H2: Hope = Expected Value

Dear: My goal for this chapter is to try to show you some of what I've learned about feelings known as 'hopes', with the hope that, thereby, I can help you. And even from that first sentence, I hope you see (and expect you already know) that as with happiness, a hope is a *feeling* we associate with some goal. Unlike happiness, however, which is a feeling we associate with making progress toward some goal and which deals with the past and the present, hopes are feelings associated with the future and with the outcomes of our goals. For example: I was happy, I am happy, I *hope I will be* happy.

Generally, the greater the hope we associate with any goal, the higher we place that goal's priority. Sometimes the magnitudes of such feelings are barely detectable (e.g., when we casually say "I hope you have a nice day"); other times, such feelings are so powerful that they can essentially dominate our lives (e.g., when parents hope their child will recover). And what I hope to show you in this chapter is at least an outline of how you can evaluate your hopes, so that the hopes you choose to pursue (i.e., the priorities you choose for your goals) will be "reasonable" or "rational" or "realistic", in turn, so you'll more likely realize your hopes. In contrast, choosing priorities unwisely, pursuing "false hopes", can lead to great unhappiness – even tragedy. Consequently, Dear, please be very careful when choosing the priorities for your goals, i.e., the hopes that you adopt in your life.

First, though, I want to suggest how Right Brain seems to become involved in establishing goals. Although Body obviously dictates some very important goals (such as sleeping, eating, and breathing!), yet generally it's Left Brain (with its analysis) that dominates in identifying, defining, and pursuing goals. Yet, although Right Brain doesn't seem to specify many goals (save to "have some fun"), there's no doubt that Right Brain has major (maybe even a dominant) involvement with all goals, not only "monitoring progress" toward them (with feelings of happiness) but also with maintaining their priorities (with feelings of hope).

As I tried to show you in the previous chapter, our right brain's interpretations of progress we're making (or failing to make) toward our goals can range on some "happiness scale" from "total euphoria" to "overwhelming grief". In addition, though, our right brain associates with each of our goals various feelings of hope, which range on some "hope

scale" from "uncontrollable urge" to "utter despair". These feelings of hope are an amazing and wonderful "built-in gauge" that allow us to "measure" not <u>progress</u> we think we're making towards our goals (that's Happiness's job!) but <u>priorities</u> for our goals.

Astoundingly, though, our feelings of hope seem to be defined not solely by our Right Brain – at least, not for most of us. For most of us, our hopes represent (or at least we hope they represent!) a cooperative effort between the right and left hemispheres of our brains, i.e., cooperation between our abilities to synthesize and to analyze (or to feel-emotionally and to think-rationally). My version of Webster's dictionary does a good job of displaying this cooperation by giving as the primary definition for 'hope': *a feeling that what is wanted will happen;* ***desire accompanied by expectation****,* in which I added the bold type for emphasis.

Let me try to help you to "digest" the above definition by giving you some "food for thought". First, Dear, think of something that you really, really, <u>want</u>: A billion dollars? The most wonderful person in the world as a life-long companion? The authority to establish "peace and plenty" throughout the world? Eternal bliss?… As you undoubtedly know, Right Brain (like a little child) is amazingly good at "picturing" what it <u>wants</u>!

But now, Dear, think about some of your <u>hopes</u> (which, similar to wants, are feelings). Of course I don't know what hopes you have, but let me provide a hypothetical list of your hopes, so I'll have something to compare with your hypothetical wants (assumed in the previous paragraph): A million dollars? A life-long companion who is loving and caring? A good job where you can "make a difference"?

So, what happened? Why is your (hypothetical) list of <u>hopes</u> "rather pathetic" compared with your (hypothetical) list of <u>wants</u>? The obvious response is that, to establish our hopes (the priorities for our goals), apparently what happens is that Left Brain gets involved, "weighting" Right Brain's visions of "wants" with Left Brain's estimates of probabilities (viz., expectations) that our wants can be achieved.

Thus, we might want a billion dollars, but when Left Brain estimates the probability of our acquiring this want, we "get real", temper our want, and then might adopt the "more reasonable" hope of acquiring a million dollars. Similarly, our Left Brain seems to temper our Right Brain's wants for our

life-long companion and for our employment – appropriately (we hope!) weighting wants with expectations, resulting in our adoption of priorities, i.e., our hopes.

EVALUATING HOPES

To define the concept of 'hope' more accurately – and even to develop some "measure" for it – to evaluate hope – first notice that some value can be associated with every one of our wants. Although sometimes it requires some effort and imagination, even a monetary value can be associated with each want. That's relatively easy to do if what you want is a billion dollars (monetary value = $1 billion!), but even for your other hypothetical wants (assumed above) you might estimate the following: value of "the most wonderful person in the world as a life-long companion" = $10 billion, value of "the authority to establish peace and plenty throughout the world" = $1 trillion = 10^{12}, value of "eternal bliss" = $1 quadrillion = 10^{15}, and so on.

Next, recall the definition of *expected value* of anything, i.e., its value multiplied by the probability of its realization. For example, if the probability of your winning a $1 million (viz., a $1 x 10^6) "jackpot" in some lottery is 1 chance in 10 million [viz., $1 / (10 \times 10^6) = 10^{-7}$], then the *expected value* of your lottery ticket is:

$$(\text{value x probability}) = \$10^6 \times 10^{-7} = \$10^{-1} = \$0.1 = 10¢ ,$$

for which most State Lotteries charge you $1.00 ! [And of course that's how the States make money in their lotteries: it's a tax on the foolish; foolish people pay a dollar for something whose (expected) value is 10¢!]

Finally, then, in an attempt to get an idea of how to measure 'hope', notice that the above definition of *expected value* (= value x probability) is a mathematical restatement of Webster's definition of hope, viz., "a feeling that what is wanted will happen; **desire accompanied by expectation**." That is, not only is *expected value* "desire accompanied by expectation" but also it specifies how to evaluate any hope: multiply the value of the desire by its probability of realization. Thereby, Dear, my choice for the title of this chapter: "Hope = Expected Value".

Consistently, the reason that our hopes are feelings expressing the priorities of our goals is because our hopes represent our estimates of the expected

values of our goals – which then also reveals potentials for major problems. Thus, if our analysis capabilities aren't well developed (as is typical for young children, and unfortunately, far too common among adults), we may associate unrealistic expectations with our wants. That is, although our estimates for the values of our wants may be fairly reliable, our estimates for the probabilities of their realization may be poor – resulting in very poor estimates of expected values. As a result, our hopes can be badly misguided. We may then end up pursuing "vain hopes", similar to those hopes that have ruined innumerable lives.

Incidentally, Dear, in case you're "not too keen" on the term "expected value", perhaps I should add that equivalent terms are available. In statistics and probability theory, "expected value" is the term commonly used, defined as the sum (or integral) over the values of all possible ways of achieving whatever is considered to be a "favorable outcome" multiplied by their probabilities. In economics (in particular, in "cost-benefit analyses") it's more common to use the word "utility", which is also the value multiplied by its probability. In risk assessments (done by statisticians, economists, ecologists, engineers, and others) it's common to use the word "risk" (or "hazard"), which again is the value (or the consequence – if it's a negative value) multiplied by its probability. Meanwhile, gamblers talk about "the potential payback", which is the payoff multiplied by its probability (and then subtract the value of the bet). Consequently, equally appropriate titles for this chapter would be:

Hope = Expected Value
Hope = Utility
Hope = Risk Assessment (or similar)
Hope = Potential Payback (or)
Hoping = Gambling.

And in case you object to the idea that *Hoping = Gambling*, let me remind you of some definitions and at least one "critical fact of life". As for definitions, according to Webster the intransitive verb *gamble* (i.e., a verb not acting on a direct object) is from the Old English word *gamenian* meaning "to play", in turn probably from the Greek word *gammeln* meaning "to sport, make merry". Webster gives two meaning for the verb *gamble:*

1. to play games of chance for money or some other stake **2.** to take a risk in order to gain some advantage.

As for the "critical fact of life", Dear, Webster gives for the noun *gamble*: "an act or undertaking involving risk or loss." That, my Dear, is life!

Seriously, Dear, essentially everything in this "game of life" is a gamble: you gambled when you got out of bed this morning that you wouldn't trip over the mess you left on the floor last night (or however many days it's been there!), you gambled when you ate breakfast that you wouldn't be poisoned, you gambled when you went out the door that you wouldn't be hit by a meteorite or a bolt of lightning, you gambled that you wouldn't be killed in a traffic accident, and so on. Life's "a game of chance for money or some other stake", and with every decision you make, you "take a risk in order to gain some advantage." Life is "an act or undertaking involving risk or loss." And in case you didn't know it, a prime purpose of grandfathers is to try to teach their grandchildren to become competent gamblers!

To become competent gamblers in this game of life, grandchildren must learn how to make reasonable estimates of expected values (or utilities or risk assessment or potential paybacks); i.e., they must develop capabilities to develop rational hopes. And since expected values (or hopes) are equal to values of wants multiplied by their probabilities of realization, and since estimating values of wants are usually relatively simple, then grandchildren must especially learn how to make realistic estimates of probabilities.

But meanwhile, Dear, in case I'm "losing you", in case you object to "all this mathematical stuff", or in case you disagree (arguing that you know perfectly well what your hopes are and that they have nothing whatsoever to with gambling or calculating probabilities), then let me remind you about the trail that I've been taking you on – and take the time to point out some of the flora, fauna, and scenery!

QUANTIFYING HOPES & FEARS

Back in Chapter **D** (dealing with Decisions) I showed you what I remind myself when I'm walking:

> **D***: To decide, dig – especially into data. "Show me the data!" For difficult decisions, dig into goals and values, feelings and instincts, and premises, options, priorities, and probabilities.*

Since then, I've been trying to explain what I mean about digging into "goals and values, feelings and instincts, and premises [and] options…" In this chapter, I want to dig deeper into "priorities and probabilities", in hopes that, when you come to associating hopes with your goals (i.e., assigning priorities to your goals), you might become more proficient in weighting your "wants" with "expectations" (i.e., in calculating their expected values). In later chapters (e.g., in **Ih**, entitled "Hypotheses & Probabilities" and in **Y6**, entitled "Your Hopes and Their Priorities"), I'll dig still deeper.

In **E** (dealing with Evaluations), I illustrated the use of expected values in making decisions (in pursuit of goals) but didn't emphasize the concept of hope. Let me return to that example, but this time, call your attention to the obvious, namely, that in making decisions, we almost invariably attempt to optimize hope. As I wrote in **E**:

> Thus, suppose that you wanted to decide whether you should wear your new suede jacket today. You hope to impress a certain someone, and you're sure you'd look "real cool" (or whatever expression is used by today's teenagers!) if you wore your new jacket. But you heard that there's a chance of rain today, you're worried that you'd damage your jacket if it gets wet, it's gonna be kinda warm to be wearing a leather jacket today, and you could end up looking definitely "uncool", sweating away in your suede jacket, while being mad at yourself for ruining it in the rain. So, how do you decide?

Notice that in this hypothetical case, the quandary was how to "prioritize" your different hopes: 1) your hope to impress "a certain someone", 2) your hope that your jacket wouldn't be ruined, and 3) your hope that you wouldn't end up looking "definitely 'uncool'."

Notice, too, that hopes and fears are mathematically similar. For example, your "hope that your jacket wouldn't be ruined" is identical to your <u>fear</u> that your jacket would be ruined (except for a negative sign). Thus, just as 'hope' is defined as "a feeling that, what is wanted will happen; desire accompanied by expectation", 'fear' can be defined as "a feeling that, what is <u>dreaded</u> will happen; dread accompanied by expectation." Therefore, to evaluate your fears quantitatively, you can proceed in the same way that you evaluate hopes: estimate the probability that your dread will occur and then multiply it by the value you placed on that dread.[1]

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[1] If you want more details, Dear (e.g., about how hope and fear of anything are related), see the March 2009 post entitled "On Hopes & Fears" in my blog at http://meansnends.blogspot.com .

Meanwhile, in making decisions (in "taking a gamble"), we almost invariably choose (as highest priority) the option providing us with greatest hope (or equivalently, least fear), i.e., that option with highest "payback" (i.e., highest expected value). In turn, to estimate the expected values of our options, to "quantify" our hopes and fears, we need estimates for both the values of our "wants" (or "dreads") and the probabilities of their realizations. Thus, for the example dealing with your suede jacket, I wrote:

> Well, whereas it's hard to compare apples and oranges, then like it or not, for comparison purposes, you'll need to find and then use a "common denominator". Usually the best available choice is some measure of relative economic value, as mercenary as that might seem. To illustrate, let me just "pull some numbers out of my hat" – feel free to adjust the numbers as you see fit, and then redo the calculation using your own numbers.
>
> Suppose, then, that your suede jacket (which could be ruined in the rain) is worth $100 to you, that there's a 30% chance of rain, that there's a 40% chance that you'll get caught outside when it's raining, and further that there's a 50% chance that, if you're caught in the rain, it would ruin your jacket. Further, suppose that this instance of "looking real cool" is worth $1000 to you and that there's a 10% chance that "the certain someone" will also think that you would look "real cool" in your suede jacket. And on the other hand, suppose it would be worth $500 to you not to look foolish, looking definitely "uncool", sweating away in your ruined jacket.

I then proceeded to calculate the expected values, yielding:

> Expected value of ruining your jacket $= -\$100 \times 30\% \times 40\% \times 50\% = -\$6$,
> Expected value of "looking cool" $= \$1{,}000 \times 10\% = \$100$, and
> Expected value of not looking foolish $= -\$500 \times 30\% \times 40\% \times 50\% = -\$30$.

And what I hope (!) that you now see is that those calculated values produced "numerical values" for your hopes and fears. Thus, if your "want" to "look cool" was worth $1000 to you, your "hope" that "a certain someone" would think you would look cool was worth (had an expected value) of $100 (less than $1,000, because there was only a 10% chance that your wearing the jacket would have the desired effect). Similarly, if your "want" not to ruin your jacket was worth $100 to you (or stated differently, if it would be worth –$100 to you if you ruined your jacket), then the expected value of ruining it was –$6. And so on.

Now, Dear, although that simple little example might stimulate you to agree that a lot of gambling does occur in this game of life, that making decisions means gambling (risking an investment to gain something while avoiding

loss), that hopes and fears can be quantified as expected values, and that putting expected values in priority is a sensible first step in making decisions, yet I trust you realize that, "in the real world, it ain't easy"!

REAL-WORLD CHALLENGES

One major challenge is to decide on values for what you want and don't want (dread). For example, choosing a $100 value for your suede jacket is easy enough (that's what was on the price tag!), but what's the value of your wanting to "look cool"? $1,000? $10,000? And maybe the worst part of putting values on your wants is that no one can help you put a value on such "intangibles": it's a decision that only you can make.

Usually, though, by far the bigger challenge is to estimate probabilities. I'll be returning to this challenge many times in this book (to try to help you make realistic estimates of probabilities), but for now, notice that help is sometimes available from sources other than your grandfather! For example, for the above "suede-jacket case", some of the probabilities might be fairly easy to obtain: you could get an estimate for the chance of rain from a local weather forecast, you could get an estimate for the chance of finding shelter from your knowledge of where you were going, and maybe you could get an estimate for the chance of ruining your jacket (if you got it wet) from someone more knowledgeable about suede jackets than I am!

Then, however, what about the estimates for the probability (10%) that "the certain someone" would think that you looked "real cool" in your jacket, and definitely "uncool" (100% probability) in your ruined jacket? For such estimates to be reliable, you'd need to know the person extremely well – maybe even better than you know yourself! Consequently, as you no doubt already know, quantifying hopes and fears (i.e., estimating expected values) "in the real world" can be a real challenge.

But before suggesting how you might make progress on the "real-world challenge" of quantifying hopes and fears, let me pause a little longer on this trail – to point out some scenery! As an "overview", let me remark that, if one could view our game of life objectively, surely a conclusion would be that it's an amazingly interesting and challenging game. Subjectively, though, many times it can be horribly frustrating, sometimes it can be quite frightening, and other times it's tremendously exhilarating. The intensity of these emotions – the extent of our happiness (or unhappiness) associated

with our opinions about the progress we're making (or failing to make) towards our goals – depends on the intensity and the duration that we pursue these goals, i.e., their priorities.

In general, the tougher the challenges, the higher your standards, and the greater your hopes (and associated fears), then the greater the potential rewards (i.e., happiness) – but the flip side of that coin (unhappiness) is always waiting to turn up! In an attempt to ensure that the predominant side of the coin is the "happy side", it's important to try to ensure that your hopes and fears are realistic, i.e., that you become a competent gambler.

BE CAREFUL CHOOSING HOPES!

As an "overview" in a different direction, let me admit that it took me many years (decades!) to understand that my hopes and fears were the expected values of my gambles, and therefore, that my hopes and fears reflected the priorities that I had assigned to my goals. Further, after all these years, I find that I still must struggle to appropriately weigh my 'wants' and 'dreads' with reasonable "expectations", so that my hopes and fears are "realistic". To remind myself of this result when I'm walking, I start the "hope part" of "H" with: *Careful with hopes = expected values…* and as you're probably beginning to expect, I now want to urge you to similarly "take care".

A major problem about my hopes and fears is that, unfortunately, my right brain has a tendency to get "emotionally carried away". I expect that similar occurs for most people. Thus, I know of many cases (including some of my own!) when chasing some (irrational or insufficiently evaluated) hope (i.e., in reality, nothing more than a "want") or trying to avoid some (irrational or insufficiently evaluated) fear (i.e., in reality, nothing more than a "dread") has caused major problems. Examples abound, including people who "hope" to win a financial jackpot, resulting in financial devastation, and those who chase hope for "eternal bliss in Heaven" and run from fears of "eternal torture in Hell", resulting in loss of authority over their own lives – and in the case of suicide bombers, loss of their lives.

Therefore, Dear, once again (consistent with "picking up your winnings, *carefully*"), I want to urge you to "take care". My (painful!) experience has taught me that it's extremely important to evaluate hopes and fears carefully, to make sure that resulting priorities for my goals are realistic. As a summary of what I want to convey to you in this chapter, please consider

this: whereas to hope (and similarly, to fear) is to gamble, whereas hopes
and fears are feelings about priorities for your goals, I urge you to make sure
that your left brain's analysis capabilities agree with (or are "synchronized
with" or are "in sync with") your right brain's syntheses of these priorities –
which you feel as hopes and fears. That is, I hope that your right brain's
"wants" and "dreads" and your left brain's analysis of the expectation for
realizing them have resulted in priorities for your goals that are reasonable
or rational or realistic.

And please appreciate, Dear, that hopes and fears are important: hope is for
the future what happiness is for the present, while fear is for the future what
unhappiness is for the present. That is, just as happiness and unhappiness
are important feelings summarizing our evaluations of our (current) progress
or failure to make progress toward our goals, hopes and fears are important
feelings summarizing the priorities for the (future) pursuit of our goals. I'm
not very good at constructing analogies [and in general – and conveniently
(!) – I don't like analogies anyway], but maybe you can discern what I mean
if I say that, if life is like an expedition on a sailboat, then happiness is the
rudder and hopes and fears are the sails. And probably making my analogy
even worse, I'll add that the wind is time, the water and waves are data, and
what you need to keep your boat upright, especially in rough seas, is a strong
keel of analysis set securely in an ocean of data.

Okay, if that analogy "doesn't do it for you", then let me try another. Hopes
and fears are like horses, and you've got to know how and when – or if – to
ride them. Some hopes and fears are like horses that need just a good
harness and a firm hand, for example, the hope of getting a good job (and the
fear that you won't). Others, however, are untamed and frisky, but if you'll
work with them, you'll be able to ride them; for example, you might want to
become a world-famous artist or scientist. And then there are the wild hopes
and fears that will rear and buck and go running off to the hills no matter
what you do; therefore, just let them run off over the hills, out of sight and
out of mind.

Notice, also, that just as the flip side of the "happiness coin" is sadness, the
flip side of the "hope coin" is fear. In particular, the example given above
(dealing with your fear of ruining your suede jacket and of looking foolish,
sweating away in a ruined jacket) illustrated how to estimate fears (i.e.,
"negative hopes", which is why the numbers in those calculations were
negative). Consequently, rather than pursue the analogy that hopes and fears

are different sides of a coin, it's more realistic to envision your hopes and fears as being on a line running from –∞ to +∞.

Further and importantly, midway between two infinities, at the center-point of the line stretched between (negative) fears and (positive) hopes (or in mathematical parlance, at the origin of the coordinate system) is a very strange and potentially significant feeling. It's called hopelessness, despair [= *de* (without) + *sperare* (to hope)], despondency [= *de* (without) + *spondere* (to promise)], and so on, including depression, desperation, desolation, devastation… It's a strange but unfortunately a fairly common feeling of (in lieu of a better word) "blah", in which the person is "driven" by neither hope nor fear; in fact, such people aren't driven at all. It truly is a personal hell – although the adjective 'personal' is rather superfluous, since (as I'll be arguing), a personal hell is the only hell that can exist! In any event, such despair can be extremely important: it can lead to suicide.

Suicide, however, isn't the only way out of hopelessness, as all "con artists" know. Again, Dear, please be careful: in this world, there are a huge number of con artists (i.e., those who plan to profit from gaining your <u>con</u>fidence). Con artists know that "hope is the stuff that dreams are made of", who are in the business of selling hope at outrageous prices, and who have their eye on you as their next "mark". For example, I remember visiting the "Rajneesh Compound" in Oregon. There, at a huge ranch-like area nestled between the Cascade and Blue Mountains, some "guru" from India (the Bhagwan Shree Rajneesh) "conned" a lot of people out of their money in "exchange" for living with him (almost as slaves, with him the master, living in luxury). At the entrance to this "Compound" was a large sign on which was inscribed a line from *The Divine Comedy* by Dante Alighieri (1265–1321), in particular, from Dante's description of Hell in his *Inferno:* "All hope abandon, ye who enter here!"

It may seem strange that a group would post a sign, at the entrance to their "heavenly compound", describing Dante's Hell![2] But as I said: suicide isn't the only way out of hopelessness. Most people not only want but need hope – and the desperate will grasp at any hope offered. But this particular con artist, the Bhagwan Rajneesh, used a "scam" that was new to me: he conned hopeless people out of their money, not by selling them some hope for the

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[2] Incidentally, it's also strange that Dante would describe Hell in such a manner, since as I describe in my March 2009 post at http://meansnends.blogspot.com , anyone who has no hopes would then necessarily have no fear – e.g., of Hell!

future (as do most con artists, especially all clerics), but by convincing his "followers" to abandon looking toward the future; that is, to focus on seeking pleasures in the "here and now" (which is taking "awareness" to an extreme). But without thought for the future, humans become no more than animals – and are then easy prey for someone who does have plans for the future, e.g., a con artist who has plans to spend their money!

At one extreme away from hopelessness (toward $+\infty$) is "living in a dream world" of hope. Further, the more one lives in hope, the more one's mind drifts into dreams. I expect that this is what Aristotle meant when he said: "Hope is a waking dream." Such is the "heaven" sold by drug dealers (in the form of various narcotics, such as marijuana, cocaine, and opium), the "heaven" sold by gambling operations (in the form of chances to win huge jackpots), and the "heaven" sold by various organized religions (especially the "eternal bliss" hawked in Christianity, Islam, and Mormonism). In each case, the con artists selling these hopes know that the most-eager marks for their con games are the hopeless – and that their drugs are addictive. In particular, as Karl Marx said, "religion is the opium of the masses."

At the other opposite extreme from hopelessness (toward $-\infty$) is living like a caged, tormented animal in total fear. As you might expect, not many con artists attempt to sell fears to their victims, but there are hideous exceptions who thrive on people's fears: individual thieves, organized criminals, political dictators, and clerics of most organized religions (including fundamentalist Christianity and Mormonism and essentially all of Islam). Clerics of those religions stimulate their followers with fears of Hell, which is a horrible (but effective) tactic. As Robert Ingersoll wrote in 1881:

> All the meanness, all the revenge, all the selfishness, all the cruelty, all the hatred, all the infamy of which the heart of man is capable, grew, blossomed and bore fruit in this one word, Hell.

In this book I'll take pains to debunk (as being completely meaningless) the hideous idea of "eternal torture in Hell" (and the just-as-meaningless idea of "eternal bliss in Heaven"). As Luther Burbank said in an address to the 1924 Science League of San Francisco:

> The idea that a good God would send people to a burning Hell is utterly damnable to me. The ravings of insanity! Superstition gone to seed!

And although you might expect me to attempt, now, to justify my indictment that the hopes and fears sold in most religions are irrational, I've chosen to delay the demonstration until later chapters (culminating in **Y6**, entitled "Your Hopes and Their Priorities").

My reason for delaying the demonstration is that I want to show you, first, some characteristics of rational hopes (this chapter) and then some general features of "the God idea" (in **I**), policies promoted by all religions (in **J** through **Q**), and some details about science and humanism (in **R** through **X**). Nonetheless, in this chapter, I will mention a few reasons for my claim that hope for "eternal bliss in Heaven" and fear of "eternal torture in Hell" are irrational – and I'll continue to maintain that claim, counting on your patience that eventually I'll provide justification for my indictment.

REALISTIC HOPES & FEARS

Now, with scenery appropriately acknowledged (☺), let me continue on down the trail by trying to show you how to be a more competent gambler – as I any conscientious grandfather should, gambling that he'll be successful! And please notice, Dear, that the key word in the previous sentence was 'competent', i.e., a *competent* gambler. In contrast, as I'll be showing you (e.g., in **I** and **Y6**), you've picked up some atrocious gambling practices from your parents. To be blunt, some of their estimates of probabilities are absolutely pathetic. In particular, their buying into what's called "Pascal's wager" of "eternal bliss" (which I'll get to or which you can easily find on the internet) is so silly that it should be ridiculed.

To be a competent gambler (i.e., to develop capabilities of adopting realistic hopes and fears), you need to develop capabilities of estimating expected values of all possible outcomes, i.e., their values multiplied by their probabilities. As I already wrote (and anyway, as you already know), usually it's difficult to estimate probabilities, but as a simple example, suppose some outcome depends on the toss of a "fair coin", i.e., one that, upon being tossed, is equally likely to come up "heads" (H) or "tails" (T). I trust you agree that the probability that, say, H would come up on a single toss would then be ½ (i.e., 50%). Thus, in this case, the usually difficult task of estimating probabilities is actually very simple.

Now, let's get to some gambling (i.e., to hopes and related fears). Thus, suppose someone invited you to gamble on the outcome ("your call") of a

single toss of a coin. Suppose that to "buy into the game" they charged you $10, promising you $15 if your call (H or T) was correct. That is, the value to you of a correct call would be $15 – $10 = $5.   Incidentally, as with all con artists, the one promoting this scam would probably neglect to warn you that if your call is wrong, then you'd lose your $10 "entry fee"! In any event, the question that you'd then need to answer is: Would this be a "good bet" (i.e., profitable for you)?

Well, to evaluate the expected value of any gamble (associated with any hope or fear), first calculate the value of each possible outcome and then multiply it by its probability. Thus (and counting gains to you as positive numbers and losses as negative numbers), you could quickly calculate that, for this gamble, the expected value (EV) is:

$$EV = 1/2 \text{ x } (\$5) + 1/2 \text{ x } (-\$10) = \$2.50 - \$5.00 = \ -\$2.50$$

And I'll take it as "a given", Dear, that you know not to engage in gambles that have a negative expected value – such defines a "loser"!

From that example, it's once again obvious that the critical step is to estimate the probabilities for the various outcomes. In later chapters (e.g., in Chapters **Ih** and **Y6**), I'll comment on how to estimate probabilities for more difficult cases, but even in the simple case illustrated above, some general observation might be useful. For example, how come you were so smart that you knew that the probability of either H or T turning up on a toss of a fair coin would be ½ ?

There are many "correct" answers to that questions (e.g., "Experience!", "Because that's what 'fair coin' means", and so on), but let me pause for a moment to comment on another "correct answer", namely, "because of symmetry." As I suggested in an earlier chapter (**A**) and as I'll be indicating in later chapters (e.g., in **S**, dealing with Science, and in **Z**, dealing with trying to understand what this universe is "all about"), one of the most fundamental features of our universe is the huge number of symmetries (of electrical charge, components of linear and angular momentum, and innumerable other examples, from ice crystals and diamonds to the structure of our DNA molecules and the symmetry of people's faces). Also, there are some critically important cases in which symmetry is broken – one of which may have caused the Big Bang. Consequently, Dear, whenever some natural

process puzzles you, you may be able to benefit from "cocking your head a bit", seeking to discern any symmetry.

In that way, you would "know" that the probabilities for either H or T to come up on the toss of a fair coin would be 1/2, because you trusted in the symmetry of the situation: disregarding the possibility that the coin would land on its edge, you reasoned that whereas a (perfect!) coin has only two sides (no edges!), whereas these two sides were equally likely to appear when you tossed the coin, and whereas the sum of the probabilities of all possibilities must always sum to unity (i.e., something will definitely occur), then by the symmetry of the situation, you concluded that the probability of H or T must each be 1/2. Similarly, the probability that a particular side "comes up" on a throw of a single, six-sided (hexagonal) die is 1/6 (again, because of symmetry). And similarly, you know that the probability of drawing a particular card from a well-shuffled deck of 52 cards is 1/52, because however you might describe your reasoning, it's essence would be: "If there are N equally-likely possibilities, then the probability of realizing any particular one during a single event is 1/N."

Other methods for estimating probabilities are available (besides "theoretical arguments" based on symmetry). In some cases, another way is *via* experimentation. For example, if you flip a coin "enough" times, you expect that, if it's a fair coin, the "relative frequency" that either H or T occurs will tend toward ½ . That is, as the number of experimental trials becomes large, "relative frequencies" asymptotically yield probabilities.

In other cases, when there's no obvious symmetry and when you can't (or don't want to) conduct a huge number of experimental tests, you can obtain probabilities from past experiences. This was the original method for estimating probabilities, developed by Thomas Bayes (1702–1761) and one of the principal founders of probability theory, the brilliant Pierre-Simon de Laplace (1749–1827). Laplace said: "The theory of probabilities is at bottom nothing but common sense reduced to calculations."

For example, if after getting out of bed in the mornings for 16 years you were tripped only three times by the mess on your floor, then a first estimate of the probability that today you'll trip when you get out of bed is

$$[3 \text{ days} / (16 \text{ years} \times 365 \text{ days/yr})] \times 100\% \cong 5.14 \times 10^{-2} \% ,$$

in which I've used the symbol "≅ " to mean "approximately equal to". This result then suggests that, given that the probability of hurting yourself while getting out of bed is only ≅ 0.05%, perhaps you want to concoct some other excuse for staying in bed!

In some case, probabilities can be estimated from available data on frequencies of occurrences (plus from making a few "reasonable" assumptions). For example, to estimate the probability that you'll be in a serious traffic accident today, first obtain data on the population and on the number of such traffic accident in your town. Thus, if on average there were 10 serious traffic accidents per day that required hospitalization and if there are 100,000 people in your town, then the probability that you'll have an accident today (assuming that you're an average driver) is:
10 accidents/day x [1 person / 100,000 people] x 100% = 0.01% chance of your having an accident today. So, Dear, upon finding that it's roughly five times more dangerous to get out of bed this morning than it is to go out and face the traffic, it appears that you've found a good reason to stay in bed!

If you have neither data nor relevant personal experiences, and if you don't know (or don't trust) what others have experienced, then estimating probabilities is, of course, much more difficult. In some cases, estimates of probabilities can be obtained from imagining "all" possibilities and then introducing some measure of the relative probability of each. That last step, however, can be very difficult – unless there's some obvious and simple relationship among the many possibilities, e.g., that they're all equally likely. Such is the case for many gambling operations, such as state lotteries, details of which I'll show you in a later chapter (**Y6**).

In still other cases, when neither experience nor imagination is helpful in estimating probabilities, there's a "bootstrap approach" (i.e., you lift yourself up by your own bootstraps!), better known as Bayes' method (of course named after Thomas Bayes). This is the method used in science to test hypotheses, as I'll outline in Chapter **Ih**, entitled "Hypotheses and Probabilities" and in Chapter **T2**, entitled "Towards 'Truth' and Understanding". But rather than my now going into further details about estimating probabilities, what I want to do in the rest of this chapter is examine how most of us usually evaluate our everyday hopes and fears.

Even such "everyday hopes" (and similarly, fears) can have large influences on our lives, especially when we're young. As Aristotle said: "Youth is

easily deceived because it is quick to hope." More completely, Aristotle's idea might be expressed as: Young people (and immature adults) are easily deceived, because although their wants are clear to them, they haven't developed sufficient skill at evaluating probabilities (or expectations) that their wants can be achieved; therefore, their hopes are poorly evaluated.

And what I hope I can do in this book is, in part, to help you develop some skill at evaluating probabilities, in turn, so you'll achieve a "happy middle-ground of hope", well described in Rudyard Kipling's poem *If*: "If you can dream, but not make dreams your master…" This same idea of moderation was a fundamental principle in ancient Greece, e.g., as I already quoted, there's the wisdom of the Seven Sages: "Nothing too much." But the trick, of course, is to see how much is "too much" – a trick that (bit by bit – "nothing too much"!) I'll try to show you how to master.

CHOOSING RATIONAL HOPES

Some "obvious" characteristics that rational (or reasonable or realistic) hopes should possess include the following.

• A "rational hope" is a feeling that follows when you've evaluated *what you must invest* (e.g., study hard) so that you will have a reasonably good change of realizing your hope (e.g., good grades). In contrast, it's an irrational hope if, to achieve your goal, you don't know what investment is needed.

• A "rational hope" is a feeling associated with reasonable estimates of *how much you need to invest* (e.g., four or five years of studying) so that you will have a reasonably good chance of realizing your hope (your first college degree). In contrast, it's an irrational hope if, to achieve your goal, you don't know how much you must invest.

• A "rational hope" should reflect that you've made a reasonably good estimate of *the probability that your want can be realized* (e.g., if you will work hard, surely the probability of your earning your college degree is essentially certainty, i.e., very near unity or, equivalently, very near 100%). In contrast, it's an irrational hope if it's even theoretically impossible to evaluate the probability that your want will be realized.

• A "rational hope" should certainly be *to reach a desirable goal* (e.g., for you to become employed in a desirable job). In contrast, it's irrational to pursue an undesirable goal.

• 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).

Now, Dear, I don't claim that the above characteristics of realistic hopes are complete (in fact, I'll list some additional characteristics below), but I hope (even "trust") that you agree that at least the above-listed conditions should certainly be satisfied. Incidentally, if you desire, you can create a similar list to characterize rational (vs. irrational) fears.

Next, Dear, to see what's probably the most important characteristic of rational hopes, please consider additional differences between what I'll call (and in the later chapters will try to justify calling) "the *irrational* hope of eternal bliss in heaven" *versus* what I'll call (and immediately start to try to justify calling) "the *rational* hope of trying to help humanity". A part of the justification for my claim that the hope of helping humanity is "rational" is that this goal is consistent with everyone's trio of survival goals. Thus (once again), whereas all humans are related no more distantly than as fiftieth cousins, then helping one's genes survive (or promoting the survival of one's extended family) is the same goal as helping humanity.

Immediately, you might conclude (and I would agree) that the proposed "rational hope" of helping humanity is "just barely rational", because it's too general (or too broad). Thus, already it violates (or severely strains) the first three conditions for a rational hope, listed above and repeated here more compactly: a rational hope should incorporate a reasonably good definition of *what you must invest* and *how much you need to invest*, and should permit you to make a reasonably good estimate of *the probability that your hope can be realized*. Thus, if you hope to help humanity, then what must you invest, how much, and what's the chance you'll be successful?

Therefore, Dear, at the outset, let me assume that you adopt a less-general, more-focused goal, consistent with the broad goal of helping humanity. For example, consistent with the goal of helping humanity, you might adopt the goal (and develop an associated hope) to promote world peace, advance some branch of science, develop some new labor-saving device, strengthen the world's financial system, protect the environment, or innumerable other examples.

But even with this improved focus of your goal "to help humanity", a sharper focus still seems necessary. For example, suppose that within the broad goal of helping humanity, you choose "to help protect the environment". Still, there are innumerable ways to pursue this goal. For example, you could commit to creating less pollution yourself, you could go out today and pick up some trash, you could (carefully and thoughtfully) work to try to stop some polluter, you could join some organization that's committed to protecting the environment, you could become an engineer to develop less polluting processes, you could become a scientist in any of a number of disciplines (e.g., in any of several "earth sciences") to work toward understanding and protecting the environment, and so on.

NESTED HIERARCHIES OF HOPES

All of which then leads me to suggest an additional condition that you should place on your entire set of hopes, if they are to be 'rational', namely, that your hopes should be self consistent and self supporting (in a word, 'coherent', from the Latin word *cohaerent*, meaning "sticking together"). Thus, continuing the list from above, I want to add the following.

• To be "rational", the set of hopes associated with all your goals should fit comfortably together within a *nested hierarchy of goals* erected upon your trio of survival goals.

And thus, Dear, I return to the analogy with those Russian dolls that a certain infant grandchild always wanted to play with when she visited – "Outrageous!" Again, your set of rational goals and their associated hopes should be like those dolls, nested inside one another, fitting together in a "nested hierarchy".

Consider an example similar to one I went through in an earlier chapter (**G**). This time, however, I'll start at the smallest doll, at the center, to represent some current goal (and associated hope) and then "build up" from there. Thus, suppose your left brain set the goal (and your right brain dutifully developed a hope) to do well on your next math exam – both because you want to do well in math and because you want to get a good grade in the course – because you want to go to college and become a scientist – because you'll need to get a job and you want to protect the environment – because you want to survive and because you want to help humanity thrive – because these are the bases of your values, and you seek to promote your values. In

this example, then, your left-brain goal (and your associated hope) – to do well on your next math exam – fits comfortably within your nested set of goals (and associated hopes), all contained within your trio of survival goals, of yourself, your extended family (including all humanity), and your values.

<p style="text-align:center;">**MINIMIZING DOWNSIDE RISK**</p>

Meanwhile, Dear, still another condition that seems to be required of a rational hope is the following.

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

It will take me the most of the remainder of this chapter to explain what I mean by this "limited downside-risk potential", in part because I want (finally!) to begin to show you what I review when I'm walking for the "hope part" of 'H', which predominantly is associated with my failure to evaluate some of my own hopes and, therefore, with my failure to have adequately evaluated their "downside-risk potential".

In the best case, to minimize the downside risk of losing a hope, you would be wise to adopt a "fail safe" system of hopes. That is, even if you fail to achieve your original goal, still you'll be pleased with the result. In particular, Dear, it's better (by far!) if you have a nested set of goals in which there are many short-term goals along the way toward your long-term goal (for example, do well on each course, in each year at school, toward each degree, toward your goal of helping humanity). Then, even if you decide to change one of your intermediate-term goals, not only will you have made important progress along the way (and thereby experienced some significant happiness), but what you learn (working toward your previous goal) will almost certainly also assist you in achieving whatever new goal you set. For example, suppose that originally, you adopted an intermediate-goal of becoming a scientist, but then you decided to switch to the goal of becoming a lawyer. Even so, it would help you (and humanity) if, as a lawyer, you knew something about science – or if, as a scientist, you knew something about the law.

Although it's probably obvious to you that for rational hopes you should evaluate the downside-risk potential, let me show you an example that had quite serious consequences for me. In this case, I didn't evaluate the

downside risk associated with a hope I had adopted – because I pursued a hope that I didn't realize I had even adopted! In particular, ever since my children were very small, I had told them that their lives were their own and that they owed me nothing. I expect that I did this because I thought it was valid, but perhaps I did it so I wouldn't feel so obliged to my own mother, for all that she had done for me. (In contrast, my father did essentially nothing for his children – deserting us when I was very young; so, I never felt I owed him anything.) But I was wrong when I told my children that I felt they owed me nothing.

When I was about 40, I finally saw that I did expect something from my children (the same "thing" that probably all parents seek), namely, hope (that our children will live "full and productive lives", that our children will be happy, that they'll help these genes go on, etc.). I saw this "burden of hope" that we place on our children (a burden that parents bear as well!) in part from the pain I felt when your father "crashed and burned" (and then "bought into" the myths of the Bible) and in part from reading a story behind the poem "For Anne Gregory" by the great Irish poet William Butler Yeats. And while I'm showing you this poem, let me show you something about myths (more of which I'll get to later in the book, e.g., in **Ix**).

I had remembered this poem since "way back", although I thought it was entitled "The Girl with the Golden Hair". It's reproduced below, with its correct title. Notice that it's written as a conversation between the author and the little girl with the golden hair, who "speaks" in the second stanza.

For Anne Gregory
by W.B. Yeats

"Never shall a young man,
Thrown into despair
By those great honey-colored
Ramparts at your ear,
Love you for yourself alone
And not your yellow hair."

"But I can get a hair-dye
And set such color there,
Brown, or black, or carrot,
That young men in despair
May love me for myself alone
And not my yellow hair."

<p style="text-align: center; color: blue;">
"I heard an old religious man
But yesternight declare
That he had found a text to prove
That only God, my dear,
Could love you for yourself alone
And not your yellow hair."
</p>

A simple little poem – and now my myth. The source of this myth (besides the poem, itself) is that somewhere I read (or at least I think I read!) "the story" behind this poem. I've searched on the internet to find the story again, but was unsuccessful. And so, as with all myths, let me make up the story, relying on what I think I remember, but unsure not only about details of the story that I read but also about the veracity of the original details! That is, Dear, all myths are just stories, in which the next teller of the myth modifies the story, in a manner that the story teller deems appropriate, worrying little about the veracity of the story, concerned only about trying to convey some message.

Thus, Dear, for me the story (and for you the myth) is that the poet, Yeats, and his friend, Sigmund Freud, were waiting in the parlor for the little girl's mother, Mrs. Gregory, who was a friend to both men. The little girl, Anne, was entertaining them, and somehow the conversation turned to the little girl's claim that she was "loved (by her mother) for herself, alone". To which Freud objected (as if he were "an old religious man" – although he wasn't religious) that no one was loved for herself alone. Subsequently (apparently, from the poem, the next day), Yeats composed the poem.

And if you ask if that story is "true", Dear, then my answer is: it's my illustration of a myth. Just as with myths about the clerics' Jesus (as I'll show you later in the book), there might be a kernel of truth in this story about Anne Gregory. And in the next retelling of the story (e.g., by you!), maybe you'd like to add "details" about how Anne was entertaining the guests, and about the "conversation" between her and Freud. But that aside, let me return to the point of the myth, namely: no one (not even a certain grandchild!) is loved for oneself alone. Even the girl with the golden hair is loved only for what she provides others. And in particular, even though parents (such as I) may not recognize it, part of parental love for their children is because of the hope that their children provide.

Similarly, Dear, in case you hadn't previously noticed (!), you might notice, now, that I seem to be burdening you with an awful lot of my hope! In response, I can only offer the following: 1) That's what grandparents do (they're almost as bad as parents – and sometimes worse!); 2) Although you're convinced that you're you, Dear, I know that you're also me, going forward, and my hopes reflect a very selfish concern about what you plan to do with my genes (!), and 3) If the heaviest load you ever need to tote, kid, is the burden of my hopes, then you've got it made: you can always dump my hopes, replacing them with your own. As someone once told you: it's your game; your life belongs to you!

Besides, Dear, I'm not writing this book just for you. Maybe some youngster, somewhere, will benefit from reading it. Maybe some young person in Afghanistan or Argentina or Australia will find in it some ideas that seem useful. Maybe upon reading it, a teenager living somewhere between Canada to Chile and between China to Croatia will see some of the damage that the clerics have caused humanity. Maybe someone in Indiana or India or Israel will realize that religion is relic of the past that belongs in the trashcan of human mistakes. Maybe some youngster in Zaire or New Zealand will see how humanists have helped humanity, and will decide to similarly try to help. That's hope enough for me.

But such musings aside, what I was trying to get to was what I review for 'H' when I'm walking in the desert. As maybe you noticed, 'G' and 'H' have a lot of overlap. When I'm walking, they just "run into one another", because in total they take just a few minutes to review – which I expect is rather hard to believe, when I've taken so long to explain them! To display this overlap more completely, let me repeat here what I review for both 'G' and 'H'.

> **G:** *God's a bunch of garbage. Life's a game, you win when you begin! The rest is just picking up your winnings, carefully…"*

I then start 'H' with what I tried to explain in the previous chapter, dealing with happiness:

> **H:** *Happiness = Progress. Happiness is a right-brain measure (a feeling) of progress we think we're making toward our goals. Happiness isn't the goal of the game of life, at most it's just the score; usually it's just the feeling from scoring another point! Play the game, pursue your goals, and only every once-and-awhile*

(e.g., when you're unhappy), check the score. Take an inventory: Stop, Look, and List'em – and accomplish something today.

Next, I move on to hope, starting with

Careful with hopes = expected values: losing hopes can hurt, big time…

and then I usually try (once again!) to "ease myself down" from the pain of losing a hope – a hope that I had adopted not only without evaluating the downside-risk potential (which turned out to be enormous) but also without even realizing that I had adopted this hope. Thus, I continue with:

I'm a hero for how I helped him, but let your hopes go – and if you can't let your hopes go entirely, then at least work on lowering them. There are others more worthy of help, but be careful: to help can be to hurt.

<div align="center">

Of course we wish our hurts were less,
But does it measure "humanness":
Just how much hurt and painfulness
We pass on through to happiness.

</div>

The "stanza" (immediately above) is from another "versification" that, for reasons I'll explain "when you're older", I'll not include in its entirety. Further, I don't plan to describe to you some of these "hurts" that I've experienced (because they're so dependent on my unique experiences). Yet, maybe there are some general concepts that might help you – concepts that I had to learn the hard way. If I explain these concepts to you, then maybe you could learn them the easy way, i.e., by learning from my mistakes!

SOME EXAMPLES

One concept that might help you is this. If someday you become a parent, I hope you'll be better than I was. Of course I tried to do a good job, and sometimes I attempt to console myself with the familiar: "If you did your best, that's all you could do." But I could have tried to learn more; I could have thought more. In contrast, without adequate knowledge or training, I made an almost continuous series of blunders, the essence of which (I finally realized) was that I continuously robbed my children of their problems.

Dear, it's another one of those crazy curveballs that life pitches at us and that I remind myself with *to help can be to hurt*. Who hasn't been encouraged to help others? For example, it's part of the dogma of all religions, but

actually, to help others needn't be part of any religious dogma: as I'll describe in more detail in a later chapter, it's instinctive to try to help others – especially one's own children. But you gotta use your head! By helping you can hurt – big time! It's another one of those "connectedness of opposites": sometimes the best way to help is to hurt – gobbledygook that you probably understand, but let me try to explain a little more.

Not only are humans "problem-solving animals", solving problems is a source of happiness: by solving our problems, we get to feel more in control of our lives. When a parent who isn't sufficiently knowledgeable or is too doting or too controlling or… (in general, who is similar to the way I was and sometimes still am) finds a child stuck on some problem, the first reaction will be to help the child overcome the problem (fix a broken toy, repair a friendship, help with solving a math problem, earning a college degree, buying a house…). But, Dear, helping a child overcome such problems weakens the child: by helping, you can hurt. If your children are to become strong, they must learn how to solve their own problems.

It's not enough – in fact, it's essentially meaningless – to "just love your child". I get angry every time I see the dumb bumper-sticker: "Have you hugged your child today?" Another line that "gets to me" is the familiar: "a child needs unconditional love". What stupidity! What a child needs, most, is to learn how to live in this world – which includes (among many other lessons) learning to live with the idea that love (as with everything else) must be earned. I remember a good line from a modern book (but have forgotten the names of the book and the author) that one of the few principles the author had found to be, not only reliable, but also satisfying to the author's sense of fairness: "You get out of any relationship pretty much what you put into it."

Dear, the vastly overused word "love" (which I'll get to in Chapter **L**) generally refers to desirable interactions between you and "whatever" (your child, Beethoven's Seventh Symphony, strawberries…) in which your goal is to enhance, promote, help, etc., and which generally is also in your own interest. Webster's dictionary states: "love implies intense fondness or deep devotion and may apply to various relationships or objects." Meanwhile, the problem with "just love your child" (and similar) is that the concept of 'love' is so amorphous it gives no guidance for your actions: yes you love your child, yes you hugged your child today, but the question at hand is should

you give your child some help with… or should you "suffer through", watching your child gain strength by…?

And of course there's a time to step in to try to show the child how to solve what seems to be an insurmountable problem. But should you ever become a parent, Dear, beware: deciding "when" *versus* "when not" to help, and "how" and "how not" to help, is enormously difficult, day in and day out! A good rule is what I read somewhere about 30 years ago: a parent's prime job is to watch from the sidelines with an ample supply of Band-Aids! Sometimes that's called "tough love" – and what parents need to realize is that tough love is toughest, by far, on parents!

If someday you need some reassuring words, Dear, maybe these will help: quite likely, being a good parent is too difficult for any human! And if that seems absurd, then please think about the essentially impossible balancing act that parents attempt: to show the child that she's important while teaching her that she's not! And therefore, Dear, for both your current role as a "child" and your potential role as parent, allow me to add: pity the parent – it's a damn-near impossible job.

Thus, Dear, most parents in this country spend enormous time, effort, and money showing their children that they're important: a common description is that we do "whatever it takes" to put a smile on our child's face. But in contrast, it's essential for children to learn that they're not important: that society will not seek to provide for any person and that Nature will not (and certainly God will not) bend the laws of the universe to benefit anyone. Consequently, if parents manage to show their children only that they're important, failing to show them that they're not, then when their children leave home to enter the world, they will experience tremendous shocks.

Teenage years and young-adult years (e.g., in college) can then be revolutionary for kids, leading them to illegal drugs or to legal drugs such as religion. Such youngsters are thereby attempting to regain their previously occupied position of importance in the universe. Indeed, that's one of the principle appeals of religion to "wayward" young adults: regaining the comforting feeling that at least somebody (i.e., God) gives a damn about them. Thus, if you reduce essentially all "prayers of petition" to their essence, they're: "Hey, God, what the hell's goin' on? I'm important! Get your ass down here and help me with…" As for "prayers of adoration", as

Ingersoll said: "Think of the egotism of a [person] who believes that an infinite being wants his praise!"

This is not to suggest, Dear, that there isn't some "power in prayer" – though not because the creator of the universe has intervened on one's behalf because of one's importance! Instead, "the power" is in the supplicant's mind. Thus, for essentially any problem, the first step toward its solution is "to state the problem well" (as I reviewed in **B**). For religious people, this "statement of the problem" is normally done in the prayer. The next step in the solution (as I also reviewed in **B**) is to let the right side of one's brain "run with it". Then later (for me, it's in the morning when I wake, or when I'm walking, or next week sometime), commonly in a flash, Right Brain delivers its solution to the problem. For this, religious people thank God; for me, I become amazed, once again, at the capabilities of the human brain.

I'm also amazed at the incompetence of some human brains, such as the brain of a certain old grandfather (whose name might, perhaps, best be omitted). I mean, how can I be so stupid?! Thus, above I wrote:

> When a parent [or grandparent?] who isn't sufficiently knowledgeable or is too doting or too controlling or… (in general, who is similar to the way I was and sometimes still am) finds a child stuck on some problem, the first reaction will be to help the child overcome the problem (fix a broken toy, repair a friendship, help with solving a math problem, earning a college degree, buying a house…). But, Dear, helping a child overcome such problems weakens the child: by helping, you can hurt. If your children [and grandchildren?] are to become strong, they must learn how to solve their own problems.

So now, if I know that, what am I doing?! I find that my grandchildren have a major problem: they've been brainwashed into "believing" supernatural junk that belongs in a trashcan labeled "mistakes made by savages". To gain strength, my grandchildren should solve their problems by themselves. Others have done it; so can they. And yet, what does a certain, stupid grandfather do? He sits down for umpteen years and writes a huge book to try to help them solve their problem! Tell me that he's learned his lesson! Talk to me about stupidity! Tell the poor children that they're not related to such an idiot! Sorry, Dear, but maybe I can at least generalize from my statement that "quite likely, being a good parent is too difficult for any human": it may be impossible, also, to be a good grandparent. There is, however, another possibility: maybe the rules for being a good grandparent are different from those for a parent! So there!

Meanwhile, another concept that might help you is associated with the above stanza, which has stuck in my mind and which starts with "Of course we wish our hurts were less". Generalizing from it, and giving you another example of the connectedness of opposites, there is this: all the pain that I (and your grandmother) experienced eventually led me to (and was necessary for) my attaining another level of happiness, in large part because of increased understanding. The connectedness is: pain is needed to appreciate pleasure. Also, while wondering (in that "versification") if a measure for "humanness" is "how much pain and hurtfulness we pass on through to happiness", I almost always pause to reflect about all the "heroes" there are, essentially everywhere. That is, Dear, if people permit you to learn enough about them, I expect you'll be amazed to learn the extraordinary obstacles that most "ordinary people" have managed to overcome.

But if you have a choice, Dear, perhaps you would rather do without the pleasure derived from recovering from pain! The problem with this pleasure is that losing a "long-held hope" can be a source of both sudden depression and gnawing pain. Therefore, Dear, please choose your long-term goals (with their associated priorities = hopes) carefully. In particular, be careful of hopes that seem to just "ooze" into your life.

For example, one of many hopes that all young girls must be careful about is one of many with which our society indoctrinates essentially all of them (from the age of about three!): "the Cinderella complex" or "the happily-ever-after hope". Our society similarly indoctrinates young boys, not only with finding a "princess", but becoming a "knight in shining armor", joining King Arthur's court, and always being assisted by a Merlin the Magician.

In contrast, girls who choose to marry should be forewarned: don't place your hopes on Prince Charming sweeping you off your feet, and then the two of you living "happily ever after". That's storybook stuff, sold (as are all dreams, including those of all religions) for the profits for the dream weavers. In reality, frogs don't turn into princes; what most wives conclude is that their erstwhile princes turn out to be frogs. Meanwhile, what many husbands conclude is that when beautiful princesses are rescued from evil witches, somehow or other, at the last minute, the witch made a switch! Further, in modern days, with both husband and wives employed (slaying

modern dragons), they find that it's difficult to maneuver in armor, King Arthur's court is corrupt, and as with all magicians, Merlin is a fake.

If you choose to marry, Dear, keeping your marriage going will be one of the toughest jobs of your life. I remember when, at our wedding reception, my father-in-law (who had then been married for just over 20 years) said to me: "The first 20 years are the easiest!" Since then, many times, I've remembered his "advice", typically with the thought: "You mean it gets worse?!" Well, Dear, I can now pass on to you an additional bit of wisdom. Your great grandfather's statement was derived from insufficient data: the first 40 years of marriage are the easiest!

A huge source of the difficulty with marriage is that (surprise, surprise!) men and women are different. With emphasis on the side that I know more about (as the New York Times columnist John Tierney wrote: "Freud confessed that his 'thirty years of research into the feminine soul' left him unable to answer one great question: 'What does a woman want'?"), I'll add: most men are idealists rather than realists, seek ordered minds not environments, are more interested in adventure than security, want sex to relieve pressure not to build bonds, want more action and less talk, are more interested in succeeding than cooperating, want time alone and money to spend, don't know how they feel, don't care "that much" about relationships, and so on! (That is, there are many other differences, but I'm getting tired of this list.) Of course I'm reminded of the book *Men are from Mars; Women are from Venus,* but what strikes me most about the title of that book is the brazen assumption that men and women are from planets in the same solar system! I'll leave it to you to imagine – and to consider carefully – the resulting stresses that develop in most marriages, and why the majority of marriages in this country now end in divorce.

Yet, Dear, I'm certainly not recommending that you don't marry. As far as I know, marriage is the best available way to join with someone for life-long mutual support. Besides, should you want to have children, it would be a good idea to have a partner to share the task of rearing them, for I give you an "absolutely guaranteed" guarantee that it's a task that shouldn't be tried alone! Further, this mutual support is especially good exactly because men and women are so different, and accommodating these differences will lead to better outlooks and actions for both partners. But, Dear, never, never underestimate the difficulties involved reaching these "accommodations": keep your hopes realistic!

But the above was just an aside, used as an illustration of one of possibly many hopes that you might have adopted, for example because of societal indoctrination, without your even noticing. If you decide to have children, another hope that will sneak up on you is the hope for your children, with this hope probably derived from both instinct and cultural indoctrination. And of course, Dear, a hope that you must carefully consider is the one in which your parents have immersed you essentially since birth, that is, in the hopes "hawked" in your religion. In this case, the hopes are really quite astounding: not only hope in this life, but a hope for "eternal life"! How I hope that such a mindless notion will vanish before we entertain our first visitors from another planet, for I fear that, should they take an inadequate survey, they'd conclude that there's no intelligent life on this planet! But I'll return to that theme in later chapters.

SOME POSSIBLITIES

For now, let me start "turning off" this chapter just by mentioning a few concepts that I've found to be useful and that might help you when you try to define your long-term goals and adopt their priorities (i.e., your hopes).

- As I mentioned in an earlier chapter, don't get too hung up on your long-term goals (i.e., longer than about five years into the future). Let me put it this way: I still haven't figured out what I want to be when I grow up!

- Stay broad – don't constrain your opportunities (especially while you're young); for example, get as much education as you can and, as you get older, try to keep expanding your capabilities.

- Try to learn from others, including from what others have written, e.g., about how to be pleased with your life or "how to succeed".

In a later chapter (**Y5,** entitled "Your Decisions and Goals"), I'll show you a few illustrations of some of these "how to succeed" ideas that others have suggested. I want to delay showing them to you, because they should be approached with substantial caution. I'll try to explain what I mean, later. Here, I'll just summarize by saying that, by following any of many available "how to succeed" recipes, you could become a great bank robber, corrupt politician, religious leader, or other traitor to humanity! Let me put it this way: it's better by far to be a failure as a humanist than successful in any religion! That is, Dear, I hope that you'll adopt the goal of not just

succeeding but succeeding at something "useful" or "of value" – where (as I'll later try to justify) the ultimate "value" is to help solve human problems more intelligently (e.g., *via* science) and to hinder ignorance (e.g., all organized religions).

I also want to add, Dear, my hope that you don't "sell yourself short". I guarantee that you have the capabilities to accomplish quite astounding goals, if you commit yourself to them. The sky isn't the limit: I have no doubt that you could be an astronaut, or the President, or a world-famous scientist, or a great novelist. But assuming that you don't have any particular desire to be an astronaut or a politician, maybe you should spend some time thinking about the following possibilities.

- Be a mother. I put this potential long-term goal first, Dear, after watching you with the other children. I'm certain that you would be a good mother, but I hope that you don't put this as your #1 long-term goal – because being a wife and mother means becoming too dependent on other people for your own happiness. (And for other readers, I'll add that being a father isn't all that it's cracked up to be!) Thus, if you're determined that you want to be a parent, I'd suggest that you include that as one of your goals, along with other goals (which you might be able to achieve first), such as the following.

- Make a lot of money (maybe a million dollars by the time you're 40) – not for the money, itself, but for the freedoms that the money will then permit you to enjoy. Yet, I'd also discourage you from putting this as your #1 long-term goal, mostly because it's too self-centered and therefore, I expect, it wouldn't be sufficiently satisfying for you.

- Become the leader of a corporation. Again, I doubt that this would be a satisfying accomplishment. If you go that way, Dear, I suspect (based on my own experiences) that you'd find that playing the necessary "in-house politics" would be highly dissatisfying. They drove me to distraction – and to discouragement that such disgusting people were "successful".

- Become associated with the medical profession in some way, for example, as a doctor, a veterinarian, a psychologist, a medical researcher, etc. I suspect that such a career could be emotionally satisfying (helping others) and would be financially rewarding. Yet, Dear, be aware of some downside-risk potentials, especially of being a medical doctor, not only because of the necessary time commitments but also because it must be an enormous emotional-strain to deal almost continuously with misery and death – unless you learn to become emotionally detached from people, which you may not want to do.

- Become a scientist, in any of a huge number of fields, from anthropology to zoology, and maybe especially in one of the physical sciences such as engineering, physics, chemistry, etc. You may want to choose to go this route, Dear, not only because it may be dominant in your genes (!) but also because the honesty of working with Mother Nature will be a continuous source of delight and because the challenges of trying to understand nature will never permit you to become bored.

But again, Dear, I strongly recommend that, whatever long-term goal you point yourself towards, stay broad – in case you change your mind, or in case you want to tackle another goal, after you reach your first long-term goal. Therefore, Dear, at this stage of your life, I hope that your prime long-term goal is "just" to learn more.

Further, Dear, there's something here that I hope you'll consider: some undertakings are so big that it's easy to avoid starting them. For example, there's the time my nearest-age brother and I rode our motorcycles to Colorado: neither of us two old fogies (we were both over 50) could comfortably contemplate undertaking a 3,000-mile motorcycle ride! So we didn't! We decided, however, that we could easily go for an hour's "bike ride", say to get a cup of coffee, and by pointing our bikes generally in the direction of Colorado, "lo and behold" we made it there – and had a tremendously enjoyable time doing it, one hour at a time. Similarly, Dear, I strongly recommend that you don't worry too much about reaching your Colorado (or El Dorado!): generally point yourself in that direction, but for now, just plan on driving down the road to the next desirable place to rest, there to "re-create" for a while.

And should you want a more illustrious example to illuminate your way, Dear (rather than this example of your old grandfather and your great uncle), then think of Father Sun: think of what he created, working just day by day! Or if you should want a different and even more wondrous example, bidding you to follow, then think of Mother Nature: what wonders she's accomplished, working just day by day. Without too much effort (although it took her a few billion years, and therefore, required quite a bit of patience!), she even made you! Similarly, Dear, you can make amazing accomplishments, making just a little progress day by day. And don't worry about "the patience bit": I've been working overtime, helping you develop yours!

All of which I can summarize with the final condition that I want to use to describe a rational hope:

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

In contrast, Dear, all religious goals are to be held tightly; in fact (at least according to my version of Webster's dictionary) the word 'religion' seems to be derived from the Latin word *religare*, which means "to bind back" or to "bind together".[3]

Dear: if your "game plan" is so structured, so rigid, so firm… that you're "uptight" about it, then you really should re-examine your hopes (i.e., re-align your priorities), because otherwise, you're probably headed for major problems. Almost without exception, if humans plan something – especially their lives – it ain't gonna work out that way! As the wonderful poet Robert Burns wrote (in his Scottish dialect) in his poem entitled *To A Mouse, On Turning Her Up in Her Nest With the Plough, November, 1785:*

Wee, sleekit, cow'rin, tim'rous beastie,
O, what a panic's in thy breastie!
Thou need na start awa sae hasty,
Wi' bickering brattle!
I wad be laith to rin an' chase thee,
Wi' murd'ring prattle!

I'm truly sorry man's dominion,
Has broken nature's social union,
An' justifies that ill opinion,
Which makes thee startle
At me, thy poor, earth-born companion,
An' fellow-mortal!

I doubt na, whiles, but thou may thieve;
What then? poor beastie, thou maun live!
A daimen icker in a thrave
'S a sma' request;
I'll get a blessin wi' the lave,
An' never miss't!

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[3] Actually, Dear, there is some question about the origin of the word 'religion'. In his book *The Story of Religious Controversy* (which is available on the internet), Joseph McCabe writes: "To begin with the word ['religion'] itself, it belongs to the very earliest period of the Latin language, and even the Roman writers of the civilized periods had lost the meaning of it. Very often it is said to come from the word 'bind' (*ligare* or *religare*), and so it is represented as meaning 'what binds man to the gods.' But in that case the word would be *religation*, not 'religion', and we must try again. It seems to be connected with the Latin word for 'cull' or 'select', but what it really meant to the men who first used it we cannot tell."

Thy wee bit housie, too, in ruin!
It's silly wa's the win's are strewin!
An' naething, now, to big a new ane,
O' foggage green!
An' bleak December's winds ensuin,
Baith snell an' keen!

Thou saw the fields laid bare an' waste,
An' weary winter comin fast,
An' cozie here, beneath the blast,
Thou thought to dwell—
Till crash! the cruel coulter past
Out thro' thy cell.

That wee bit heap o' leaves an' stibble,
Has cost thee mony a weary nibble!
Now thou's turn'd out, for a' thy trouble,
But house or hald,
To thole the winter's sleety dribble,
An' cranreuch cauld!

But, Mousie, thou art no thy lane,
In proving foresight may be vain;
The best-laid schemes o' mice an' men
Gang aft agley,
An' lea'e us nought but grief an' pain,
For promis'd joy!

Still thou art blest, compar'd wi' me
The present only toucheth thee:
But, Och! I backward cast my e'e.
On prospects drear!
An' forward, tho' I canna see,
I guess an' fear!

As an example, suppose you adopt the goal (loosely held, I hope) of becoming a scientist. Well, Dear, based on my experience, you needn't do much "planning", and if you do, it'll mostly be a waste of time As Robbie Burns wrote in the above poem (and I put in bold type): "The best-laid schemes o' mice an' men gang aft agley, An' lea'e us nought but grief an' pain, for promis'd joy!"

Instead, Dear, if you decide to pursue the goal of becoming a scientist, I hope you'll strive just to earn a good grade in your next math exam. Then,

plan on taking a good course in science. And then, pick another. Just keep "pickin' away", until you get your first college degree. And so on. And when you've finished your formal education, then still don't seriously consider planning how to become a scientist. Just try to solve a science problem. And then another. And so on. Just keep "pickin' away". And when, a decade or so later, someone introduces you at a conference as "the world famous scientist…", then thank the speaker for the kind introduction, and then apologize to the crowd that today, instead, all they'll hear from is someone who picks away, day by day, trying to solve problems.

Finally for this chapter, Dear, although I don't normally review this "part" of 'H' when I'm walking, let me repeat some additional ideas that I tried to convey in this chapter:

> *Be especially careful choosing long-term goals with their associated hopes, i.e., their priorities as pictured by your right brain. Hopes should fit within a "fail safe" hierarchy of nested goals, all within your trio of survival goals, and each should be evaluated for how much you need to invest, of what, and the probability of their achievement. Also, to try to ensure that your hopes are "fail safe", keep your options open, and to try to maintain your sense of balance, don't hold any hope religiously!*

In the next set of chapters, all labeled with **I**'s and dealing with Ideas, strangely enough I'll try to convey additional ideas to you – such as the idea that you should get more exercise!