude of each jackpot multiplied by the probability of winning each:

$$\text{Payback} = H \cdot P(H) + i \cdot P(i) + j \cdot P(j) + k \cdot P(k) + \dots$$

i.e., the Payback is the sum of the prizes multiplied by their probabilities.

Now, Dear, although I don't want to minimize the appeal of the "consolation prizes" (idolatry, justification for living, kindness, love...), I don't want to continue examining them here, because (just as with the state lotteries), these consolation prizes are not the essence of the game. Thus, although I would agree that the probabilities of winning these consolation prizes is large (in some cases, the probability of winning them is essentially unity, i.e., these "consolation prizes" are definitely won), yet with a similarly large probability, the player could win similar "prizes" by joining any social club – especially if the dues were as high as those charged by organized religions, i.e., 10% of one's income! Stated differently, I want to focus just on the essence of the con game, which is the payback from winning the jackpot, i.e., just $H \cdot p(H)$, the magnitude of the "Heavenly jackpot" multiplied by the probability of winning it (i.e., the probability of getting into Heaven – provided the player follows the clerics' prescriptions).

I should add that, at least temporarily, I'd agree with anyone who proposes that the jackpot in the religious con game would have a huge value. If a monetary value could be put on "eternal bliss", then whereas certainly Bill Gates would give his entire fortune in exchange for such a jackpot, then its value is well in excess of \$100 billion or even \$1 trillion = $\$10^{12}$. For definiteness, suppose the monetary value of H is $\$10^{100}$, which is an incomprehensibly huge amount. But the key question, of course, is: what's the probability of winning this enormous jackpot?

Now, there are a variety of con-artist clerics belonging to different religious sects, in each of which the probability of winning the jackpot is stated to be different. Thus, there are a variety of Christian "fundamentalists" or "literalists" (e.g., in the "Christian Right"), who basically say: "the game's a 'shoo-in'; all the player must do is 'be saved'." That is, in essence, these con artists argue that the probability of winning H, $p(H)$, is very large, i.e.,

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essentially unity, if you (as the gambler) will just “accept Jesus Christ as your savior”. In Islam, similarly, fundamentalists argue that “the game’s a shoo-in”, provided that you do little more than agree that “There is no god but Allah and Muhammad is his messenger”, that you say your prayers five times per day, pay your tithes, fast during dictated times, and if possible, at least once in your life, make a “pilgrimage” to Mecca.

On the other hand, there are a variety of “traditionalists” and “allegorists” who argue that it’s not at all easy to win the jackpot. In particular, if a group of Christian clerics promotes the teachings of the New Testament, then certainly Christ’s Sermon on the Mount (e.g., *Mathew 5*) strongly suggests that it’s a tough game to win: not only must you not murder, you can’t even sneer at another person; not only must you not commit adultery, you’re not even to think about it; not only must you keep your oaths, you’re not to swear oaths at all; not only must you not seek vengeance, you’re to offer the offender more opportunities to offend you; and not only are you to love your neighbors, you’re to love your enemies, and so on. As Christ reportedly said “The gate that leads to [eternal] life is small and the road narrow, and those who find it are few.”

But whether the gate is small or large and the road narrow or wide, the point that all clerics make is that, if the player will play the game the way they say, then there is a finite probability (that is, some small number greater than zero) of winning the jackpot. Thus, if the probability of winning H , $p(H)$, is nearly unity (in various fundamentalists’ schemes) or even if $p(H)$ is only one in a million = 10^{-6} , or one in a billion = 10^{-9} , or... then when even a tiny number is multiplied by the huge value of the jackpot H (e.g., $\$10^{100}$), the payback on the player’s investment (i.e., for living one’s life in a manner dictated by the clerics) is claimed to be huge, e.g., $10^{-9} \cdot 10^{100} = 10^{91}$! Even $10^{-50} \cdot 10^{100} = 10^{50}$!

That’s the mathematics behind what the clerics sell to all those duped into playing the clerics’ con games. After the first person who formulated the problem mathematically, i.e., Blaise Pascal (1623–1662), it’s called “Pascal’s wager”. If you look on the internet, you can find many descriptions of Pascal’s wager. Here’s one, from a book by Gerald Runkle:³

³ *Good Thinking - An Introduction to Logic* (Holt, Rinehart, and Winston, New York, 1978).

Pascal... argued that the nonbeliever should cultivate a belief in God, not because God's existence could be shown to be more probable than his nonexistence, but because of the big payoff that would accrue to the believer if [God's existence] should turn out to be correct. So it is not simply a matter of betting the greatest probability but betting where the odds are most favorable.

Here is another description of Pascal's wager, from a book by E.T. Bell:⁴

The 'expectation' in a gamble is the value of the prize multiplied by the probability of winning the prize. According to Pascal, the value of eternal happiness is infinite. He reasoned that even if the probability of winning eternal happiness by leading a religious life is very small indeed; nevertheless, since the expectation is infinite (any finite fraction of infinity is itself infinite) it will pay anyone to lead such a life...

Stated differently, Pascal's wager is the idea that you might as well go along with what the clerics tell you to do, just in case they're right, because the "heavenly pay off" is potentially huge.

The quotation below shows some of Pascal's thoughts (in this quotation, he's talking to himself), as given in his 1660 book *Pensées* (i.e., "thoughts", from the French verb *penser* meaning "to think" in turn from the Latin verb *pensare* meaning "to weigh or consider"):⁵

Pascal: *Pensees*, SECTION III: OF THE NECESSITY OF THE WAGER

194: The immortality of the soul is a matter which is of so great consequence to us and which touches us so profoundly that we must have lost all feeling to be indifferent as to knowing what it is. All our actions and thoughts must take such different courses, according as there are or are not eternal joys to hope for, that it is impossible to take one step with sense and judgment unless we regulate our course by our view of this point which ought to be our ultimate end... this ultimate end of life... we ought to have this feeling from principles of human interest and self-love...

⁴ *Men of Mathematics* (Simon and Schuster, New York, 1965, p. 79).

⁵ Available, e.g., at <http://philosophy.eserver.org/pascal-pensees.txt>. And let me add that Pascal was really quite an amazing fellow – and it's amazing that he accomplished so much, so long ago, in such a short and painful life. He proved and published his first theorem in geometry when he was 16, at the age of 18 he invented the first calculating machine, and his work in measuring and understanding atmospheric pressure is now honored by defining the unit of pressure of 1 Newton per m² as a "Pascal" (symbol Pa). But of more relevance to "Pascal's wager", he (along with Fermat) created the subject of probability theory, and at the age of 23, Pascal became a religious fanatic. I'd even add, Dear, that if ever you decide that you'd like to become a movie director rather than a... (!), then you might want to consider making a movie about Pascal – although at the outset, realize that it would need to include much about both Fermat and Descartes and that it would need to be at least an "R-rated" movie, if not "X-rated"!

We do not require great education of the mind to understand that here is no real and lasting satisfaction; that our pleasures are only vanity; that our evils are infinite; and, lastly, that death, which threatens us every moment, must infallibly place us within a few years under the dreadful necessity of being forever either annihilated or unhappy.

There is nothing more real than this, nothing more terrible. Be we as heroic as we like, that is the end which awaits the world. Let us reflect on this and then say whether it is not beyond doubt that there is no good in this life but in the hope of another; that we are happy only in proportion as we draw near it; and that, as there are no more woes for those who have complete assurance of eternity, so there is no more happiness for those who have no insight into it.

Surely then it is a great evil thus to be in doubt, but it is at least an indispensable duty to seek when we are in such doubt; and thus the doubter who does not seek is altogether completely unhappy and completely wrong. And if besides this he is easy and content, professes to be so, and indeed boasts of it; if it is this state itself which is the subject of his joy and vanity, I have no words to describe so silly a creature...

Let us then examine this point, and say, "God is, or He is not." But to which side shall we incline? Reason can decide nothing here. There is an infinite chaos which separated us. A game is being played at the extremity of this infinite distance where heads or tails will turn up. What will you wager? According to reason, you can do neither the one thing nor the other; according to reason, you can defend neither of the propositions.

Do not, then, reprove for error those who have made a choice; for you know nothing about it. "No, but I blame them for having made, not this choice, but a choice; for again, both he who chooses heads and he who chooses tails are equally at fault, they are both in the wrong. The true course is not to wager at all."

Yes; but you must wager. It is not optional. You are embarked. Which will you choose then? Let us see. Since you must choose, let us see which interests you least. You have two things to lose, the true and the good; and two things to stake, your reason and your will, your knowledge and your happiness; and your nature has two things to shun, error and misery. Your reason is no more shocked in choosing one rather than the other, since you must of necessity choose. This is one point settled. But your happiness? Let us weigh the gain and the loss in wagering that God is. Let us estimate these two chances. If you gain, you gain all; if you lose, you lose nothing. Wager, then, without hesitation that He is. "That is very fine. Yes, I must wager; but I may perhaps wager too much."

Let us see. Since there is an equal risk of gain and of loss, if you had only to gain two lives, instead of one, you might still wager. But if there were three lives to gain, you would have to play (since you are under the necessity of playing), and you would be imprudent, when you are forced to play, not to chance your life to gain three at a game where there is an equal risk of loss and gain. But there is an eternity of life and

happiness. And this being so, if there were an infinity of chances, of which one only would be for you, you would still be right in wagering one to win two, and you would act stupidly, being obliged to play, by refusing to stake one life against three at a game in which out of an infinity of chances there is one for you, if there were an infinity of an infinitely happy life to gain. But there is here an infinity of an infinitely happy life to gain, a chance of gain against a finite number of chances of loss, and what you stake is finite. It is all divided; wherever the infinite is and there is not an infinity of chances of loss against that of gain, there is no time to hesitate, you must give all. And thus, when one is forced to play, he must renounce reason to preserve his life, rather than risk it for infinite gain, as likely to happen as the loss of nothingness.

For it is no use to say it is uncertain if we will gain, and it is certain that we risk, and that the infinite distance between the certainty of what is staked and the uncertainty of what will be gained, equals the finite good which is certainly staked against the uncertain infinite. It is not so, as every player stakes a certainty to gain an uncertainty, and yet he stakes a finite certainty to gain a finite uncertainty, without transgressing against reason. There is not an infinite distance between the certainty staked and the uncertainty of the gain; that is untrue. In truth, there is an infinity between the certainty of gain and the certainty of loss. But the uncertainty of the gain is proportioned to the certainty of the stake according to the proportion of the chances of gain and loss. Hence it comes that, if there are as many risks on one side as on the other, the course is to play even; and then the certainty of the stake is equal to the uncertainty of the gain, so far is it from fact that there is an infinite distance between them. And so our proposition is of infinite force, when there is the finite to stake in a game where there are equal risks of gain and of loss, and the infinite to gain. This is demonstrable; and if men are capable of any truths, this is one.

“I confess it, I admit it. But, still, is there no means of seeing the faces of the cards?” Yes, Scripture and the rest, etc. “Yes, but I have my hands tied and my mouth closed; I am forced to wager, and am not free. I am not released, and am so made that I cannot believe. What, then, would you have me do?”

True. But at least learn your inability to believe, since reason brings you to this, and yet you cannot believe. Endeavor, then, to convince yourself, not by increase of proofs of God, but by the abatement of your passions. You would like to attain faith and do not know the way; you would like to cure yourself of unbelief and ask the remedy for it. Learn of those who have been bound like you, and who now stake all their possessions. These are people who know the way which you would follow, and who are cured of an ill of which you would be cured. Follow the way by which they began; by acting as if they believed, taking the holy water, having masses said, etc. Even this will naturally make you believe, and deaden your acuteness. “But this is what I am afraid of.” And why? What have you to lose? But to show you that this leads you there, it is this which will lessen the passions, which are your stumbling blocks.

The end of this discourse. – Now, what harm will befall you in taking this side? You will be faithful, humble, grateful, generous, a sincere friend, truthful. Certainly you will not have those poisonous pleasures, glory and luxury; but will you not have others? I will tell you that you will thereby gain in this life, and that, at each step you take on this road, you will see so great certainty of gain, so much nothingness in what you risk, that you will at last recognize that you have wagered for something certain and infinite, for which you have given nothing.

Now, Dear, although simpletons buy into this “Pascal’s wager” in droves, Pascal’s analysis (and the associated decision to buy into this scheme) is quite wrong, for many reasons, which I’ll now begin to address.

The first error a player makes when placing a bet on such a scheme is to assume that the way peddled by the clerics is the way to win the jackpot. Instead, it’s easy to convince oneself that playing the game the clerics’ way leads not to Heaven but to Hell! To see this in the case of Judaism, Christianity, Islam, and Mormonism – basing the analysis on what’s written in the Bible and not on what’s preached by the clerics (who have a vested interest in having the players play the clerics’ way!) – look at the following series of quotes, allegedly direct from God.

- In *Genesis 2, 16*, God says (to Adam): “You may eat from every tree in the garden, but not from the tree of the knowledge of good and evil; *for on the day* [I added the italics, for emphasis] that you eat from it, *you will certainly die.*” But as the story goes on to describe, Adam and Eve didn’t die *the day* they ate this fruit; that is, God lied.
- In *Genesis 3, 22*, God says (to the other gods): “‘The man [Adam] has become like one of us, knowing good and evil; what if he now reaches out his hand and takes fruit from the tree of life also, eats it, and lives for ever?’ So the Lord God drove him out of the garden of Eden... He cast him out, and to the east of the garden of Eden, he stationed the cherubim and a sword whirling and flashing to guard the way to the tree of life.” From this, surely no other reasonable interpretation is available than God’s reluctance to let humans have eternal life – “the way” is even guarded by a “whirling and flashing sword”!
- If one then wonders why God doesn’t want us to have eternal life, now that we have become “like one of us [i.e., gods] knowing good and evil”, God allegedly gives the answer (in *Exodus 20, 1–5*): “I, the Lord your God, am a jealous god”, i.e., he’s not keen on competition!

- And if one then wonders about the prophecies of a “messiah” and about all that Jesus and any other supposed “messiah” or “messenger” or “prophet” had to say, apparently all this can be dismissed as more of God’s deceit (or lies), for *Jeremiah 8*, 4–10 states: “These are the words of the Lord: ‘...For all, high and low, are out for ill-gotten gain; prophets and priests are frauds, every one of them’...”
- Finally, for good measure, at *Jeremiah 23*, 16 we find: “These are the words of the Lord of Hosts: ‘Do not listen to what the prophets say, who buoy you up with false hopes; the vision they report springs from their own imagination, it is not from the mouth of the Lord’.”

And by the way, Dear, when a prophet tells you that you can’t believe prophets, then as I’ve mentioned before, that’s commonly called a “double bind” or a “Catch 22” or “the liar’s paradox” (the resolution to which, as I tried to show you in an earlier chapter, is to see that no information has been communicated).

My first point, then, is that the probability, $P(H)$, of winning the “eternal life” jackpot, H , is much more complicated than what the clerics advertise and what Pascal calculated: the probability of winning the jackpot is the conditional probability of winning the jackpot if you play the right way, say, $P(H|rw)$, multiplied by the probability that you’re playing the right way, $P(rw)$, i.e., $P(H) = P(H|rw) \cdot P(rw)$. Meanwhile, of course, all groups of clerics will argue that theirs is the right way, but obviously they have a vested interest (namely, 10% of your income!) in your choosing their way. On the other hand, it seems obvious that “God’s words” in the Bible makes it perfectly clear: that no prophet or messenger or priest can be trusted, that already we are gods (if we know the difference between right and wrong), that God doesn’t want competition, and that he doesn’t want us to gain eternal life! Surely an unbiased observer would conclude, at the very least, that the probability that the clerics are preaching the right way is at least as large the probability that they’re preaching the wrong way.

On the other hand, even if one goes along with all the Biblical junk, it doesn’t necessarily follow that one can’t gain eternal life. God also didn’t want us to know the difference between good and evil, but good-old Eve got Adam to eat the apple, so we learned the difference between good and evil. Obviously, therefore, God doesn’t always get what he wants! Yet, to gain

* Go to other chapters *via*

eternal life, it seems clear that we must be tricky! For example, whereas God says he doesn't want competition, one good way to get eternal life would therefore seem to be to demonstrate (through the way we live our lives), that we're not interested in eternal life (i.e., be a nonbeliever or atheist): thereby, if you show God that you're disinterested in all the "god trappings", he probably won't be jealous – and then, maybe he'll let you join the "life-after-death" club!

In sum, it's a hopeless mess! Each group of clerics will say that only theirs is the correct way, atheists making fun of theists will say that the correct way is theirs, and the conclusion that I hope that you'll reach about my first point, Dear, is that there's no way to tell which way is the correct way. Mathematically, when you don't know "the right way" (rw), i.e., when you must set $P(\text{rw}) = 0$ (since there's no way to know if yours is the "right way" and there are, theoretically, an infinite number of ways), then $P(H) = P(H|\text{rw}) \cdot P(\text{rw}) = P(H|\text{rw}) \cdot 0 = 0$. Consequently, payback on the "eternal bliss" scheme = $H \cdot P(H) = 0$, i.e., you get zero return (except for the consolation prizes) for the 10% of your income that the clerics' charge to play their game.

The result can be expressed more simply and more forcefully in words: the first error made by anyone who plays the "eternal-life" con game is to become involved in a gamble for which the probability of winning can't be calculated. The "take-away lesson", Dear, is that for any claim to be of any value, it must be at least theoretically possible to demonstrate that it's wrong. In the case of the chance of gaining "eternal bliss", that condition isn't met. Shucks, even I can cook up as good a line as any con-artist cleric. For example:

God wants company who can bring something to the table, namely, original thoughts; he wants people who can think for themselves, not just more preaching parrots, braying donkeys, baying dogs, and baaing sheep. Therefore, he sent Zoroaster, Ezra, Jesus, Muhammad, Joseph Smith and all the rest of the prophets down to Earth to fake-out all 'believers'. As a result, all those who decided to follow "the way" (preached by any prophet) would go to never-never land – never to be heard from again! Meanwhile, those who said 'rubbish' and stood on their own two feet, were then the gods (i.e., those who know the difference between right and wrong) worthy of eternal life. Thereby, by using various prophets and messengers, God cooked up a scheme to eliminate all who couldn't think for themselves! Any who follow any prophet or messenger are then automatically eliminated. You may say that this is hard to believe, but I remind you that "God works in mysterious ways."

By the way, Dear, several years ago, when your mother became so upset that your father had dumped Mormonism, I wrote the following note to her in an attempt to calm her down. In what follows, I've skipped the introductory stuff dealing with her immediate concerns; also, I should add that my references to "user's manual" and similar are consistent with the tasks in which she was then involved, selling scientific instruments as CEO (Chief Executive Officer) of her own, one-person company.

Now, let me turn to the more distant future, and comment on the potentials for the eternal happiness of your immortal soul. For purposes of this communication, let me agree with you that each of us possesses an immortal soul and that, basically, this sojourn on Earth is merely a "probationary" or "testing" period, allotted to each of us so that God can judge our worthiness for future assignments, including the possibility that the most worthy among us will become gods, ourselves, ruling our own worlds. If I have misrepresented any of your ideas, then immediately let me state that, for purposes of this note, I withdraw my interpretations and accept yours.

But with my accepting such ideas, immediately the question arises: what's the best way to live one's life? Since you were a child, you have been taught a specific set of answers to that question. Yet, without challenging the correctness of those answers (or challenging your ideas about the existence of either God or your immortal soul), let me at least point out, somewhat in amazement, how many different people (such as my mother) must then have been taught incorrectly. It is also somewhat puzzling that God, in his omnipotence, didn't send all of us a single, clear, comprehensive and unequivocal "set of instructions" to go with "this instrument".

Given this puzzle, let me suggest a possible reason why God didn't provide a single, simple "instruction booklet" or "user's manual". Given the existence of so many different "instruction booklets" [i.e., "holy books"], given the evidence that people live their lives differently, and given the data that different people have different competencies, consider the possibility that "the test" during this "probationary period" is actually much more complicated than most people realize and than is given in any "user's manual".

From this view, consider some of your own experiences. Do you know some people who seem to successfully follow a specific "user's manual", yet who seem to be incompetent in properly arranging some of the simplest aspects of their lives? Do you know some people, for example, from whom love seems to effuse, but who can't balance their checkbooks? Do you know other people who are always giving of themselves but who are almost always in need of help themselves? In general, do you know some religious people who follow their "user's manual" to the letter but whose incompetencies are such that it's incomprehensible that they could ever rule a world?

And in contrast, do you know of other people with astounding competencies and who have made major contributions to human welfare (such as finding a vaccine for polio,

developing anti-locking brakes, or decreasing strife in Ireland and the Mid-East) and yet who refuse to follow any “instruction booklet”? If so, consider the possibility that maybe the test can’t be passed just by following any “user’s manual”. If you accept that “God works in mysterious ways”, then “the way” to pass “the test” might be quite different. Thus, it may be that God has sent many different “user’s manuals” so that he can separate “the wheat from the chaff”. Maybe his idea is something similar to the following.

God knows, from experience, that it’s a tough job to rule a world, and a very lonely job, too. He therefore needs first-rate CEOs. Not someone who just follows orders, but someone who can think for herself; not someone who agrees to obey, but someone who demands to evaluate; not someone who accepts someone else’s ideas, but someone who figures things out for herself; not someone who agrees to “judge not”, but someone who relies on her own judgment; not someone who wants to follow, but someone willing to lead; not someone who seeks companionship, regularity, and security, but someone who can cope with her insecurity, adapt to change, grow with experiences, and make her own decisions, on her own. Wouldn’t such a person be a better prospect as the CEO of her own world?

If you entertain this view as a possibility, then for the sake of your immortal soul and your eternal happiness, shouldn’t you question the wisdom of the path you have chosen, both for yourself and your children? Shouldn’t you “keep your options open”? Shouldn’t you consider the possibility that your husband is making the next step toward passing his test, while you are holding back on a path that leads to failure? Shouldn’t you now proceed to demonstrate how you could be a first-rate CEO of your own world, showing how you can make judgments about how to live your life well, even without following still another “user’s manual”? Isn’t it time for you to try to follow your own rules?

Asked differently, what kind of God do you think rules this world? A wimp who just follows some “user’s manual”? Or is he a God sufficiently clever and experienced to devise and implement a method for separating the wheat from the chaff?

And what’s the probability of my scheme being correct? Answer: the same as the probability that the priests’ scheme is correct: unknown, unknowable, and therefore just as useless. But I can use it, with just as much justification as the con artists hawk their scheme – and I’ll charge you only 5 percent of your income to become a member of my club. In summary, then, with my scheme, the probability of getting some return from the 10 percent of your income and going the con artists’ way is zero. And though the probability of getting return going my way can’t be calculated, why don’t you play it safe, and send me only 5 percent of your monthly paycheck, every month, for the rest of your life?

Possibly unfortunately, however, I first sent a copy of the above to your father, asking for his “permission” to send it to your mother. He didn’t grant his permission. Who knows, it might have prevented your parent’s divorce.

All the above, however, addressed only my first point (that the probability of winning the “eternal life” jackpot is far more complicated than what the clerics advertise). A more serious error made by any player of the “eternal-life con game” (more serious than the error of accepting the clerics’ estimate of the payback of their scam) is to become involved in any gamble for which reliable, independent data are unavailable.

Thus, Dear, for the state lottery I have no doubt that there are winners, as is frequently reported in our local newspaper (which, generally, I trust). In fact there was a local winner, recently, and I knew (and trusted) people at work who knew the winner. Similarly, Dear, if you ever enter a casino (e.g., in Nevada), you’ll find pictures of proud winners displayed, and not only have I won some quite large jackpots in Nevada myself, but your grandmother and I were standing in line (waiting to get into a buffet) when we saw a lady win over a half a million dollars.

In contrast, I don’t personally know a single person who has won at the “eternal life” game. Further, not a single one of my acquaintances has ever met one of the jackpot winners. Also, our newspaper, radio, and TV reporters have never once interviewed a dead person who returned from life-after-death and described how great it was to win the jackpot. In fact, the only report that I’ve seen about this supposed jackpot is in the very same brochures (or scam-sheets) that advertise this scheme (i.e., various “sacred scripture”). But, Dear, a very good practice that you should follow before becoming involved in any investment or any gambling is this: obtain independent data about the scheme. If the only support for the scheme is provided by the promoters, then stay clear, because almost certainly, it’s a scam, designed solely for the benefit of the promoters.

As for how the promoters benefit, consider this. Without any physical effort (save the effort in wagging their tongues), the con-artist clerics who hawk this “hope” get free room and board (and clothes and cars and so on), generally a high regard in their communities (except from free thinkers, many of whom consider all clerics to be the “scum of the Earth”), power to call the shots for other people’s lives (a power monger’s dream), 10% of each gambler’s income, and as a result, the clerics get membership in the world’s richest clubs. In particular, based on information that I found on the internet (although reliable data are hard to find), it appears that the financial worth of the Mormon Church is in the range of \$10–100 billion and of the

Catholic Church, probably in the range of \$1–10 trillion! And if the amount of money collected by the Catholic con-artists running their scam is too much to comprehend, Dear, perhaps it would help to describe it this way: if the approximately 1 billion Catholic people were to sue their church for running this scam, and if the judgment were against the priests, then each Catholic would receive a refund of \$1,000 to \$10,000 (which is a lot of money, if one realizes that such sums are much larger than the lifetime incomes of a large fraction of the Catholics in, e.g., South America).

And to tie up still another loose end, I'll add the following. As I mentioned in **H2**, when (decades ago) I first saw the stupidity of the “eternal bliss” gamble, it moved me enough to try to write another “poem”. Not to subject you to more of my poor “versification” but for completeness, here it is.

“Prove It’s Wrong!”

I know it’s hard to understand
 (And when it’s known, to play your hand),
 But all of it’s just fabled land,
 Where God exists and death is banned.

The reason why the weak are led
 (And God exists, inside their head),
 Is nothing but their fear and dread
 Of thinking that they’ll soon be dead.

All those who say they know the host
 Of father, son, and holy ghost:
 They bought the con-man’s worthless boast,
 And paid with what they wanted most.

They wanted life, a life that’s whole,
 A life that’s free – that they control;
 They bought the bill “immortal soul”
 And paid by forfeiting their goal.

The sting is set with “sacred” song,
 Where only those who “lief” belong,
 But arguments are never strong,
 When all they say is: “Prove it’s wrong!”

But let them weep and wail and moan,
 And to their Gods, for sins, atone;
 Although they fear all things unknown,
 The universe sails on alone.

Of course, that can't be proved, as well,
But here's a truth that you can tell:
The thought of Heaven, where all's well,
Can turn the life you have to Hell.

Now, true, it's just another game,
Where "scriptures" tell you where to aim,
But you must share their stupid blame
And their distorted view of shame.

For this you get "deliverance",
But there's a famous utterance:
True Hell is where there's ignorance,
And reason doesn't stand a chance.

So, if their "way" is what you choose,
Just think of what you thereby lose:
A precious life. A life that's whose?
The only life that's yours to use.

Oh sure, life's just a game to play,
And you can play it either way,
But if you play the way they say,
You'll never own a single day!

For me, from data I assess,
My death will cause my consciousness
To end – a total emptiness:
"Life after death" is meaningless!

But from these thoughts, another's drawn,
And it's a thought to dwell upon:
You'll never know when you are gone –
So if you wake, rejoice at dawn!

Each day you wake, you start anew;
The life you have belongs to you:
New scenes, new thoughts, new tasks to do,
And death, you'll find, you never knew.

But some, I know, are not impressed,
They seem to like the stories best,
So now I'll tell them all the rest:
Religions are His way to test!

This way, the chaff is blown aside –
 The ones whose greed is undenied,
 Who thought that He could just be bribed –
 From those who lived their lives and tried.

And when the winds have blown away
 The cowards, fools, and those who pray
 That greed will yet their death betray,
 He's left with those He wants to stay!

Those few (Spinoza not outdone)
 Perceived the true phenomenon:
 They saw that they and God were one,
 And thereby claimed the life they won.

And yes, to hucksters of the throng,
 I say my argument is strong:
 Let's see you prove that I am wrong!
 (I, too, can ring that mindless gong.)

Subsequently, I've seen many additional analyses of the foolishness of Pascal's wager. You can find many on the web. The following two are from the indicated books.

The problem with the above argument [Pascal's analysis] is that it does not establish a fifty-fifty betting proposition. There are many alternatives that it fails to consider. For example, God may exist but he may damn anyone who "bets" on his existence merely for reasons of prudence. He may consider such a "bet" to be an insult. Furthermore, it may be that a mere belief in God is not enough to ensure salvation. A further requirement may be the belief in a particular religion. But which religion? Again, there are many alternatives. Another possible alternative is that God offers salvation only to atheists because God does not like being surrounded by obsequious "yes-men." God may prize independence and skepticism." [B. C. Johnson, *The Atheist Debater's Handbook*]

"What Pascal overlooked was the hair-raising possibility that God might out-Luther Luther. A special area in hell might be reserved for those who go to mass. Or God might punish those whose faith is prompted by prudence. Perhaps God prefers the abstinent to those who whore around with some denomination he despises. Perhaps he reserves special rewards for those who deny themselves the comfort of belief. Perhaps the intellectual ascetic will win all, while those who compromise their intellectual integrity lose everything." [Walter Kaufmann, *Critique of Religion and Philosophy*]

And in contrast to Pascal's wager, there's the following "de-conversion wager":⁶

Whether or not you believe in God, you should live your life with love, kindness, compassion, mercy, and tolerance while trying to make the world a better place. If there is no God, you have lost nothing and will have made a positive impact on those around you. If there is a benevolent God reviewing your life, you will be judged on your actions and not just on your ability to blindly believe in creeds – when there is a significant lack of evidence on how to define God or if he/she even exists.

Similar was beautifully written by the incomparable Scottish poet Robert (or "Robbie") Burns (1759–1796) in his *Epitaph On My Own Friend And My Father's Friend, Wm. Muir In Tarbolton Mill, 1784*:

An honest man here lies at rest,
As e'er God with his image blest:
The friend of man, the friend of truth,
The friend of age, and guide of youth:
Few hearts like his – with virtue warm'd,
Few heads with knowledge so informed:
If there's another world, he lives in bliss;
If there is none, he made the best of this.

Recently on his blog,⁷ "The 327th Male" posted a very nice (in the mathematical sense of *nice*, viz., "fine, subtle, discriminating, precise, careful, meticulous") analysis of Pascal's Wager. Below is a copy of his analysis – which I put here in hopes of increasing the probability that you'll consider it!

Pascal's wager

by The 327th Male

Game theory is a concept in applied mathematics. Like any branch of mathematics, it throws around big sounding terms such as "pay-off matrix" and "Nash equilibrium", but at its heart, game theory is really very simple.

Game theory is about winning.

In any game where the rules are clearly defined, game theory can be used to try to find the best strategy. Take a classical game of chicken for example, where two

⁶ Copied from <http://de-conversion.com/>.

⁷ Copied from <http://kinsman.is-a-geek.net/blog/index.php/2007/12/27/pascals-wager/>.

drivers accelerate towards a head-on collision, the one who swerves being the chicken. A traditional pay-off matrix for chicken looks like this:

	<i>bob swerves</i>	<i>bob goes straight</i>
<i>fred swerves</i>	tie	bob wins
<i>fred goes straight</i>	fred wins	crash

The matrix is fairly easy to understand; if both players swerve, the game is a tie. Neither player is the chicken and neither player dies. If both players stay the course, they both die – the worst possible outcome. If one player swerves, only their pride will be hurt, while the other gains the honor of winning.

So what is the best way of winning? If you don't swerve you could die – so you'd better swerve. The other guy will be thinking that as well though; so, if you don't swerve he probably will. But wait – what if he is thinking the same thing! Then you will both die!

Analyzing the game in this way, trying to work out the right decisions to achieve the best outcome – most people call this 'strategy'. Mathematicians call it game theory.

Blaise Pascal was a French mathematician who was also very religious. He used game theory's sibling, decision theory, to try and tell the world that belief in God is the right decision. This is now known as Pascal's Wager.

The wager states that belief in God is the correct decision because the pay-off is infinite, while the punishment is infinitely painful. The pay-off matrix as proposed by Pascal would look like this:

	<i>no god</i>	<i>god exists</i>
<i>atheism</i>	oblivion	hell
<i>christianity</i>	oblivion	heaven

It would seem Pascal is right. Time to throw away all my years of skepticism – praise be to God the almighty! I see the light!

But wait, something tells me the matrix isn't quite complete. That's the problem with game theory (and decision theory): it can appear very authoritative until you realize that you haven't accounted for all the variables.

Take my initial example of chicken. The analysis of the game looks complete, it looks like I have thought of every possible scenario. But what happens if both players swerve in the same direction. There's a chance that if they both chicken out, they could actually swerve into each other and be killed. Taking this into consideration, the pay-off matrix now looks like this:

	<i>bob swerves left</i>	<i>bob swerves right</i>	<i>bob goes straight</i>
<i>fred swerves left</i>	tie	crash	bob wins
<i>fred swerves right</i>	crash	tie	bob wins
<i>fred goes straight</i>	fred wins	fred wins	crash

In the initial matrix, there was a 25% probability of winning and a 25% probability of crashing. In the new matrix there is only a 22% probability of winning and a 33% probability of crashing. Clearly it could lead to disaster if you base your decisions on the original matrix.

Pascal's wager is equally flawed. For starters it doesn't take other religions into account. Let's add Islam:

	<i>no god</i>	<i>god exists</i>	<i>allah exists</i>
<i>atheism</i>	oblivion	hell	hell
<i>christianity</i>	oblivion	heaven	hell
<i>islam</i>	oblivion	hell	heaven

Or what about a God / Allah that doesn't punish wrong choices in belief, and only judges based on how good you have been throughout your life?

	<i>no god</i>	<i>god exists</i>	<i>allah exists</i>
<i>good atheist</i>	oblivion	heaven	heaven
<i>good christian</i>	oblivion	heaven	heaven
<i>good muslim</i>	oblivion	heaven	heaven
<i>bad atheist</i>	oblivion	hell	hell
<i>bad christian</i>	oblivion	hell	hell
<i>bad muslim</i>	oblivion	hell	hell

And what if God / Allah exists, but actively punishes belief? What if God / Allah wants us to think for ourselves?

	<i>no god</i>	<i>god exists</i>	<i>allah exists</i>
<i>atheism</i>	oblivion	heaven	heaven
<i>christianity</i>	oblivion	hell	hell
<i>islam</i>	oblivion	hell	hell

As you can see, decision theory isn't very useful if you don't know all the rules behind the game, and we know nothing of the rules behind the afterlife, or even whether it exists. This makes the wager an unconvincing argument.

Sorry Pascal, but I'm sticking with atheism.

As for additional reasons why the “Heavenly bliss” bet is a bad gamble, Dear, let me run through details by using the same scheme that I used earlier, in **H2**. There, I showed you a list of what I called “some features of rational hopes”. What I’d like to do, below, is contrast the irrationality of the “eternal-life hope” (which the clerics hawk) against some rational hopes that I hope you’ll adopt, trying to help solve humanity’s problems more intelligently (e.g., promoting world peace, advancing science, developing some new labor-saving device, teaching school children or college students, strengthening the world’s financial system, protecting the environment, and/or thousands of other examples). For you, Dear, for essentially all of these examples, you’ll almost certainly need more education; therefore, for contrast with the eternal-life hope, let me continue to use the example that I used earlier, namely, that you place your hope, first, on obtaining your first college degree.

From the above paragraph, one obvious and general feature of any hope is that it incorporates an assumption about the future. A second general feature about hope is that to adopt a hope is to choose to gamble: you invest something in the present hoping to get back more in the future. And just as with any investment or any gambling, there’s an element of risk in hoping, namely, the risk that the investment won’t pay off (i.e., that the gamble will be lost). In **H2**, I listed some characteristics (repeated immediately below in the “bulleted list”) of what I called ‘rational’ (or ‘realistic’) hopes, which are the only long-term goals that I hope you’ll adopt. I’ll now repeat the list and try to show you differences between the irrational hope of eternal bliss in paradise vs. some rational hopes associated with helping humanity.

- A rational hope should incorporate a reasonably good definition of *what you must invest* (e.g., study hard) so that you will have a reasonably good change of realizing your hope (good grades).

Unfortunately, no “reasonably good definition of what you must invest” is available if your hope is to achieve “life after death” or “eternal bliss” or however the con-artist clerics choose to hawk their scam. Of course each class of con artists (Muslims vs. Christians, or, within just the Christian class, Greek Orthodox vs. Roman Catholic vs. Lutheran vs. Mormon and so on) “guarantee” that their way is the only correct way, but a rational analysis first will conclude that obviously they can’t all be correct! Further, as I suggested earlier in this chapter, a rational analysis of any “holy book” could

easily lead one to conclude that none of the ways hawked are correct: if “eternal life” were possible, it seems just as likely that the “correct way” is to reject what all clerics hawk, so that “when you’re called”, you’ll have something original to bring to the table (that is, your independent thoughts) rather than being just another member of a huge herd of Christian (or Muslim or Mormon) sheep.

So again, Dear, if you choose to place your greatest hopes on “life after death”, there’s no rational way to determine what it is that you’re expected to invest: are you to do and to think as you’re told (be a good little theist) or are you to think for yourself and then act accordingly (be a scientific humanist)? In contrast, if your long-term goal (your hope) were to help intelligent life to continue to evolve, then there is a “reasonably good definition of what you must invest”, namely: do the best you can – or maybe better: Evaluate!

- A rational hope should incorporate a reasonable estimate of *how much you need to invest* (e.g., four or five years of studying) so you’ll have a reasonably good chance of realizing your hope (your bachelor’s degree).

Now, although a rational analysis won’t help you decide what you must invest to achieve the (nonsensical) long-term goal of “life after death”, yet if you do buy into one of the con-artists’ schemes (Christian, Muslim, or whatever), then the clerics quickly tell you “how much you need to invest...” Of course there’s the tithes, which even in Webster’s dictionary means 10% of your income, but some people might argue: “It’s not really necessary to pay my tithes; I’ll just assume that life-after-death is a possibility, live a good life, and skip paying the clerics.”

Well, Dear, con-artist clerics haven’t stayed in business for as long as they have by letting people get away with that! That’s why, for example in the Bible (immediately after the Ten Commandments), there’s a huge list of appropriate “offerings” (see essentially the entire chapter entitled *Leviticus*, which in my copy runs through pp. 108–143!). The clerics’ point is this: you can’t live a “good life” without “making sacrifices” to God (and of course, the collection plates are just convenient places for the worshippers’ “offerings” – not that the clerics plans to profit!), and if you don’t live a good life by making all these “offerings”, then “all bets are off”: you can’t possibly win the jackpot.

But in reality, you're required to invest much more. As I'll return to (in the list below), you're required to accept the clerics' definition of values, to ignore values that you deduce by yourself, to make choices defined by the clerics, to give up your volition, to become a good member of the clerics' flock of sheep, to abandon your "humanness" – up to and including murdering the horrible unbelievers, walking with your children to be eaten by the lions, or tying explosives around your waste to blow yourself up for the sake of the con-artists' "Jihad".

In contrast, if you choose as your prime hope to help humanity solve its problems more intelligently, then how much you must invest is generally proportional to how much you want to help: if you hope to "do something for the environment", then it's relatively easy to find something to do (e.g., pick up some trash); if you hope to find a cure from some disease, you'll need to work very hard for a long time at your studies; and so on. But usually if you set yourself a difficult long-term goal that requires substantial preparatory work, then there's substantial payback for yourself as you progress. For example, with each college degree you earn, and with each minor research achievement you make, you will make personal progress toward your own dual survival goals (of yourself and your genes) – which will be source of happiness.

- A rational hope should permit you to make a reasonably good estimate of *the probability that your hopes can be realized* (in the case of your getting your college degree, Dear, if you will work reasonably hard, surely the probability is essentially certainty, i.e., very near 1 or 100%).

For the case of the con artist's "life-after-death" scam, earlier in this chapter I devoted substantial space to showing you how to estimate the probability that such hopes can be realized. In summary, anyone who plays clerics' life-after-death lottery is making some very serious errors, as I'll now briefly review.

An obvious error (already mentioned in this list) is to assume that the way to win the jackpot is the way promoted by the clerics. Even just a little reading of any "holy book" reveals that its god is a tricky character; therefore, other explanations should be sought for everything that's stated, including the possibility that the way to Heaven is exactly opposite from the way stated. And the important conclusion to be drawn is this: whereas there's no way to estimate the probability that anything in any "holy book" is "true" in reality,

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therefore, there's no way to estimate the probability of winning the life-after-death lottery; therefore, don't play it!

A second error in playing the clerics' lottery is to accept any estimate for probability of winning that is based on zero data. In fact, not even the most rudimentary data are available, namely, data showing that someone has ever won. And certainly it's significant that if, as expected, the entire life-after-death lottery is a scam (i.e., that there's zero probability of winning the jackpot), then the number of winners would be exactly zero, which is exactly the same as the number of winners suggested by the data.

Dear, for a gamble in which the probability of a favorable outcome can't be calculated and for which zero evidence is available that anyone has ever won, the most that you should be willing to bet is something you plan to throw away. In contrast, what you are required to bet in any clerics' con game is the essence of your life – your volition. Many people who are “hopeless” make such a bet, commonly with: “Oh well, what do I have to lose?” (with the meaning that their lives are worthless anyway). Of course that's sad, but actually, it's not a mathematical argument that I would have you seriously consider for rejecting the false hope being sold by religious con artists. That is, Dear, I would have you reject playing the life-after-death lottery not because it represents the world's longest-running con game, but because it's teachings are wrong; I would have you reject all organized religions not because their mathematics are wrong, but because their morality is wrong (for reasons that I'll outline below and that I've described in detail in earlier chapters).

In contrast, if as your long-term goal you seek to make a contribution to humanity, then if you'll do your best, then success is guaranteed! I say that confidently, Dear, because even should you fail to cure a disease, write a wonderful poem, discover a new scientific principle, or... still you'll have made an extremely valuable contribution to humanity: you'll have demonstrated to others the way to live, i.e., you did what you deduced was the best you could.

- A rational hope should certainly be *to reach a desirable goal* (e.g., for you to become employed in a desirable job).

For the Christian (and, similarly, Muslim and Mormon) con games, Dear, I hope you'll give serious thought to the question: is "eternal life" a desirable goal? In your thoughts, please especially consider the following two points.

1. First, consider a little history. As I've reviewed earlier in this book, it appears that Zoroaster dreamt up the now-common idea of Heaven and Hell, about 2500 years ago. He lived alone (in a cave) for more than a decade – and from his writings it seems clear that he drifted into insanity. There are still some practicing "Zoroastrians", but it was "Saint" Paul and his followers (including Muhammad) who grabbed Zoroaster's idea of Heaven and Hell and saw that they could sell it (at a huge profit).

But, Dear, it's impossible to get to Heaven, not because you can't jump over all the fictitious hoops that the con artists have erected, but because Heaven, itself, is an impossibility. The possibility of "eternal bliss" (eternal happiness) is ridiculous, because happiness and unhappiness are inseparably coupled: you can't be happy overcoming obstacles if there are no obstacles; you can't know beauty without knowing ugliness; you can't know gladness without knowing sadness, and so on. Seeking eternal bliss in Heaven is as vain as searching for a one-sided coin.

In fact, if you have a choice in the matter, choose Hell! The con artists' Hell at least would offer some challenges – some possibility for happiness! And if you would like to imagine the most miserable possible existence – a Hell of gigantic proportions in which there isn't even the possibility of ever being happy – then you've just envisioned what the con artists call Heaven!

Dear: please imagine it. What would you do if you could do absolutely anything. Sure. And then what would you do next week? Next year? And how would you pass your time during the next century? The next millennium? Good. Now, what about for the next million years. Okay, that takes care of the briefest unit of time in "eternity". What are your plans for then next 10 billion years, and then...? As even the new pope (Benedict) recently wrote (in his 30 November 2007 "encyclical" on hope):⁸

But then the question arises: do we really want this – to live eternally? Perhaps many people reject the faith today simply because they do not find the prospect of eternal life attractive. What they desire is not eternal life at all, but this present life, for

⁸ Copied from http://www.vatican.va/holy_father/benedict_xvi/encyclicals/documents/hf_ben-xvi_enc_20071130_spe-salvi_en.html.

which faith in eternal life seems something of an impediment. To continue living forever – endlessly – appears more like a curse than a gift. Death, admittedly, one would wish to postpone for as long as possible. But to live always, without end – this, all things considered, can only be monotonous and ultimately unbearable.

As Susan Ertz said: “Millions long for immortality who don’t know what to do on a [rainy] Sunday afternoon.”

Nietzsche famously said “God is dead” (by which he meant that the philosophical concept of God is dead, because the arguments for God’s existence are so flawed). Yet I would jokingly add: “He committed suicide: driven insane by unrelenting boredom, suicide was the only remaining activity that offered a little amusement.” Dear, happiness is not in having no obstacles to overcome (that’s the hell experienced by most people who receive huge inheritances); in large measure, happiness is derived from the process of overcoming obstacles.

Yet, as I’ve written in earlier chapters, the realization that unhappiness is essential should not, in itself, be a source of unhappiness! Look on the bright side: “if there were no shadows, new light could never shine.” If any pity is to be considered, pity the con artists’ god: if you could do anything (create light, zap up a new world, whatever), if you lived forever, if you knew everything, ... then there is only one thing that you could not have: happiness! That is, Dear, the con artists’ god doesn’t live in the con artists’ Heaven but in Hell. I therefore hope that you’ll see, Dear, that the long-term goal, the “hope” of the Christians, Muslims, Mormons, etc. is not “eternal bliss” but eternal boredom! I absolutely guarantee you, Dear, that you’ll never be happy in Heaven!

2. And another aspect of the desirability of the hope hawked by the con-artist clerics, which I hope you’ll think about, is an attribute rarely emphasized. Maybe the reason that it’s rarely emphasized is because the goal is so embarrassing: to live forever is a purely selfish, egotistical goal; the plan is to help nobody but yourself!

Looked at differently, Dear, if the goal is for your “soul” to live in “eternal bliss”, then surely one should ask: For what purpose (besides the obvious purpose of satisfying your egotistical goal of your own eternal bliss)? In response to this damning question, many religious people will answer “the purpose is to serve God’s will.” But then if you ask, “Well, fine, but what’s

God's will?", you'll find that you'll receive a huge number of answers, ranging from "to reward souls for living according to his laws" to the mind-numbing: "God works in mysterious ways." And if you press on, for example by asking "Why does God want a bunch of souls that act exactly as He desires?" or "Why does God act in mysterious ways?", and so on, I guarantee you, Dear, that you will receive no rational answer.

Yet a rational answer is staring one in the face: Zoroastrians (including Christians, Muslims, and Mormons) believe that their "souls" can live forever, because they want to live forever, for the sole purpose and irrational hope of avoiding death. So then, who is imagined to reside in the imagined Heaven? Egotistical dimwits; those who surrendered [their minds] in obedience to Christ or Muhammad or... As Mark Twain said: "Go to Heaven for the climate, Hell for the company."

Again I congratulate the new pope (Benedict) for his recent "encyclical" on hope (already referenced): not only for (finally!) admitting that the common concept of Heaven is a hoax (as is the Muslim stupidity, especially if the correct translation is not that each martyr will get 72 virgins but 72 white raisins!), but for his attempting to describe a more appealing Heaven. Unfortunately, however, he failed. He posits the following.

We can only attempt to grasp the idea that such a moment is life in the full sense, a plunging ever anew into the vastness of being, in which we are simply overwhelmed with joy. This is how Jesus expresses it in Saint John's Gospel: "I will see you again and your hearts will rejoice, and no one will take your joy from you" (16:22). We must think along these lines if we want to understand the object of Christian hope, to understand what it is that our faith... leads us to expect.

Thus, seeing that what he's promoting (eternal "joy" or happiness) appears to be astoundingly egotistical, Benedict quickly back-pedals to insist that the greatest joy is in helping others.

Then, however, Benedict neglects to mention the obvious: that the Christian's goal should then be to go not to Heaven but to Hell, since that's where there's alleged to be the most opportunity to help others. That is, Dear, if you want the happiness of overcoming obstacles and helping others, then go to Hell! Think of how many "tortured souls" you could help in Hell, alleviating their suffering – for example, by using all the alleged heat to power-up air conditioners!

But getting back to reality, if your rational hope (here on Earth) is to help humanity, then obviously your “soul” or your “spirit” or (better) your thoughts can live on – maybe even forever, if your thoughts are sufficiently powerful – and without your paying 10% of your income to anyone. Thus, think of some of the wonderful thoughts, still “living”, that others have left us, for example: “the best revenge is to live well”, “the only way to pay our debt to the past is to put the future in debt to ourselves”, “certain inalienable rights, such as life, liberty, and the pursuit of happiness”, “a government of the people, by the people, and for the people”, “ $\text{curl } \mathbf{H} = \mathbf{j} + \partial \mathbf{D} / \partial t$ ” (where the last is the addition that Maxwell made, enabling him to explain electromagnetic waves), Einstein’s “ $E = mc^2$ ”, Schrödinger’s $\mathbf{H}\psi = E\psi$ (which is the basis for steady-state quantum mechanics), and so on.

Further, Dear, what is it – besides your best thoughts – that you would want to live for “eternity”? If your “soul” lived for eternity, would your “spirit” enjoy: strawberry milkshakes with no ability to taste them, roses with no ability to smell them, sunsets with no ability to see them? In contrast, if you have some thoughts that help intelligent life continue, then as surely as they do, then so will your “spirit”.

- A “rational hope” should be consistent with your values (certainly at least preserve them, but even better, enhance them). In contrast, it’s irrational to pursue a hope that compromises your values, because preserving what you have chosen to be your values means promoting what you have chosen to be one of your prime goals (e.g., you shouldn’t need to lie or cheat or... to get your college degree or to keep your job).

For example, if you choose as one of your prime values “to use your brain as best you can” (which includes evaluating your thoughts against the best available data), then you’d have an irrational hope if you pursued a goal that forced you to abandon your best thoughts and just “obey” (as all organized religions require). And therein lies the greatest evil of religious con games: the highest price you must pay (to play their life-after-death lottery) is that you must adopt whatever values the clerics prescribe.

In particular, you lose the lottery (you lose your hope for eternal survival) if you sin and don’t receive the clerics’ forgiveness for your sin – where of course, it’s the clerics who grabbed the power to define sins (“if you do not do well, sin is a demon crouching at your door”) and to forgive them! For example, if you violate some of the Bible’s many “commandments” (e.g., if

you coveted someone's food when you were starving) and if you don't get "forgiveness for your sins" from some cleric, then you'll be excluded from "eternal bliss".

And what an mind-numbing range of sins various clerics have defined! As some examples given at just the start of the Bible, the damnable clerics have proclaimed that it's a sin: not to follow orders (even if you were never told that was "evil" not to follow orders), to be seen naked (even by your spouse), to offer their god vegetables rather than fatty foods, to participate in violence, to do what you "have a mind to" (such as build a tower), and a huge number of other examples, including it's a sin not to murder all men, women, and even children of the enemy – but later in the Bible you're told you're a sinner if you don't "love thy enemy".

Ah, but, the clerics are a crafty bunch. They soon found that such a huge string of "sins" substantially reduced the number of lottery players, reducing the clerics' income. So, early in the history of religions based on the Bible, the priests decided to grab the power, also, to "forgive" sinners. Of course, also they charged to "forgive" sins: in the early days of the biblical sham, the cost was various amounts of silver or food for the Levite priests (Moses' mafia); modern catholic priests have developed the cost of forgiveness to an art form – so, deeply religious members of the Italian and Sicilian mafia just accept the price of forgiveness as part of the cost of doing business ("Let's see, if I murder that politician, it'll cost me \$400,000 plus 7 Hail Mary's..."). And the sham goes on: a modern example is the familiar bumper sticker: "Christians aren't perfect, just forgiven" – I guess the bumper is too small to add who forgave them and at what cost.

But much more significant than the cost of sinning is the cost to one's "humanness". Dear, we humans are more than animals because we can think about the future and make choices based on our thoughts. It's called "volition". The best tool that we have to permit us to make "good choices" is rational thought based on realistic data, i.e., evaluate! In turn, generally we decide that a choice is "good" if it promotes our dual survival goals (of ourselves and our "family" – which may include all life forms). And yet, it's exactly this volition – the essence of our humanness – that the con-artist clerics demand that we give up if we are to gain a chance (so they say) of winning their lottery.

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To play their game, you must adopt the values dictated by the con-artist clerics. No matter your best evaluation about what's right vs. wrong – no matter your best thoughts about what's moral vs. immoral – in fact, no matter your best thoughts or even any of your thoughts: you are not to think; you are to obey. Dear, as I've written so many time already, such is the worst of all possible evils: to yield your volition to anyone. And it is this volition – this ability to think of the future and make choices – your own evaluations – the essence of your humanness – your most valuable possession – what you should value most – that the con-artist clerics demand that you pay to play their game. How I hope, Dear, that someday you will be able to say to all clerics of the world: “Blow it out your ears; my life belongs to me!

Finally in the list in **H2** were the following three features of “rational hopes”. For these, my comments will be briefer – because I'm sorry, but as with the rest of the above, it's all obvious!

- To be “rational”, the set of hopes associated with all your goals should fit comfortably together within a *nested hierarchy of goals* [like those Russian dolls you used to play with!] erected upon your trio of survival goals.

First let me admit that, although I've been critical of the “irrational hope” of “eternal bliss in heaven” that's hawked by most organized religions of our culture, yet they have managed to build into their con games an important feature of any set of goals, namely, that they form a “nested hierarchy”. As a possible explanation of how they have managed this degree of success (and their associated economic success), I would suggest the possibility of just trial and error: any group of con artists with the opportunity to try out various schemes for hundreds (or even thousands) of years will probably eventually stumble onto a system that sells!

Thus, taking the “religious dolls” apart (rather than trying to put them back together): if you hope to achieve the (astoundingly selfish) goal of eternal bliss in heaven, then you'll need to be a “good person” and to help humanity to the best of your ability; therefore, you'll need not only to obey the commandments but also be as successful as possible in your career; therefore, you'll need not only to pay your tithes but also you'll need to do well in school; and therefore not only must you pray every day but also

you'd better pray that you'll do well on your next math exam – and study hard, just in case!

But of the many problems with these “religious dolls”, the problems with such goals and their related hopes is that, individually, many of them don't satisfy the previously listed conditions for “rational hopes”. That is, although these goals and their associated hopes fit together in a nested hierarchy, the individual goals (associated with praying, paying tithes, obeying commandments, seeking eternal bliss in heaven, etc.) aren't rational.

- A rational hope should have a *known and limited downside-risk potential*, should your hope fail to materialize.

As a contrasting example, if you chose to pursue the irrational goal of “eternal bliss in heaven”, with an intermediate goal of helping more people to join your church, then I imagine that there could be enormous pain associated with your abandoning the goal of “heavenly bliss”. For example, if you had participated in the “conversion” (or “saving”) of other “souls” (e.g., by “going on a mission”) and if you came to the realization that all organized religions are just perpetrations of primitive, pre-scientific models of the universe by ignorant clerics, then when you abandon your organized religion in exchange for adopting humanism, you would need to live with the knowledge that, in your own ignorance, you probably damaged other people's lives.

- A rational hope doesn't need to be held – and shouldn't be held – rigidly, like a religion.

That, I trust, is obvious – ya gotta learn to go with the flow, kid. That's almost as obvious as your need to get some more exercise!