

D – Digging for Decisions

Dear: Starting with this chapter and progressively increasing throughout the rest of the book, I'm going to be straying from what I review when I'm walking. I'll continue to show you my "meditation", but on the one hand, sometimes I'll delay trying to explain some ideas until a more convenient place later in the book, and on the other hand, sometimes I'll introduce topics in an earlier chapter, before I show you how I review them when I'm walking. Let me illustrate what I'm trying to describe.

What I review for 'D' when I'm walking is something similar to the following (depending on my mood, the weather, what's bothering me, whatever!):

D: To decide, dig – especially into data. "Show me the data!" For difficult decisions, dig into goals and values, feelings and instincts, and premisses, options, priorities, and probabilities. But remember: important decisions are usually simple; many decisions are difficult, because they're unimportant; if it's "too close to call", don't; instead, flip a coin!

Consequently, when I'm walking, 'D' normally takes me about 10 seconds to review – unless I'm worrying about a particular decision. If so, I then start "digging" – and many times, I must curtail the digging, so it won't consume the rest of my walk! For this **D**-chapter, in contrast, I won't show you what I mean by most of this "digging".

There are two main reasons for my decision to deviate from trying to show you just what I review when I'm walking. One reason is to try to overcome a number of "technical problems and constraints" that I've experienced while trying to write this book, and the other is derived from the dual purposes of this book. Below, I'll briefly comment on both these reasons.

Although the "technical problems and constraints" are theoretically rather trivial, yet as with many theories, they've caused major difficulties in practice. For example, if in this chapter I tried to explain all I mean by "dig into goals and values; feelings and instincts; premisses, options, priorities, and probabilities", then this chapter would continue for most of the rest of the book! That is, it will take me much of this book to explain what I mean. But meanwhile, I want to conform to the constraint that each chapter be not too long, for already, I expect that their lengths are "trying your patience."

In this chapter, consequently, I plan to describe only part of what I mean by this “digging”, especially “digging into data”. In fact, in this chapter I won’t even finish describing all I want to convey to you about digging into data; I’ll show you more in **I** (which deals with Ideas) and in **S** (which deals with Science). Meanwhile, though, I don’t need to review all such “background stuff” when I’m walking, because I already know what I mean when I remind myself to “dig into goals and values” – as I’ll try to show you in **G** (dealing with Goals) and **V** (dealing with Values). In **Y** (dealing with You!), I’ll try to tie up remaining loose ends.

Besides such “technical problems”, the second main reason for my planned modifications to the format of this and subsequent chapters deals with the dual purposes for this book. Thus, with this book I’m trying, on the one hand, to respond to a certain four-year-old who asked me why I didn’t believe in God. If that were my only purpose, I trust that I would have chosen a chapter-format that made it easiest for me to describe (and more importantly, easiest for you to understand) why I consider “the god idea” to be not only silly but also an idea that has caused and is still causing humanity (individually and collectively) a great deal of harm.

On the other hand, though, another prime goal of this book is to try to show you a wonderful alternative to “the god idea”. This alternative can be called “humanism”; for me, it’s just what I remind myself with my meditation, which I’ll continue to try to show you. Thereby, Dear, should you choose to reject your indoctrination with the god idea (just as I, your paternal grandmother, and a number of your aunts and uncles have rejected ours), I hope that a much better choice will be immediately obvious to you.

As a result of those dual purposes for this book, one reason for my now starting a chapter format somewhat different from what I used earlier is that, starting with this chapter, I’ll be increasing my emphasis on showing you why I don’t believe in some “superior being”, while still trying to show you what I consider to be a superior alternative, i.e., humanism. In this chapter, I’ll just mention religion a few times, but in later chapters, when I “get serious” about “digging into data” related to religions, the text will go on and on and on... without ever getting around to showing you what I review while I’m walking! Thereby, Dear, one of the prime purposes of all grandparents will be evident: to teach their grandchildren patience! Rest assured, child: eventually I’ll get to my point; eventually I’ll show you why I rejected “the god idea” and adopted humanism.

UNCERTAINTIES & DOUBTS

Now, with that long “introduction” finally finished, I’ll try to get back on track. The next several chapters (**D** through **H**) are coupled; they deal with making decisions. With these chapters, perhaps I can help you reduce difficulties in making decisions. Also, maybe I can help you make better choices. Thus, whereas a certain grandchild asked me why I didn’t believe in God, then before showing you how I reached that decision, I hope it will be useful to you if I try to show you some general methods to reach decisions with which you’ll be pleased.

I’m sorry for the length of these coupled chapters, Dear, but as you’ve already experienced, each of us must make both a huge number and an enormous variety of decisions – and making a particular decision can be both extremely important and very difficult. As George Moore wrote in 1900: “[The difficulty in life is the choice.](#)” In turn, a major difficulty in making decisions arises from uncertainties – and continues as doubt.

Further, if one chooses to face reality (rather than live in some “religious fantasy”), then there’s no way to avoid the trouble-making pair of uncertainty and doubt. As I’ll be showing you (e.g., in **T & U**, dealing with Truth and with Uncertainties), in reality nothing can be known with certainty: even the concept that “nothing in reality can be known with certainty” isn’t certain!

And if that doesn’t cause enough doubt, Dear, you’ll always have doubts about your decisions, wondering about “the road not taken”. As Robert Frost wrote in his 1916 poem “The Road Not Taken”:

[I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I –
I took the one less traveled by,
And that has made all the difference.](#)

In that regard, it’s a pity that data aren’t available to support the Hindu idea of re-incarnation: if re-incarnation occurred, we could spend eternity checking out consequences of other choices!

If you want to think about that idea, Dear, then for this weekend’s “re-creation”, maybe you’d like to watch the movie *Groundhog Day*. In this movie, the authors (Danny Rubin and Harold Ramis) have the principal

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character (played superbly by Bill Murray and supported beautifully by Andie MacDowell) explore consequences of different choices – not from his entire life but from those decisions made only during a single day!

Meanwhile, in reality, the rest of us must “muddle by” as best we can: in spite of uncertainties, we consider our options, arrange our priorities, estimate probabilities, grudgingly make our decisions, live with all the unexpected and unwanted consequences, and suffer through our doubts.

Actually, though, the “human condition” isn’t so hopeless as it can easily be portrayed. There is a “collective consciousness going on” that can provide us with guidance for making decisions. Thereby, for example, we can be aided in some important decision, e.g., “Take care” and “**Don’t do drugs!**” Unfortunately, though, some of this “collective consciousness” provides us with mixed messages (e.g., “Look before you leap” and “He who hesitates fails”), which leads to the need for still another decision: which advice to take?! Nonetheless, one message that I’ve found to be always reliable and that I’ll emphasize in this chapter is: base all your decisions on the best available data.

When I’m walking, sometimes all I remind myself “during D” is “my motto”: *show me the data*. But other times, especially if I’m “wrestling with a decision”, I add details:

To decide, dig – especially into data. “Show me the data!” For difficult decisions, dig into goals and values, feelings and instincts, and premisses, options, priorities, and probabilities...

It’s true that, with the above, I address only what I call “rational decisions” (in which Left Brain dominates), but it’s these rational decisions that cause me (and probably most people) most difficulties. In contrast, emotional (or Right Brain) decisions and instinctive (or Body) decisions are relatively easy to make – although, as I hinted at in **B**, I have lived to regret such decisions when I neglected to use my left brain to analyze and evaluate them.

As I already mentioned, if I’m “wrestling” with a rational decision, the associated analysis and evaluation (or “digging”) can then take substantial time, potentially consuming all my walking time! If this threatens and if the decision isn’t needed “immediately”, I force my mind to suspend the digging until another time, not only to allow my left brain to move on to the rest of my “meditation” but also to permit my right brain to work (on its own!) on whatever my left brain has already analyzed.

That is, Dear, many time I've found that if I "sleep on it" or otherwise force my left brain to ignore details associated with a particular decision, then my right brain does an amazingly good job of "putting the pieces together" (better known as 'synthesizing'), finding what my left brain later analyzes to be a highly desirable decision. That's what I meant when I wrote in the "poem" *B – Board Meeting*:

Left Brain with your analysis,
Where logic can excel,
In every case your prime job is
To state the problem well.

Then Right Brain, when the problem's known,
Exposing what is real,
It's up to you – go on alone –
And tell us what you feel.

And then, Left Brain, it's you who's free
To analyze the thought,
To test out practicality,
Rejecting what is not.

But that aside for now, in this chapter I want to begin to show you what I mean when I remind myself to "dig", and then show you some of what I mean by "digging into data". In subsequent chapters of this group, I'll dig deeper into what I mean by "digging"!

TYPES OF DECISIONS

First, let me mention an idea that's obvious – but which then leads to another idea that may startle you. It's obvious that, during your life, you'll need to make an enormous number of decisions. These decisions will range in importance from trivial (e.g., when to cut your nails or how to fix your hair) to critical (e.g., if you should try some illegal drugs or if you should have unprotected sex with a stranger). Then, Dear, think of how many decisions you'll need to make during your life. Of course I don't know the exact number, but I suspect that, on average, it'll be somewhere around 10 decisions per waking hour, or ~100 per day, or ~30 thousand per year. Therefore, during only the next 30 years, you'll need to make more than a million decisions! Kinda scary, huh?!

Now, Dear, whereas you'll need to make a million-or-more decisions during your life, don't you think it would be a good idea to learn how to make

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decisions? Do you think that maybe, before you make another decision, you should first get your Ph.D. in Decision Sciences or Operations Research or Systems Analysis (which are different names for a similar branch of Business Administration or Systems Engineering)? And of course your decision is “No!” Such a decision would be not only impractical but also impossible: during the intervening years, before you earned your Ph.D., how would you reach the needed 100,000-or-so decisions?!

An available practical solution is to “muddle by”, as most people do, learning how to make decisions from “the school of hard knocks” (i.e., experience) – even if sometimes the lessons learned can be quite painful. There are, however, some major inadequacies in such a method: experience can be not only a painful instructor but also many times can be quite inefficient and sometimes quite wrong. For example, many experiences teach us to seek pleasure and avoid pain (e.g., to seek the warmth of the sun and to avoid straining our muscles); it’s only with the help of others that we learn that too much sun can cause skin cancer, and it’s only after we use our minds to forecast the future that we see that some short-term pain should be accepted, foregoing short-term pleasures (sometimes known as ‘hedonism’) for longer-term gains (one characteristic of humanism). As other examples, experience can lead to habits, to irrational feelings, to “following the crowd”, to “responding to peer pressure”, to “maintaining the status quo”, and so on, and such decisions (based on habits, fears, the herd instinct, peer pressure, avoiding change, and so on) can be highly inappropriate.

In many instances, though, experience can be a good teacher: we usually learn much from our mistakes. But if it can be arranged, it sure can be a lot less painful to learn, instead, from other people’s mistakes! Thereby, it’s usually useful to talk to others about the decisions you’re wrestling with, not only in case they might see what you might have overlooked but also in case they might be able to provide you with information from experiences with similar decisions they’ve made. In many cases, unfortunately, children have difficulty describing their “decision dilemmas” to their parents (e.g., decisions dealing with drugs or sex or similar), in which cases, children (again unfortunately) discuss such matters with other youngsters, who normally don’t have adequate or appropriate experiences. Instead, Dear, I would encourage you to seek out more experienced people whom you trust (and who you know won’t “rat on you”), such as a teacher you trust, a “guidance counselor”, professional counselors (such as psychologists and psychiatrists), and even certain grandparents!

Many books on “How to Make Decisions” are also available,¹ but I’ve found that the authors of most such books assume that the reader already knows his or her goals and values, has them all neatly arranged in priority, is fully aware of all feelings and instincts, has considered all appropriate premisses, options, and probabilities, and of course, has access to all relevant data. But if you had successfully completed all such “digging”, then almost certainly you wouldn’t need help in making your decision: almost certainly, the best choice would be obvious! Therefore, Dear, this current book is not meant to be another on “How to Make Decisions”; instead, I want to show you some methods that I’ve learned and that don’t seem to be emphasized sufficiently in other books, namely, how to “dig deeper”.

Let me try to say that again. First is the wisdom in the old cliché: life is about choices. Stated differently, it’s doubtful that anything is more important in your life than the decisions you’ll make. If that’s so, and if I seek to help you, then certainly I should try to show you what I can about how to make decisions. But, Dear, it’s an enormous task. For example, books are available (e.g., at your school library) to help you choose “just” a career. More generally, if you want help with a particular decision (and if you have the money!), then you can hire a consultant with a Ph.D. in Decision Sciences, who will probably use one of many available computer programs to help you reach a decision – provided that you’re already “tuned into your emotions”, your goals are clear and “prioritized”, you’re already confident of your values and know their sources, all premisses, options, and probabilities are known, and all appropriate data have been uncovered and evaluated.

That is, Dear, if you are to make decisions that satisfy you, then on your own, you should first become competent in the “fundamentals” that such a consultant would assume: that you’ve uncovered your emotions, that you’ve evaluated your values, that you know your goals and have arranged them in priority, and that you’ve dug into all appropriate data. These are the topics that I want to begin to address in this chapter. In later chapters (e.g., **Y5**), I’ll try to put the pieces together, to try to help you make decisions in an uncertain world.

And please notice, Dear, that the root problem with making decisions is derived from uncertainties. In contrast, if all consequences of all choices could be foreseen, most decisions would be obvious. In reality, some

¹ For example, *Smart Choices* by John S. Hammond, Ralph L. Keeney, and Howard Raiffa, Harvard University Press, 1999.

decisions can be very difficult – even frightening – because they require substantial reliance on guesses about the unknown (i.e., you need to imagine possibilities and evaluate the probabilities of their occurrences). In many cases, the uncertainties associated with decisions (and the stimulated fears of the unknown) have driven people to make just one decision: to hide in any of many religions, wherein everything is imagined to be known and responsibility for decisions is left to others. Thereby, a person can become “a child of God”, i.e., God is an alleged “father in Heaven”, whose representatives on Earth, the clerics, will tell you what to do, when, and how – and how much to pay them for their “services”!

When you were a child, your parents removed most of the uncertainties and made decisions for you. For example, your mother decided what you would wear, when and what you’d eat, where you could go and for how long, and so on. In fact, your parents even tried to remove your uncertainties about the world and its future – all the way to eternity! – with the idea that “God’s in His heaven; all’s right with the world.” As you became older, your parents decided less and less for you, causing you more and more uncertainties. They relied on you to make more and more decisions for yourself. And if you should now ask them, “What should I be when I grow up?”, in essence their response will be something similar to: “Someone able to make good decisions for yourself.” That is, Dear, in large measure “growing up” really means: coping with uncertainties, taking responsibility for making decisions, living with their consequences, and learning from experiences.

But rarely are people entirely on their own. With their laws, societies demand that their members make certain decisions (e.g., on which side of the road to drive), and with their customs and peer pressure, societies strongly encourage other decisions (e.g., what to wear and generally how to behave). For other decisions, relatives and friends are usually more-than-willing to try to help you make decisions, and should you decide to marry and seek to avoid divorce, then you’d be well advised not to try to make major decisions entirely on your own – unless, of course, prior arrangements are agreed upon. For example, soon after we were married, your grandmother informed me that she would make all the unimportant decisions, while I would be held in reserve to make important decisions – and you know the rest of the story. But I would have thought that in all these years she would have identified at least one important decision for me to make, besides what grade of oil to use in the car...

Meanwhile, to help you with your decisions, of course there's a "collective consciousness going on", which can provide a huge amount of information about how to make decisions. For example, Dear, if you have a few hours with "nothing better to do", and before you are faced with an especially difficult decision, I recommend that you search on the internet (or at your library, etc.) to find what data and associated theories are available to help you make decisions. On the internet, search with words such as "personal decisions goals values", and then after getting a few hundred thousand hits (!), look at a few pages to see how to refine your search.

In some extreme cases, some people may even have old grandparents who have the audacity to attempt to advise "youngsters" about how to make decisions. In such cases, Dear, perhaps it's best just to smile politely, to let them think that they still have something to contribute. In most cases, they can't contribute much, because even after a lifetime's experience of making decisions, it's very difficult to discern general principles about how to make decisions, which in turn follows, because there are so many different types of decisions. For example:

- On a "scale of importance" decisions range from "unimportant" (e.g., should I eat my broccoli or carrots first?) to "critical" (e.g., whom should I trust?)
- On a "complexity scale" decisions range from "trivial" (e.g., should I try to be kind?) to "extremely complex" (e.g., what career should I choose?)
- On a "time scale" decisions range from "immediate" (e.g., should I duck?!) to "whenever" (e.g., when should I visit the Grand Canyon?)
- On a "consequence scale" decisions range from minuscule (e.g., should I wear my light blue or dark blue sweater?) to enormous (should I try those illegal drugs?)

and so on, including repercussions of making unwise decisions, probabilities of desired outcomes, and availability of fallback positions. In addition, decisions differ depending on the degree to which they're based on your instincts, your emotions, and your analytical (or rational) capabilities.

Given this huge range in the types of the million-or-more decisions that you'll need to make, perhaps you then see why it's difficult for anyone to provide you with general advice about how you should make decisions that

will satisfy you. Yet, there are a few “governing principles” that define all decisions and a few “guiding principles” that can help you in making all your decisions. In what follows, I want first to comment briefly on some of these governing principles; I’ll then devote the rest of the chapter to commenting on some guiding principles.

GOVERNING PRINCIPLES FOR DECISIONS

Some obvious governing principles include the following.

1) Causality

The fundamental assumption behind all decisions is the same as the fundamental premiss of science, i.e., the principle of causality. The idea (based on an enormous quantity of reliable data) is that all effects have their causes. Related to making decisions, the principle of causality can be stated as: decisions have consequences. And if you should find, Dear, that some decisions seem to have no significant consequences, then before you conclude that you’ve found a case that violates causality, realize that “no significant consequence” was the consequence!

2) Uncertainties

Another governing principle for all decisions is that uncertainty is inevitable. Of course, you can try to reduce uncertainties (e.g., by always “playing it safe”) and you should try to estimate uncertainties (by estimating all appropriate probabilities). But, Dear, there’s no way that uncertainties can be avoided: there will be uncertain consequences of your choice, uncertainties about alternatives, and lingering uncertainties about whether you’ve made the “right” choice. Stated mathematically, the system is too nonlinear and has too many poorly defined variables to permit predictions; stated practically, nobody (including any alleged “prophet” – and even any god!) can predict details about the future. At best, all anyone can do is foresee some general principles that will be applicable in the future, such as: 1) all decisions have consequences and 2) for all decisions, uncertainty is inevitable.

3) Unavoidability

Faced with inevitable uncertainty, you might desire to avoid decisions. But, Dear, there is another general principle waiting in the wings to pounce on all “procrastinators”: decisions are unavoidable. Thus, Dear, even if you choose not to decide, such a choice will be your decision – with its own set of uncertain consequences. The only thing that absolves

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humans of decisions is death! As the philosopher Jean Paul Sartre (1905–1980) said (in effect): even if you choose to be guided by some “guardian angel” on your shoulder, it will be up to you to decide if, in fact, it’s an angel on your shoulder – and if you’re going to be guided by its advice. Of course, I strongly recommend that you don’t rely on the advice of some “guardian angel” on your shoulder, for I have yet to find any convincing data that any such angels exist. Instead, what I do recommend (most strongly) is that you base your rational decisions on data, but before I dig into details about basing your decisions on data, consider one more general principle, namely,

4) The First Principle of Ecology

Actually, Dear, I’m not sure that this is “the first principle of ecology”, but I recall someone stating it to be so. It’s certainly a fundamental concept in ecology – and it’s also “good enough” to be a general principle, “governing” all decisions. It’s this: you can never do just one thing. For example, Dear, when you make one choice, you’re simultaneously rejecting all other choices, each of which would have had its own consequences.

And actually, Dear, if you consider the above general principles for a few minutes, you might then wonder how anyone has the courage to make decisions – except insofar as it’s impossible not to make decisions, because that’s already a decision! For example, suppose you decide to go back to get your keys, therefore you missed your scheduled flight – which crashed, and therefore... Thus, whereas you might have thought that you did only “one thing” (to go back to get your keys), the resulting ramifications stagger the imagination; they can “scare the hell out of you” – as well as your ability to make decisions.

It’s then no wonder that some people try to “run and hide” from making decisions. Thus, some people decide (!) to join some group (e.g., some religious group) in which someone else will dictate all other decisions. Meanwhile, other people almost freeze (like some animals illuminated by the headlights of a car), unable to continue with their lives, unable to make decisions, fearful of the consequences. In the face of the above unyielding general principles, in the face of such uncertainties, it would be easy to argue that only a fool makes decisions – save for the fact that there’s no alternative! Therefore, there’s no alternative but to (as Shakespeare wrote) “screw one’s courage to the sticking point”, and choose.

GUIDING PRINCIPLES FOR DECISIONS

Yet, in addition to the above governing principles, there are some “guiding principles” that can reduce fear of making decisions. Below, I’ll just list some of these guiding principles, and then, in the rest of this chapter (and in the rest of this book!), I’ll try to explain what I mean (and show you still others).

- Be guided by your goals!
- Be aware of all your goals!
- Listen to yourself: convene your Board of Governors.
- Be certain of your values.
- Rely on the best available data.
- Dig into the data – and their interpretations.
- Check (and recheck!) premisses, e.g., the importance of the decision – and of oneself!
- Don’t forget: reason, alone, is inadequate – and new interpretations of old data must then be tested against new data.
- Remember: many “important decisions” are simple; many “difficult decisions” are unimportant.
- If possible, keep your options open; have a fallback position; make it a “fail-safe operation”.

Now, Dear, once again I ask you to be patient with me: it’ll take me many chapters (in fact, most of the book) to try to explain the above list of guiding principles. Stated differently, one of my prime goals in writing this book for you is to try to help you make decisions with which you’ll be pleased. For this chapter, I’ll start to try to explain some of the above guiding principles; in the next few chapters, I’ll turn to what I’ve learned about digging out and evaluating feelings, hopes, and goals. In later chapters, I’ll cover other topics important for decisions, related to understanding your values, evaluating probabilities, testing hypotheses, and dealing with uncertainties.

DECISIONS IN PURSUIT OF GOALS

To start explaining items in the above list of guiding principles for making decisions, I’d have you first consider: *be guided by your goals*. Yet, if you think about that advice for a minute, maybe you’ll realize that (in a way) it’s rather silly – if not “downright stupid” – because it’s impossible to make a decision except in pursuit of some goal. Otherwise, what’s to decide? That is, decisions are choices we make in pursuit of goals.

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But even if that's obvious, Dear, I'd still encourage you to *be aware of all your goals*. For example, if you have the goal of getting a lot of money, you may decide to rob a bank. Later, though, you would probably regret such a decision, because you'd have reached it while forgetting that another of your goals was to stay out of jail – and, I hope, that you have the even higher priority goal of not participating in slavery (i.e., obtaining goods and services from others without earning the right). Therefore, in your “decision process” (i.e., in your thinking!), you'd be well advised to frequently ask yourself such questions as: *What are my objectives? What are my goals?* and *How will my goals be impacted by my decision?*

Now, to this point in this book, “all” I've tried to show you is “just” your prime goals, viz., your trio of survival goals (of yourself, your extended family, and your values). But in reality, of course we all have a huge number of lower-priority goals. In later chapters in this group, I'll suggest how you may want to create a “hierarchy” of your lower priority goals. Thereby, I hope you'll gain some insight into how to decide among options that promote your goals of higher priority, without doing too much harm to your goals of lower priority – and even how to improve your prospects for achieving conflicting goals. Yet, as I'll show you, all of this is only part of what I mean by “digging out your goals.”

As an example, right now you may be wrestling with a decision dealing with the conflicting goals of going out with your friends and having some fun *versus* continuing to read this junk! And if you want my advice, I'd say: go out and have some fun – but be reasonable, be sensible! This book will be here when you get back – and besides, it's probably better to read it early in the morning, when your mind is “fresh” and your friends are still sleeping! Stated differently, Dear, in pursuit of your goals, you need to organize them not only in priority but also in time.

But setting aside an inquiry into lower-priority goals until later chapters, I can summarize another critically important step in your decision process with the guiding principle: *listen to yourself*. No doubt, if you ask others for help in making your decisions, they'll give you partial advice along the same lines. Thus, if you ask for help with a particular decision, some people may advise you to “listen to your heart”, others may advise “heed your instincts”, and still others may advise “reason it out”. At different times, any one of these pieces of advice is sound. Yet, if you have the time and if you must make what seems to be an important decision, then I urge you to use

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your full capabilities to reach your decision: use your left brain's analysis capabilities to examine your right brain's emotions, your body's instincts, and your universe of values. That is, Dear, *for important decisions, take the time to convene your "Board of Governors"*.

INSTINCTIVE & EMOTIONAL *Versus* RATIONAL DECISIONS

In some instances, though, especially if you don't have much time to make a decision, then rely just on your instincts – for very fortunately, some extremely important decisions are quite simple and can be rapidly made quite satisfactorily. For example, suppose you were driving down a highway at 60 mph and, all of a sudden, a brick wall (or similar) appears in front of you. Then, very quickly, you would need to make a very important decision – and fortunately, such an important decision is very simple to reach: slam on the brakes! More generally, our instinctive decisions are usually related (or, maybe, are always related) to our dual survival goals (of ourselves and our extended families), and our DNA molecules have “programmed” our bodies to quickly arrive at correct choices. Those DNA molecules that failed to program their hosts to make correct, instinctive decisions are now, in the main, extinct. In summary, instinctive decisions are usually both important and simple.

On the other hand, Dear, if you do have the time to make a “thoughtful decision”, then as I already said, I encourage you to rely on more than just your instincts – or just your emotions. In contrast, as I hinted at in **B**, I have made “instinctive decisions”, based on “Body's demands”, that I later regretted. Therefore, if you have adequate time to make a rational decision, then have your full Board of Governors evaluate both Body's demands and Right Brain's emotions; have Right Brain picture the consequences of your options; and have Left Brain evaluate these consequences, in view of your Universe of experiences (particularly, your values – which in turn you should evaluate, as I'll demonstrate in later chapters).

In contrast to my instinctive decisions, with which I'm usually satisfied, I'm rarely satisfied if I rely only on my emotions to dictate a decision. For example, Dear, when I'm angry (which I know is too frequent), I know that wiser than making a decision is to count to ten – or even to a hundred. But unfortunately it's the case for me that, many times, my emotions seem to “sneak into decisions”, unless my left brain is quite firm about understanding the cause of some feeling.

For me, “evaluating my emotions” is extremely important, if I’m to be satisfied with my decisions – so important that I don’t want to try to squeeze the topic into this chapter. Instead, I’ll devote most of **F** to show you how I try to “figure out my feelings”. Therefore, for now, I want to skip emotional factors in decisions, and instead, in the rest of this chapter, emphasize another important principle in making decisions: *digging into data*.

But again, Dear, I ask for your patience, because you don’t need to dig into data to make all your decisions! It depends on the type of decision you must make, especially on how important you consider the decision to be and on how much time you have available to make it. Thus, Dear, there’s wisdom both in “Look before you leap” and also in “He who hesitates fails”.

Obviously, the above “platitudes” are conflicting recommendations, but the apparent paradox is resolved when one realizes that both recommendations are appropriate, but for different types of decisions. That is, sometimes it’s appropriate to let one’s instincts and emotions make our decisions for us (e.g., “Yes! Do slam on the brakes! He who hesitates fails!”). But with some decisions, you’ll need to assemble your full Board of Governors and have your left brain’s analysis capabilities undertake thorough investigations of your goals, values, instincts, emotions – and dig into all available data and their interpretations, i.e., “Look (thoroughly!) before you leap!”

SIMPLE & IMPORTANT *versus* DIFFICULT & UNIMPORTANT

And though I may be “trying your patience”, I would feel remiss if I didn’t mention something else. What I’ve found (to my pleasant surprise!) is that, among the million-or-more decisions that I’ve had to make during my life, many (if not most) important decisions were really quite simple, whereas many (if not most) difficult decisions were rather unimportant! [And yes, I did write that the way I meant to!]

Certainly there are exceptions. A choice of a career can be both difficult (generally because of insufficient data) and quite important (although not irreversible, because subsequently we can usually change careers). Yet, as a general “rule of thumb”, I’ve found that decisions primarily dictated by my instincts (“Slam on the brakes!”) and by my emotions (“I gotta be free!”) are both simple and important. In contrast, when Left Brain becomes involved (digging into data, prioritizing goals, evaluating values, examining emotions and instincts, checking premisses, considering options, estimating probabilities, arranging fallback positions, etc.), then the decisions can

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become extremely difficult – and yet, many times, such decisions turn out to be relatively unimportant!

For example, Dear, imagine that you're in college and someone asks you if you'd like to join a group for a weekend ski trip. Imagine some of your thoughts as you struggle with your decision:

“A ski trip would be fun, but given the weather, it could be dangerous... It would be expensive, yet there's a chance for romance... But I'm not that good a skier, and I might look silly on the slopes... Besides, this weekend I really should study, especially because, if I could impress a certain someone with good grades, then maybe... But 'you're only young once'... Yet, there will be more appropriate times, in the future, when I can ski, and ...!”

So what do you decide? You decide to flip a coin!

Now, Dear, I'm not claiming that this result (that important decisions are usually simple, whereas difficult decisions are usually unimportant) is always appropriate. Also, I know that the result may seem (and may be!) “counter intuitive” (i.e., contrary to what is expected without having Left Brain analyze it). Yet, if you will analyze some data, I think that you'll see that many times this “guiding principle” is valid.

Thus, again, some very important decisions (usually dealing with your survival) are trivially simple to make. These include both “negative decisions” (e.g., Should I start smoking? – No! Should I take drugs? – No!, Should I have unprotected sex with this stranger – No!, and so on), as well as “positive decisions” (Should I be careful in rattlesnake country – Yes! Should I study harder – Yes!, Should I get more exercise – Yes! Should I eat more healthful food – Yes!, and so on). Again, Dear: although these decisions are simple to make, their consequences are important.

For contrast, think about some of the very difficult decisions that you've had to make – or that you will yet need to make: What should I do to attract a certain person's attention? What elective course should I take? To which colleges should I apply? Which offers should I accept? Which job should I accept? What house should I buy? Should I move to a different location? And so on. Most people get themselves “tied in knots” with such “difficult decisions”, worrying about the 1001 ramifications of such decisions, splitting hairs of consequences. And yet, because the consequences are so close (and therefore the decision is so difficult), it's obvious that the source

of the difficulty is that the decision is unimportant! Things will work out pretty much the same, whichever choice is made!

The conclusion I hope you'll reach from this, Dear, is the following. If ever you “tie yourself in knots” (mentally and physically) over “extremely difficult decisions”, check to see if the cause is actually that the decision is relatively unimportant. Thus, if you find yourself worrying about a decision, day after day and even during the night (interfering with your sleep), while you wrestle with all the uncertainties, making lists of “pros and cons”, perhaps even creating a spread sheet on your computer to help you (suitably weighing each pro and con, summing the results for each column, and reducing all your thoughts to numbers), then many times all these agonizing details display the obvious: it doesn't matter much which choice you make!

That is, if your best evaluation leads to a result that's essentially “too close to call”, then stop trying to “call it”! In the limit, when you encounter “an extremely difficult decision”, you'll likely find the reason that it's so difficult is exactly because the consequences of the choices would be essentially equal, i.e., the choice will be almost irrelevant! Flip a coin! Things will “work out pretty much the same” whatever choice you make. And with the time and mental energy left over from not worrying about such a difficult decision, spend a little extra time re-enforcing the (simple) decisions that you reached on important matters, e.g., don't take unnecessary risks, “don't do drugs”, get more exercise, eat better food, and so on.

Besides, the “toss-of-the-coin resolution” of a “very difficult decision” has another neat feature (besides doing as the “gods of probability” decree!), namely, you get to trick the gods by *ex post facto* (i.e., “after the fact”) deciding if the choice is to be made by a single toss of the coin, or the best two-out-of-three tosses, or the best three-out-of-five, or whatever! That is, when a rational decision is too close to call, then if you'll choose (*ex post facto*) how many coin-tosses to make, you'll thereby permit some probably inadequately accounted emotion to finally enter into your “deliberations”!

PREMISES BEHIND DECISIONS

And let me add something, here, dealing with premisses. Dear: when people tie themselves into knots wrestling with difficult decisions, it's a wonder that sometimes they don't burst into laughter! Based on my own experiences with difficult decisions, laughter is probably the furthest thing from their minds, but if one could have the “presence of mind” to check

one's premisses, then laughter would probably ensue – which, in turn, would probably help substantially to simplify the decision. And in case you're wondering "What the devil is grampa talking about?", let me try to explain.

Dear, when you "wrestle with a difficult decision", obviously one of your premisses is that it's an important decision. Meanwhile, as a certain grandchild so frequently says: gimme a break! Does anyone really know which decisions are important? The most important decision that you'll ever make is to go back to the house to get what you forgot; if you hadn't done that, you wouldn't have missed the plane, which crashed, killing all on-board. That is, Dear, the premiss that any particular decision is important is in turn based on the premiss that you can predict the future: do you really have adequate data to support that assumption?

There is another fundamental assumption behind all our deliberations that should be examined with care. I'll return to this premiss in a later chapter; here, I'll just introduce it. It's to assume that we're important. Now, all of us, of course, must consider ourselves to be important: DNA molecules "had the smarts" to ensure that each one of their hosts would try to survive (i.e., via evolution, this behavior pattern had and has survival advantage). And of course, our families re-enforce the premiss that each family member is important: pity the child who concludes otherwise. Further, in most religions, clerics preach that one or more gods is so interested in "the believers" that their god watches every move of the believers – and even assesses their every thought! In fact (or at least, so the clerics say), you're so important that if you'll pray to their god (and pay the clerics their "commission"), he'll bend the laws of the universe for your convenience! As someone else said: "It's egotism gone berserk!"

Meanwhile, though, Mother Nature continuously challenges the premiss that individuals are important: 10 people die in a fire, 100 people die in a flood, 1,000 people die when a volcano erupts, 10,000 people die in a flu epidemic, more than 100,000 people died as a result of the Indonesian tsunami, at least 1 million die every year from AIDS, at least 10 million people die every year because of other viruses, 100 million people die every year of old age, if a large asteroid hits the Earth at least 1 billion people would probably be killed, and when our Sun "calls it quits" (a few billion years from now), that will be the end of life on Earth. As the poet Matthew Arnold wrote, more than a century ago:

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Nature, with equal mind,
Sees all her sons at play;
Sees men control the wind,
The wind blow man away.

Yet, we tie ourselves in knots with “important decisions” based on the premiss that the individual is important – in spite of so much data to the contrary. Pray tell: important to what? (Besides to oneself!) Let me put it this way: Dear, I encourage you to “dance as best you can” – because you’ll enjoy life more, accomplishing your goals. But don’t be disappointed if others don’t applaud – with a little bit of luck, they’ll be too busy dancing as best they can.

Nonetheless, even though many difficult decisions are caused by almost equal options and even though difficult decisions are based on some very shaky premisses (e.g., that you can predict the future and that the decision – and you – are important), I still encourage you to invest a reasonable amount of mental energy in making such decisions.

That recommendation may seem contrary to what I’ve just finished describing, but I make it for a number of reasons, including the following.

- 1) First and foremost, the observation “many important decisions are simple, whereas many difficult decisions are unimportant” isn’t invariably correct: some difficult decisions are important (e.g., what career to pursue, whether to marry and have children, whether to believe in God, and so on).
- 2) Many times throughout life (and throughout nature), small differences can lead to large consequences (which is a characteristic of what are called “nonlinear systems”).
- 3) Because, in the future, you may wonder about “the road not taken”, it may be useful if you’ll be able to recall why you chose the road you did.
- 4) Whereas we humans, among all the animals, have the amazing ability to think about the future, then use the capability to try to guide your life.

Now, Dear, as I already wrote and tried to illustrate, there are many different types of decisions. Of those types that are distinguished by which of your “Board of Governors” makes them, it’s rare that any decision is purely of

one type. Yet, many decisions are predominantly: 1) instinctive (or intuitive), 2) emotional, or 3) rational. That is, in the language that I used in **B**, you'll find that many of your decisions are predominantly made, respectively, by 1) Body, 2) Right Brain, or 3) Left Brain. As examples, if ever you are faced with a decision about saving your child's life, your instincts will say "Yes!", when you are faced with a decision about going on a date with a certain special person, your emotions will probably guide you well, and when your wondering if you should do your homework, you know what your reason will dictate!

I reminded you of the above, Dear, to try to prepare you for what I consider to be another important guiding principle that should help you be satisfied with your decisions, a principle right up there in importance with *convene your Board of Governors, be guided by your goals, and dig into all relevant data*. The question that I would have you consider, Dear, is: Who should have the "final authority" over making your decisions?

"SHOW ME THE DATA!"

I'll soon provide my recommended answer to that question, but first, as old grandfathers are wont to do, let me tell you a story – which just happens to be true! It's a story about a certain grandchild. When she had just turned ten, she struck out on her own: she traveled across the country, from Florida to Nevada, to visit her grandparents. She was very brave, and we were very proud of her – but I think she was rather relieved that we were at the airport to greet her.

Anyway, one day during her visit, she and I were walking in the desert, and I showed her a huge pile of bones of dead horses. We wondered why the bones were there. We talked of wild horses in the West, in Nevada and Arizona. She then mentioned her friend who lived in Arizona, and that she wanted to go to Arizona to visit him. I told her, to her surprise, that she was already standing in Arizona. I pointed to our town, at the bottom of the hill, in Nevada; pointed to the hills just to the East, and said that was Utah; and then pointed to the ground and said that this was Arizona. That, with the way thoughts seemed to be linked in our brains (plus my desire to help her) led to the following.

"Dear," said I, "let me tell you the most important thing that I've learned during the whole 700-or-so years that I've been alive. Maybe it'll also help you."

Of course she responded: "You're not *that* old!"

“Well, okay, maybe not; I’m not sure; but I am sure of what I want to tell you; it’s my motto.”

“Your motto?”

“Yah – like on license plates. Arizona is ‘the Grand Canyon State’; Nevada is ‘the Silver State’; on Utah license plates it says ‘Ski Utah’, but I think Utah’s motto is something about being ‘the Beehive State’; maybe you remember that Washington is ‘the Evergreen State’; I think Florida is ‘the Sunshine State’.

“Yah, it is.”

“Well, my motto is similar to what I think is the best motto for any state, Missouri: ‘The Show Me State’. The famous line is: ‘I’m from Missouri; show me’.”

“I know.”

“Okay. Well, my motto – the most important thing I’ve learned in life – is: “Show me the data.”

“Oh,” said an unimpressed grandchild – and she then returned to talking about dead horses.

After our walk, I “took a break”. You see, Dear, as much as grandparents love their grandchildren, yet grandchildren get tiring! The trouble is, they never seem to unwind! So, while the grandmother interacted with the granddaughter, I announced that I was going to the casino “to get some data”.

Now, the granddaughter wouldn’t have understood what I meant, so let me explain. Her grandmother and I have been trying out various “theories” about how best to play the video-poker machines (using results from a computer program that I wrote, as well as those calculated by others). We then go through “phases” during which we play the machines using someone’s “method”, getting data to test out the various theories (i.e., various ideas of “the best way” to play the machines).

When I returned from the casino, granddaughter had finished practicing her assigned math “homework” (even though it was summer!) and was playing double-solitaire with her grandmother, who asked me if I got any good data.

“Well,” said I, “I went to the first machine, played for about 15 minutes, and got deuces; so, that was good data.”

Grandmother said “good” – but granddaughter wouldn’t have understood that, on the machines that I play, “deuces” pay \$250.

“Then,” I continued, “I went to the machines at the bar, ordered a cup of coffee, and before I had it half drunk, I got more good data: a royal flush.”

“No!” said the grandmother in disbelief. (Again the granddaughter wouldn’t have understood that the royal flush pays \$1,000.)

“Yup,” said I, and continued, “So then, I complained to the bartender that the machine wouldn’t let me play very long,” which generated a snicker of delight from grandmother (but nothing from granddaughter), “picked up what remained of my cup of coffee, moved down the bar to another machine, and before my coffee was finished, I hit another royal flush! How’s that for good data!”

The grandmother made another statement of disbelief, and I turned to my granddaughter and said (probably with some smugness): “So, Dear, what do you think?”

Her response was astounding. The little sweetheart said: ***“Show me the data!”***

And you can bet that, as soon as I had spread out the 22 one-hundred-dollar bills on the table in front of you, I gave you a big hug. Not that I was pleased with winning the money (although no doubt that stimulated me emotionally), but because, even though you had shown more interest in the bones of dead horses, you had understood perfectly what I meant by: “Show me the data.”

And how I hope, Dear, that you, too, will adopt the motto: “Show me the data.” For example, if someone tells you that there’s some god in heaven who knows your every thought, watches your every move, and so on, then I hope that, someday, you’ll feel strong enough to respond: “Show me the data”. Or if someone tells you that you have an immortal soul and therefore that you must do such-and-such, then again I hope you’ll demand: “Show me the data.” And more down-to-earth, Dear, whenever you must make a rational decision, please carefully evaluate all relevant data. In his poem *All for Love*, John Dryden summarized the idea beautifully:

Errors, like straws, upon the surface flow;
He who would search for pearls must dive below.

And so, Dear, coming back to what I started (before I was distracted by the above story), I very much hope that, for all your decisions, always the highest authority on which you rely

- *Will not be* someone else (no matter who – and certainly including me!),
- *Will not be* something written in some book (no matter its author or authors or its “inspiration”),

- *Will not be* your instincts (for our instincts can lead us to actions that we forever regret),
- *Will not be* your emotions (for all of us can make enormous errors based on our emotions), and
- *Will not be* even your reasoning (for, as I'll illustrate many times in this book, some of the most brilliant humans who ever lived made absolutely horrible errors in their reasoning).

Instead, Dear, I very much hope that, always the highest authority that you recognize will be data, i.e., evidence.

Further, if the decision is important to you and if you have sufficient time, don't rely only on the data of which you are already aware: dig up more. For example, suppose you're trying to decide which graduate school to attend. Suppose that you had already decided what course of study to pursue and that you had been offered graduate research assistantships at a number of different colleges. Then, don't make a decision based in large measure on available data that the expert in the field of study is at a certain school; instead visit the school – to get more data. There, you may learn that, three years ago “the master” had a stroke and now has a speech impairment leaving him almost unintelligible – and all his courses are actually taught by foreign graduate students, whose speech is also almost unintelligible. Meanwhile, his protégé is teaching at another college, with more secure research funding. Furthermore, at “the master's school”, the department is downwind from the dairy farm and the stench is a terrible distraction! That is, Dear, dig up more data.

“PATIENCE, CHILD”

Now, Dear, unfortunately it'll take me quite awhile to explain what I mean by “digging into the data”. In many cases, it means digging into old interpretations of old data. To do so usually requires more reasoning, but then as I've already said (and later will illustrate) reason alone is inadequate. That is, new interpretations of old data must then be tested against new data. In fact, after trying other alternatives, I decided to delay much of my explanation of “digging into the data” until later chapters (in the **I**-chapters, dealing with Ideas, and in **S**, dealing with Science).

In addition, because it's so important (and therefore I want to try to describe it thoroughly), I plan to delay most of my description of the “shovel” that you should use to do your “digging”, namely, *skepticism*. Therefore, Dear, again please be patient with me. A “first cut” summary of what I want to convey to you is this:

In making rational decisions, be skeptical: be skeptical of your instincts, be skeptical of your emotions, be skeptical of your analyses, be skeptical of all “authorities”, and be skeptical even of all data and all their interpretations. But in the end, base your decision (even if your decision is only temporary) on the most reasonable interpretation of the most reliable, relevant data – and then seek new evidence to test your new interpretations.

Thus, Dear, although I encourage you to base your decisions on evidence (not on the opinions of some “authority figure” and not solely on the basis of your instincts, emotions, or even your analysis capabilities), yet I encourage you to be skeptical, also, of the available data and of all interpretations of these data – including your new interpretation and your new data!

Now, Dear, I'm painfully aware of my inadequate explanation of what I mean by “digging into data and their interpretations”; please be patient with me; it'll take me much of this book to try to show you what I mean. Nor have I shown you all that I intend to show you, to try to help you make your million-and-more decisions. But this chapter is already long enough (too long?); therefore, let me “turn it off” by trying to summarize what I've tried to convey to you.

During your life, Dear, you will make an enormous number of decisions. They can't be avoided. With each decision, you are choosing to pursue some goal. Some of your decisions will be primarily instinctive, or emotional, or rational; others will be a complicated mixture of instinct, emotion, and reason. When you have time to make rational decisions, convene your Board of Governors, be aware of influences from your emotions, instincts, and values, be aware of all your goals, check your premisses including estimates of probabilities, and dig into all relevant data and their interpretations. Thus, as 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 premisses, options, priorities, and probabilities. But remember: important decisions are usually simple; many decisions are difficult, because they’re unimportant; if it’s “too close to call”, don’t; instead, flip a coin! Do as the gods decree, in the best two out of three, or three out of five... – until they get it right!

Now, Dear, I expect that you’re disappointed with how little the above helps you, but again, please be patient with me. Perhaps the only thing more difficult than satisfactorily making difficult decisions is satisfactorily describing how to make difficult decisions that are satisfying!

Yet, if you’re really dissatisfied with the above, then you may want to jump, now, to **U** (dealing with “Uncertainties”) and **Y5** (dealing with “Your Decisions and Goals”) – but I don’t recommend it, because they rely on a lot of intervening ideas:

- What I’ve learned about digging out emotions,
- How you might want to organize your goals,
- How to estimate probabilities,
- How inadequate even the best reasoning can be,
- Ways to evaluate your values – and form new ones,
- That the bedrock of all understanding is data,
- That the foundation of all knowledge about the universe external to our minds is the scientific method (“guess, test, and reassess”) – and using it, much has been learned also about each person’s “internal universe”.

Besides, with it all, I want to try to teach a certain grandchild how to develop patience. After all, Dear, surely you already have a substantial amount of reliable data to support the idea that the prime purpose of all grandparents is to test their grandchildren’s patience!