HOW TO DECIDE

Simple Tools for Making Better Choices

ANNIE DUKE

Contents

Your Best Decision, and Your Worst

What was your best decision of the last year? Go with your gut, the first thing that comes to mind. Describe the decision below.

_____

_____

Now, what was your worst decision of the last year? Again, go with the first thing that comes to mind. Describe the decision below.

_____

_____

Did your best decision end up turning out well? (Circle one.)   *YES   NO*

Did your worst decision end up turning out poorly? (Circle one.)   *YES   NO*

I

Resulting

OUTCOMES IN THE REARVIEW MIRROR MAY APPEAR LARGER THAN THEY ARE

[I]

Job Hopping

1 Imagine you quit your job to take a position at a new company.

The job turns out great! You love your coworkers, feel fulfilled in your position, and within a year you get a promotion.

Was it a good decision to quit your job and take the new position?
(Circle one.)   *YES   NO*

2 Imagine you quit your job to take a position at a new company.

The new job turns out to be a disaster. You are miserable at the company and within a year you have been laid off.

Was it a good decision to quit your job and take the new position?
(Circle one.)   *YES   NO*

[2]

The Shadow of Resulting

1 You buy an electric car and you love it. It's an awesome car, manufactured by a tech genius widely hailed as a visionary. Based on your experience with the car, you buy stock in the company.

After two years, the company's stock soars and your investment has increased in value twenty-fold.

Rate how you feel about the quality of the decision to invest, on a scale of 0 to 5, where 0 is a terrible decision and 5 is a great decision:

Terrible Decision   *0*   *1*   *2*   *3*   *4*   *5*   *Great Decision*

Write down the reasons for your rating.

_____

_____

_____

_____

2 You buy an electric car and you love it. It's an awesome car, manufactured by a tech genius widely hailed as a visionary. Based on your experience with the car, you buy stock in the company.

After two years, the company is out of business and you have lost your investment.

Rate how you feel about the quality of the decision to invest, on a scale of 0 to 5, where 0 is a terrible decision and 5 is a great decision:

Terrible Decision   *0*   *1*   *2*   *3*   *4*   *5*   *Great Decision*

Write down the reasons for your rating.

_____

_____

_____

_____

Now that you know what resulting is, think about a time in your life when you resulted. Use the space below to describe the situation.

_____

_____

_____

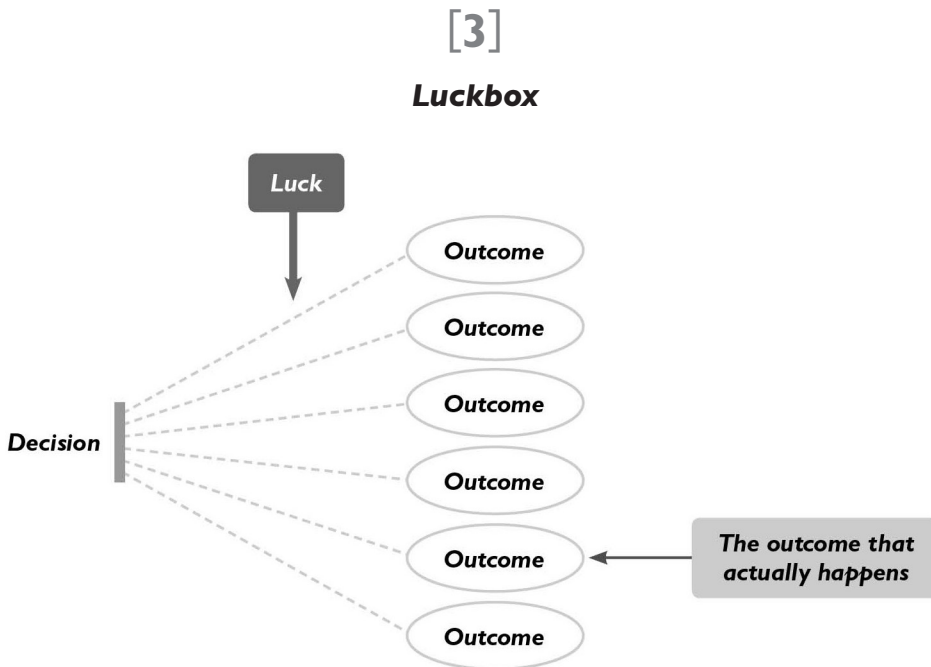IF YOU WANT SOME EXAMPLES, go back to the very first questions I asked you: What were your best and worst decisions of the last year? The point of having you write those down is that most people don't actually think much about their best and worst *decisions*. They usually start by thinking of their best and worst *outcomes* and work backward from there.

That's due to resulting.

[3]

Luckbox

Outcome Quality

	Good	Bad
Good	EARNED REWARD	BAD LUCK
Bad	DUMB LUCK	JUST DESERTS

Decision Quality

Outcome Quality

	Good	Bad
Good	EARNED REWARD	BAD LUCK
Bad	DUMB LUCK	JUST DESERTS

Decision Quality

Outcome Quality

	Good	Bad
Good	**EARNED REWARD**	**BAD LUCK**
Bad	**DUMB LUCK**	**JUST DESERTS**

Decision Quality

[4]

When Bad Things Happen to Good Decisions (and Vice Versa!): Pulling apart outcome quality and decision quality

Now let's dig into the pair of decisions you identified in which the quality of the decision did not align with the quality of the eventual outcome, Bad Luck and Dumb Luck.

I What did you identify as your Bad Luck outcome?

_____

Describe some of the reasons you think your decision-making was good despite the bad outcome. Those reasons can include, for example, the probability of that bad outcome (or any set of the outcomes that were undesirable) occurring, the information that went into making the decision, or the quality of the advice you sought.

_____

_____

_____

List at least three reasons why you got the bad outcome despite your decision-making being good. That is, what were some of the things outside your control or things you didn't anticipate in your original decision process?

_____

_____

_____

What are at least three other ways things might have turned out given the decisions you made?

_____

_____

_____

_____

2 What did you identify as your Dumb Luck outcome?

_____

Describe some of the reasons you think your decision-making was poor despite the good outcome.

_____

_____

_____

_____

List at least three reasons why you got the good outcome despite your decision-making being poor. That is, what were some of the things outside of your control or things you didn't antic- ipate in your original decision process?

_____

_____

_____

_____

What are at least three other ways things might have turned out given the decisions you made?

_____

_____

_____

_____

3 Which was easier to think of an example of, Bad Luck or Dumb Luck? (Circle one.)

Bad Luck   _Dumb Luck_

Why do you think one was more difficult than the other?

_____

_____

[5]

Resulting's Other *Impact on Learning: Don't wait for decision errors to find learning opportunities*

I Go back to the table you filled out earlier in this section. What did you identify as your Earned Rewards outcome?

_____

Describe some of the reasons you think your decision-making was good. Those reasons might include your assessment of the probability of that bad outcome occurring (or any set of the outcomes that were undesirable), the information that went into making the decision, or the quality of the advice you sought.

_____

_____

_____

_____

Now take some time to think about **what could have been better** about the decision. Some questions to consider:

Could you have gotten more or better information before deciding?	YES	NO
Could you have decided more quickly?	YES	NO
Could you have taken more time with the decision?	YES	NO
Was there information you learned after the fact that you could have known beforehand that might have changed your decision?	YES	NO
Were there even better outcomes possible than the outcome you got?	YES	NO
If yes, if you had made a different decision, could you have increased the probability of those better outcomes occurring?	YES	NO

Can you think of any reasons why you would make a different
decision if you had to do it over again?   *YES*   *NO*

Even if you would likely come to the same decision, can you think
of ways you could improve your decision process if you had to do
it over again?   *YES*   *NO*

2 Use the space below to reflect on any of your "yes" responses.

_____

_____

_____

_____

_____

_____

_____

_____

_____

3 Exploring those cases in which decision quality and outcome quality align is just as important
as exploring the cases in which they don't. For Earned Rewards, you may have made a good
decision and gotten a good outcome, but you can still find worthwhile lessons examining
those decisions.

The same is true for Just Deserts.

Take a moment to go back over this exercise and reflect on how you can apply the same
questions to those times when the outcome quality and decision quality were both poor.

[6]

Reexamining Your Best and Worst Decisions

Go back to what you identified at the start of the book as your best and worst decisions.

How do you feel about those answers now? Has your mind changed? Upon reflection, were they actually your best and worst decisions (free of the influence of resulting)? Can you see more clearly how the quality of the outcomes influenced your choice of your best and worst decisions?

Use the space below for reflection.

After reflecting, include other decisions that you might add to the consideration of best/ worst.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

RESULTING CHECKLIST

☐ How much is the outcome clouding your judgment (or someone's judgment you've observed) about the quality of the decision?

☐ Even if bad decisions preceded a bad outcome, can you identify some good decisions made along the way? Can you identify some ways in which the process of coming to the decision was good?

☐ Even if good decisions preceded a good outcome, can you identify some ways the decision could have been better? Can you identify some ways in which the process of coming to the decision could be improved?

☐ What are the factors outside the control of the decision-maker (who might be you), including the actions of other people?

☐ What are the other ways things could have turned out?

2

As the Old Saying Goes, Hindsight Is Not 20/20

I Chart: Identifying your own hindsight bias

Now let's dig into some examples of hindsight bias from your own life.

Here's an actual example that I heard at the grocery store. (Grocery stores, by the way, are amazing laboratories for studying human behavior!)

Man: I heard you talking on the phone. I love your accent. Are you Italian?

Woman: No, I'm Greek.

Man: I knew it!

1 Think of a *Knew It All Along* example, a time when you said to someone or to yourself something like, "I knew that would turn out that way!" Or a time when someone said that to you.

Describe the decision and the outcome.

_____

_____

_____

What did you say to yourself or to the other person? What were the mental and/or verbal cues that hindsight bias was at play?

_____

_____

_____

What did you feel you knew all along or what did the person tell you they knew all along?

_____

_____

_____

Was the information you or the other person thought you knew all along something that revealed itself after the fact, like the way it actually turned out? (Circle one.)   *YES   NO*

2 Think of a *Should Have Known* example, a time when you said to someone or yourself something like, "I should have known!" or "How could you not have seen that coming?" Or a time when someone said that to you.

Describe the decision and the outcome.

_____

_____

_____

_____

[3]

What Did You Know? And When Did You Know It?

KNOWLEDGE TRACKER

Stuff you knew before the decision ——→ Decision ——→ Outcome ——→ Stuff you know after the outcome

Now let's try using the Knowledge Tracker for the examples of hindsight bias you just identi-fied from your own life. Come up with three key things that informed the decision, describe the decision and the outcome, and then come up with three things that revealed themselves only after the fact.

As an example, here's how you might use the Knowledge Tracker for the decision about taking the job in Boston.

This is what it might look like when you move to Boston and the outcome is that you quit after six months:

KNOWLEDGE TRACKER

Stuff you knew before the decision	Decision	Outcome	Stuff you know after the outcome
1. Average temperature, length of winter, and snowfall in Boston.	Take the job in Boston	Quit after 6 months	1. Your experience of months of winter in Boston.
2. Details about the job opportunity.			2. How much you like the job.
3. Your experience from your February visit.			3. That you quit the job after 6 months and move home.

Here's how it might look when you move to Boston and it is a winter wonderland of great outcomes:

KNOWLEDGE TRACKER

Stuff you knew before the decision	Decision	Outcome	Stuff you know after the outcome
1. Average temperature, length of winter, and snowfall in Boston. 2. Details about the job opportunity. 3. Your experience from your February visit.	→ Take the job in Boston	→ You stay at the job	→ 1. Your experience of months of winter in Boston. 2. You're a great snowboarder. 3. That you stay in Boston for the long haul.

Now fill out the Knowledge Tracker for an instance when you exhibited hindsight bias:

KNOWLEDGE TRACKER

Stuff you knew before the decision	Decision	Outcome	Stuff you know after the outcome
1.	→	→	→ 1.
2.			2.
3.			3.

Did tracking your state of knowledge before and after the outcome
help to reduce memory creep?   *YES*   *NO*

Did tracking your knowledge help you see that there are things that
you could not have known, even if you feel like you should have
known them?   *YES*   *NO*

Use the space below for additional reflection on the experience of using the Knowledge
Tracker.

_____

_____

_____

_____

_____

_____

_____

[4]

You Can Find Hindsight Bias Everywhere You Look

Now that you have a handle on hindsight bias, take a few days to listen for examples of hind-sight bias at work or at home, from following the news or sports, or from your boss, friends, or family. *Most importantly*, pay attention to when you catch yourself in the act.

Reflect below on two of the examples you spot.

I Example 1:

Briefly describe the example.

_____

_____

_____

Circle the form of hindsight bias involved: *Knew it all along*   *Should have known*

Were there verbal or mental cues?   *YES*   *NO*

If so, what were they?

_____

_____

_____

_____

Complete the Knowledge Tracker for this example.

If the example involves someone else's decision, you obviously can't know for sure what they knew at the time of the decision. But that doesn't mean you shouldn't try to put yourself in their shoes and take your best guess at what was reasonable for them to know. You might even try asking them to fill in the gaps for you.

KNOWLEDGE TRACKER

Stuff you knew before the decision	Decision	Outcome	Stuff you know after the outcome
1.	→	→	→ 1.
2.			2.
3.			3.

2 Example 2:

Briefly describe the example.

_____

_____

_____

Circle the form of hindsight bias involved: *Knew it all along* *Should have known*

Were there verbal or mental cues? *YES* *NO*

If so, what were they?

_____

_____

Complete the Knowledge Tracker for this example.

KNOWLEDGE TRACKER

Stuff you knew before the decision	*Decision*	*Outcome*	*Stuff you know after the outcome*
1.	→	→	→ 1.
2.			2.
3.			3.

HINDSIGHT BIAS CHECKLIST

Identify the bias.

☐ "I should have known it."

☐ "I told you so."

☐ "I knew it all along."

Use the space below to add to this list of cues, from the exercises in (2) and (4):

_____

_____

_____

_____

_____

_____

Address the bias.

☐ (1) Was there any information that was revealed after the fact?

☐ (2) Was that information *reasonably* knowable at the time of the decision? If you have a journal record of what you knew at the time of the decision, refer back to it.

☐ (3) Was the conclusion about the predictability of the result based on information that was unknowable at the time of the decision?

☐ (4) After addressing the first three questions, reassess how predictable the outcome was.

3

The Decision Multiverse

A Hairbrained Idea

You hate salons and cut your own hair to avoid them.

This gives you the idea to develop an app called Kingdom Comb that matches people who don't want to go to a salon to get their hair done with hairstylists willing to come to the customer.

You want to stake a claim on your piece of the growing gig economy and you're confident that the idea is a winner!

You quit your job and plow your savings into the venture. You also raise a friends-and-family round of start-up capital.

The heavens, it turns out, aren't opening up for Kingdom Comb. Your start-up fails as the app never achieves critical mass. You run through your money (and the money of your friends and family).

You get even further into debt during the six months it takes to find another job, and you feel guilty about the money you lost for those who invested, negatively affecting your relationships with them.

You go back to cutting your own hair.

Going forward, you increasingly doubt your judgment on career and financial decisions.

You take a job as a developer with a small company but go out of your way to keep quiet whenever business discussions involve new ventures or innovation.

Write down at least three other possible outcomes for Kingdom Comb:

1. _____

_____

2. _____

_____

3. _____

_____

We'll come back to this in a moment.

[4]

Putting Down the Cognitive Chain Saw: Reassembling the tree

Let's get back to Kingdom Comb.

I Remember, you develop Kingdom Comb to match people who don't want to go to a salon to get their hair done with hairstylists willing to come to them.

Your start-up fails as the app never achieves critical mass. You run through your money (and the money of your friends and family).

(You can go back to the beginning of this chapter to reread the complete scenario if you find that helpful.)

a. Record the decision you made and the outcome you got:

Decision   *Outcome*

b. Using the potential outcomes you identified in the opening exercise, sketch out the tree.

Decision   *Potential outcomes*

Now, here's another scenario:

2 You hate salons and cut your own hair to avoid them.

This gives you the idea to develop an app called Kingdom Comb that matches people who don't want to go to a salon to get their hair done with hairstylists willing to come to them.

You want to stake a claim on your piece of the growing gig economy and you're confident that the idea is a winner!

You quit your job and plow your savings into the venture. You also raise a friends-and-family round of start-up capital.

The heavens, it turns out, are opening up for Kingdom Comb. It shows promise, secures additional funding, and attracts the attention of both ride-sharing companies and haircutting chains. You accept an offer to sell the app, prerevenue, to one of those companies for $20 million.

Your friends and family make a huge return on their investment, as do you.

You are courted by other start-ups and big tech companies. With your pick of jobs, you are off to a great career in tech.

a. Write down the decision and the outcome:

Decision   *Outcome*

b. Sketch out a more complete tree for this scenario, including the other reasonable potential outcomes.

Decision   *Potential outcomes*

3 Did you make the same tree for both scenarios? (Circle one.)   *YES*   *NO*

[5]

Counterfactuals

1 Pick a past terrible outcome from your own life. You can take one you've already used (i.e., worst decision, an instance of resulting, a hindsight-bias example) or a different one. It's particularly good to pick one you've been beating yourself up about.

a. Write down the decision and the outcome:

Decision   *Outcome*

b. Reconstruct the decision tree.

Decision   **_Potential outcomes_**

c. Did re-creating the tree change how you feel about your
responsibility for that outcome? (Circle one.)   *YES*   *NO*

Reflect on that here.

_____

_____

_____

d. Were there outcomes on that list that were worse than the one
you got? (Circle one.)   *YES*   *NO*

2 Pick a past great outcome from your own life. You can take one you're already used (i.e., best decision, an instance of resulting, an instance of Earned Reward, a hindsight-bias example) or a different one. It's particularly good to pick one that you feel you deserve a lot of credit for.

a. Write down the decision and the outcome:

Decision

Outcome

b. Reconstruct the decision tree with the other potential outcomes added to the actual outcome.

Decision   *Potential outcomes*

c. Did re-creating the tree change how you feel about your responsibility for that outcome? (Circle one.)   *YES   NO*

Reflect on that here.

_____

_____

d. Were there outcomes on that list that were better than the one you got? (Circle one.)   *YES   NO*

3 Circle which felt better:

   Re-creating the Tree   Re-creating the Tree   Felt the Same
   for a Bad Outcome   for a Great Outcome

THE DECISION MULTIVERSE CHECKLIST

When evaluating whether the outcome provides a lesson about decision quality, create a simplified decision tree, starting with the following:

☐ Identify the decision.

☐ Identify the actual outcome.

☐ Along with the actual outcome, create a tree with other reasonable outcomes that were possible at the time of the decision.

☐ Explore the other possible outcomes to understand better what is to be learned from the actual outcome you got.

4

The Three Ps: Preferences, Payoffs, and Probabilities

Pro Tip: Don't taunt the largest animal in North America

Here is a picture of a bison blocking traffic on a road at Yellowstone.

The guy in retreat was sufficiently impatient to get somewhere that he decided it was worth shaving a bit off his travel time to exit his car and try to taunt the largest animal in North America into moving.

Now they're both moving!

Without looking anything up, what's your best guess of the bison's weight (in pounds)?

_____

What are the reasons for your guess?

_____

_____

_____

_____

[3]

Payoffs: Step 2—Identify your preference using the payoff for each outcome—to what degree do you like or dislike each outcome, given your values?

I For one of the decision trees you made in "The Decision Multiverse" chapter, reorganize the possible outcomes in order of your preference.

Decision   *Potential outcomes*

2 What goals and values motivated your order of preference?

_____

_____

_____

_____

_____

3 Are any of the outcomes significantly better than the others?

_____

_____

_____

_____

_____

4 Are any of the outcomes significantly worse than the others?

_____

_____

_____

_____

_____

THE THREE PS CHECKLIST

When evaluating a past decision or making a new decision, refer to the **Six Steps to Better Decision-Making**:

☐ **Step I—Identify the reasonable set of possible outcomes.** These outcomes can be general scenarios or be focused on particular aspects of the outcomes that you especially care about.

☐ **Step 2—Identify your preference for each outcome—to what degree do you like or dislike each outcome, given your values?** These preferences will be driven by the payoffs associated with each outcome. Gains comprise the upside and losses comprise the downside. Include this information in your decision trees.

☐ **Step 3—Estimate the likelihood of each outcome unfolding.** As a start, use common terms that express probabilities. Don't be afraid to guess.

☐ **Step 4—Assess the relative likelihood of outcomes you like and dislike for the option under consideration.**

☐ **Step 5—Repeat Steps I–4 for other options under consideration.**

☐ **Step 6—Compare the options to one another.**

5

Taking Dead Aim at the Future: The Power of Precision

[1]

Lost in Translation: Now for the bad news about using terms that express likelihoods

Let's get back to Andrew and Michael Mauboussin's exhaustive list of terms that express likelihoods. They compiled that list so they could do a survey to find out what probabilities people have in mind when they use these terms.

1 On the next page, you will find the Mauboussins' survey and get a chance to take it yourself. You'll see that all the terms are listed there, next to four blank columns. Next to each of the terms, in the first column fill in the likelihood *you intend* that a future event will happen when you use each term. Express each probability as a percentage chance, between 0% and 100% of the time.

For example, what's the probability of an event occurring when you say, "I think there's a *real possibility* of that happening"? What percentage of the time would you expect that event to happen?

	You	Person A	Person B	Person C
Frequently				
Almost certainly				
Often				
Not often				
Slam dunk				
With low probability				
Probably				
Almost always				
Usually				
Maybe				
Real possibility				
Likely				
With moderate probability				
More often than not				
With high probability				
Unlikely				
Certainly				
Always				
Never				
Serious possibility				
Rarely				
Might happen				
Possibly				

2 Compare the four sets of answers. How much agreement was there? (Circle one.)

A lot   *A moderate amount*   *A little*   *Almost none*

3 Which terms had the biggest spreads between the lowest and highest probability?

_____

_____

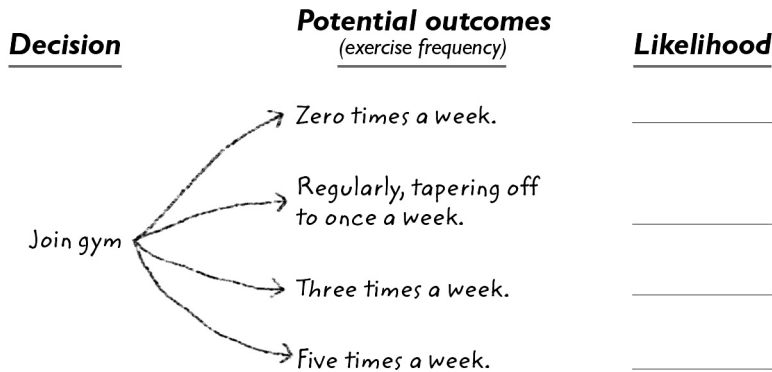**4** Did you find the amount of disagreement to be surprising?   *YES   NO*

[2]

Precision Matters: More clearly define the bull's-eye by making educated guesses

1 Make a similar conversion from natural language terms to probabilities expressed as percentages for the estimates you used in the earlier decision tree about joining Sweat Sensations.

Decision	Potential outcomes (exercise frequency)	Likelihood
	Zero times a week.	_____
Join gym	Regularly, tapering off to once a week.	_____
	Three times a week.	_____
	Five times a week.	_____

2 Did the probabilities add up to a sum over 100%? *Because these outcomes are exclusive of one another,* you should adjust the probabilities to make sure they don't. The total of the potential likelihoods doesn't have to total to *exactly* 100% because the set of possible outcomes is not exhaustive—*you're focusing on reasonable outcomes and not attempting to account for every possibility.*

Sure, there's a minute chance of an asteroid hitting Boston, or you winning the lottery and not having to work ever again, or you joining an underground political movement and becoming mayor of New Boston after Massachusetts secedes from the United States. But those types of outcomes don't really fit into the "reasonable" category, so it's not generally useful to include them in your decision-making process.

Because the list of possibilities shouldn't be exhaustive, the probabilities can total less than 100%. But by the same token, the probabilities of outcomes that are exclusive of one another also can't add up to more than 100%.

[3]

At Home on the Range

The Shock Test

1 Practice taking the shock test.

For each of the ten items below and on the next page, give your best bull's-eye estimate (your best educated guess if you were forced to guess an exact value) and set a range around that exact estimate representing the lowest and highest possible values you think the correct answer could be.

Remember, the goal is to set the narrowest range where you would be pretty shocked if the correct answer did not fall within that range.

One way to think about being "pretty shocked" is to shoot for capturing the correct answer within your upper and lower bound for nine out of the ten items. Notice that I did not say you are shooting for *at least nine* correct answers in your range. That would mean that getting all ten right would be part of the goal, which would encourage you to set ranges that are overly broad. It means that for each answer you are shooting for a 90% chance of capturing the correct answer.

Shooting for nine out of ten is a good rule of thumb for getting to that sweet spot between too broad and too narrow.

It's important to also remember that, to the extent you're at a different place on the continuum between no knowledge and perfect knowledge for different subjects, the distance between your upper and lower bound should reflect that. For example, if you don't know much about Meryl Streep but you know a great deal about Prince, you would likely have a broader range for item B below than for item C.

	Bull's-eye Estimate	Lower Bound	Upper Bound
a. The current population of the town in which you were born			
b. Meryl Streep's number of Academy Award nominations			
c. Prince's age at his death			
d. The first year Nobel Prizes were awarded			
e. The number of teams in the National Football League			

	Bull's-eye Estimate	Lower Bound	Upper Bound
f. The probability that a person in the U.S. lives in a city with a population above 1 million			
g. The number of people who voted for Abraham Lincoln in the 1860 presidential election			
h. The height of the tip of the Statue of Liberty			
i. The number of Billboard No. 1 singles by the Beatles			
j. The probability that the cause of death of an average adult in the United States will be heart disease			

2 How many of your ranges (out of the ten) included the correct answer? _____

3 Do you feel like you did a pretty good job of applying the shock test?   *YES*   *NO*

4 If yes, why?

_____

_____

If no, why not?

_____

_____

5 Which answer did you feel most certain of?

_____

Why?

_____

_____

Did the range you set reflect that?   *YES*   *NO*

Did that range include the actual answer?   *YES*   *NO*

6 Which answer did you feel least certain of?

_____

Why?

_____

_____

Did the range you set reflect that?   *YES*   *NO*

Did that range include the actual answer?   *YES*   *NO*

1 Take one of the decision trees you've already developed in this book and give your bull's-eye estimate for the likelihood of each of the potential outcomes and include a lower and upper bound around each bull's-eye estimate.

Decision	Potential outcomes	Likelihood	Lower bound	Upper bound

2 For the outcomes that had the widest ranges, what information could you seek out that would help you narrow down those ranges?

_____

_____

_____

_____

3 For the outcomes that had the narrowest ranges, what information could you seek out that would help you figure out if the range reflected overconfidence on your part?

_____

_____

_____

_____

4 Pick one of the outcomes. Imagine that you somehow discovered that the actual likelihood of that outcome occurring wasn't contained in your range. What do you think the reason(s) for that would be?

_____

_____

_____

_____

1 For each of the reasons you gave in your answer to question 4 in the exercise above, ask yourself if you could go find out that information right now. If so, go find it.

2 Did going through the process of asking yourself why you might be wrong cause you to re-calibrate any of your beliefs? Reflect on that here.

_____

_____

_____

_____

TAKING DEAD AIM CHECKLIST

Improve your estimates by taking dead aim in the following ways:

☐ Take the Mauboussins' survey on the meaning of common terms for probability.

☐ If you are uncomfortable making specific estimates, use the term that comes to mind and convert it to a specific bull's-eye estimate by referring to your answers from the survey.

☐ In addition, make a target estimate, comprising a range of the reasonable upper and lower bounds.

☐ Test the reasonableness of your upper and lower bounds with the shock test.

☐ Ask yourself, "What information could I discover that would make me change my mind?"

☐ If the information is available, go find it.

☐ If it isn't, keep an eye out for it in the future.

6

Turning Decisions Outside In

Relationship Chernobyl

You have a close, long-time friend who considers you their go-to for recounting their relationship woes. Whether they're meeting people through online dating, singles groups, or random meetups, everyone they date seems to be a weirdo or a jerk. You've lost track of the hours you've spent listening to your friend bemoaning their bad luck.

On the rare occasion when your friend declares, "Miracle of miracles, I found the last normal person on earth," the relationship inevitably meets a prolonged, messy end. "They turned out to be one of the worst ever. They were just good at concealing it, like a chameleon."

The next time you get together with them, they tell you their latest relationship tale.

"Do you remember Jordan, who got deployed to the Middle East and thought it would be better if we broke up? Get this: It was a lie. Yesterday, I saw Jordan buying socks at Target."

"I've given up on dating," they tell you for the umpteenth time. "I'm going to start looking for an exorcist instead, because I must be cursed."

Circle any of the items below that you are likely to be thinking to yourself during this conversation (but not necessarily saying out loud).

"Seems to me you might be picking jerks."

"Your luck is bound to turn around. I know you're going to meet the right person."

"Is there something about the way you behave in relationships that might bring out the jerkiness in your partners?"

"Wow, you have the worst luck in relationships!"

"Is it possible you're getting something out of all this drama?"

"Is there something about you that attracts people who turn out to be jerks?"

I Circle any of the items below that you are likely to say out loud to your friend.

"Seems to me you might be picking jerks."

"Your luck is bound to turn around. I know you're going to meet the right person."

"Is there something about the way you behave in relationships that might bring out the jerkiness in your partners?"

"Wow, you have the worst luck in relationships!"

"Is it possible you're getting something out of all this drama?"

"Is there something about you that attracts people who turn out to be jerks?"

2 If the items you circled that you would say out loud to your friend are different from the items you would think to yourself, why do you think that is?

_____

_____

_____

_____

3 In general, are you better at solving other people's
problems than you are at solving your own? _YES_ _NO_

If you answered yes, why do you think that is?

_____

_____

_____

_____

[3]

How to Be the Least Popular Guest at a Wedding

1 Describe a past situation in which a friend or family member or someone in a work situation was caught in the inside view.

_____

_____

_____

_____

2 Did you let them know?   *YES*   *NO*

3 Why or why not?

_____

_____

_____

4 Describe a past situation in which you feel like *you* got caught in the inside view.

_____

_____

_____

_____

5 In what ways did being caught in the inside view negatively affect your decision-making?

_____

_____

_____

_____

6 Take some time over the next few days to listen for people being trapped in the inside view. Note some examples and your overall impression based on spending some time listening for the prevalence and influence of the inside view.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

[4]

A Truly Happy Marriage:
The union of the inside view and the outside view

Base rates: An easy way to get the outside view

1 Go back to the estimates you made about the Sweat Sensations gym membership decision in chapter 4. Now take a few minutes to look up the following base rates and write your answers here:

What percentage of people who join a gym quit within the first half year? _____%

What percentage of gym memberships go completely unused? _____%

What percentage of gym members go to the gym once a week or less? _____%

If there was anything else you found in a few minutes of online searching relevant to the likelihood that joining a gym will lead to someone exercising regularly, note that here.

_____

_____

_____

2 Looking back at the tree with this base-rate information in mind, does that information change any of your estimates? If so, briefly explain why.

_____

_____

_____

Another way to the outside view: Actively find out what other people know

I Think about a problem that you've been grappling with. (Maybe it's a problem that motivated you to pick up this book.)

It could be retrospective, like why none of your relationships have worked out or why you keep having friction with your coworkers. Or it could be prospective, like where you should apply to college, the best way to meet the love of your life, if you should change careers, or which approach you should take to solve a particular sales problem.

Now take the time to do some PERSPECTIVE TRACKING.

Below are two columns. Use the space in the OUTSIDE VIEW column to describe your situation as best as you can entirely from the outside view. Use the INSIDE VIEW column to describe the situation from the inside view.

Notice that in the Perspective Tracking tool, you start with the outside view and *then* go to the inside view. Starting with the outside view gives you the best opportunity to anchor to what's true of the world in general or how other people might view your situation instead of too strongly anchoring to your own perspective.

Here are two tactics you might try in getting to the outside view:

(1) Ask yourself, if a coworker or friend or family member were to have this problem, how would you view their problem? How might your perspective differ from theirs? What advice might you give them? What kind of solutions would you offer?

(2) Ask yourself if there are any relevant base rates or information you could find about what's true of people in your situation in general.
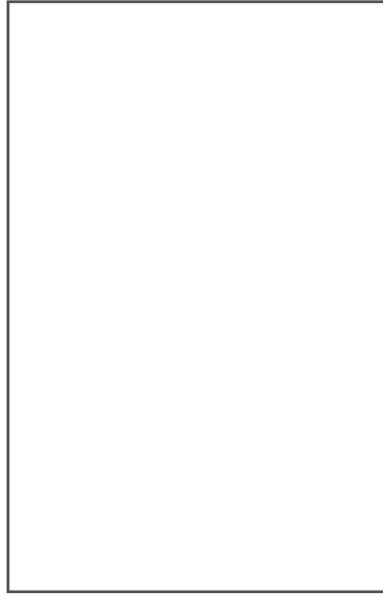
PERSPECTIVE TRACKER

OUTSIDE VIEW

INSIDE VIEW

2 Use the space below to marry the two narratives. Describe what you think is an accurate intersection of the two views.

3 Did this exercise change the way you view your situation?   *YES   NO*

If yes, why?

_____

_____

_____

_____

TURNING DECISIONS OUTSIDE IN CHECKLIST

☐ Describe your situation entirely from the outside view. The outside view should include (a) applicable base rates and (b) perspectives provided by other people.

☐ Describe your situation entirely from the inside view.

☐ Find the intersection of the outside view and the inside view to land on a more accurate narrative.

7

Breaking Free from Analysis Paralysis

HOW TO SPEND YOUR DECISION-MAKING TIME MORE WISELY

Estimate how much time you spend, in minutes per week, deciding each of the following:

	Minutes per week:
1. What to eat:	
2. What to watch on Netflix:	
3. What to wear:	

[1]

The Happiness Test:
When the type of thing you're deciding about is low impact

We're eating together in a restaurant and you're agonizing over what to order. You finally figure out what you want, you put in your order, and the waiter brings you your food. Maybe your food is great. Maybe it's just okay. Maybe it's not very good. Maybe it's even so bad you push your plate away in disgust.

1 I run into you *a year* later and ask, "How's your year been?" You might tell me it's been a great year, or an awful year, or something in between. Regardless of whether your year has been good or bad, imagine I then ask, "Remember that meal we had together a year ago? How much of an effect did the food you ate that night have on your happiness over the past year?"

Give your answer below, on a scale of 0 to 5, where 0 is "no effect" on your happiness over the course of the year and 5 is a "massive effect" on your happiness.

No effect at all   *0*   *1*   *2*   *3*   *4*   *5*   *Massive effect*

2 Now let's say I run into you *a month* after the meal and ask the same question. On a scale of 0 to 5, how much of an effect did the food you ate that night have on your happiness over the course of that month?

No effect at all   *0*   *1*   *2*   *3*   *4*   *5*   *Massive effect*

3 Now let's say I run into you *a week* after the meal and ask the same question. On a scale of 0 to 5, how much of an effect did the food you ate that night have on your happiness over the course of the week?

No effect at all   *0*   *1*   *2*   *3*   *4*   *5*   *Massive effect*

Faster than fast: when options repeat

1 Identify a type of decision you're currently struggling with and/or have struggled with in the past that you now realize is low impact because it passes the Happiness Test.

_____

_____

_____

_____

Do you think you could speed up that decision? How?

_____

_____

_____

_____

2 Identify up to five more decisions that you've agonized over in the past that pass the Happiness Test. At least one of those should also be an option that quickly repeats.

_____

_____

_____

_____

_____

[2]

Freerolling: Deciding fast when the downside is slim to none

I Identify a decision you're currently considering and/or have considered in the past that qualifies as a freeroll—a decision where there is mostly upside and limited downside—on which you've taken a long time deciding.

_____

_____

_____

Do you think you could speed up that decision? How?

_____

_____

_____

_____

2 Identify some additional past decisions that qualify as freerolls.

_____

_____

_____

_____

_____

[3]

A Sheep in Wolf's Clothing:
High stakes, close calls, fast decisions

You have a week of vacation time next year and you've decided to take a big trip. You've already narrowed it down to two destinations, Paris or Rome. (If you have a pair of favorite or bucket-list destinations, ones you've never been to before, substitute those in this thought experiment.)

1 How difficult would it be, on a scale of 0 to 5, once you've narrowed your decision to Paris or Rome (or two other destinations you consider highly desirable), to choose between them?

Not difficult at all   *0*   *1*   *2*   *3*   *4*   *5*   *Extremely difficult*

2 I run into you in a *year* after your vacation and ask, "How's your year been?" Maybe you tell me it's been a great year, or an awful year, or something in between. After you tell me, I ask, "On a scale of 0 to 5, how big an effect did that vacation have on your happiness over the year?"

No effect at all   *0*   *1*   *2*   *3*   *4*   *5*   *Massive effect*

3 I run into you in a *month* after your vacation and ask, "How's your month been? On a scale of 0 to 5, how big an effect did that vacation have on your happiness over the month?"

No effect at all   *0*   *1*   *2*   *3*   *4*   *5*   *Massive effect*

4 I run into you in a *week* after your vacation. "On a scale of 0 to 5, how big an effect did that vacation have on your happiness during the week immediately following it?"

No effect at all   *0*   *1*   *2*   *3*   *4*   *5*   *Massive effect*

Breaking through the deadlock: The Only-Option Test

I For the next week, practice applying the Only-Option Test whenever you're at a restaurant. Look through the menu and figure out which items you'd be happy with if they were your only option. After sorting the menu in this way, decide among the options that pass the Only-Option Test by flipping a coin. Use the space below to reflect on how that feels.

[4]

Quitters Often Win, and Winners Often Quit:
Understanding the power of "quit-to-itiveness"

Think about a high-impact decision that you've been struggling with. Alternatively, think about a high-impact decision that you struggled with in the past. Evaluate that decision using the mental model of quit-to-itiveness.

1 Briefly describe the decision and your main options.

_____

_____

_____

_____

_____

_____

2 What are/were the costs, after choosing an option, of quitting and making a different choice?

_____

_____

_____

_____

3 Is/was this potentially a two-way-door decision with a manageable cost to quit?   *YES   NO*

4 If yes, what is/was the cost to quit?

_____

_____

_____

_____

5 If no, what are some ways you could decision stack, putting lower-cost decisions in front of the one-way-door decision, giving you an opportunity to gather information for the later decision?

_____

_____

_____

_____

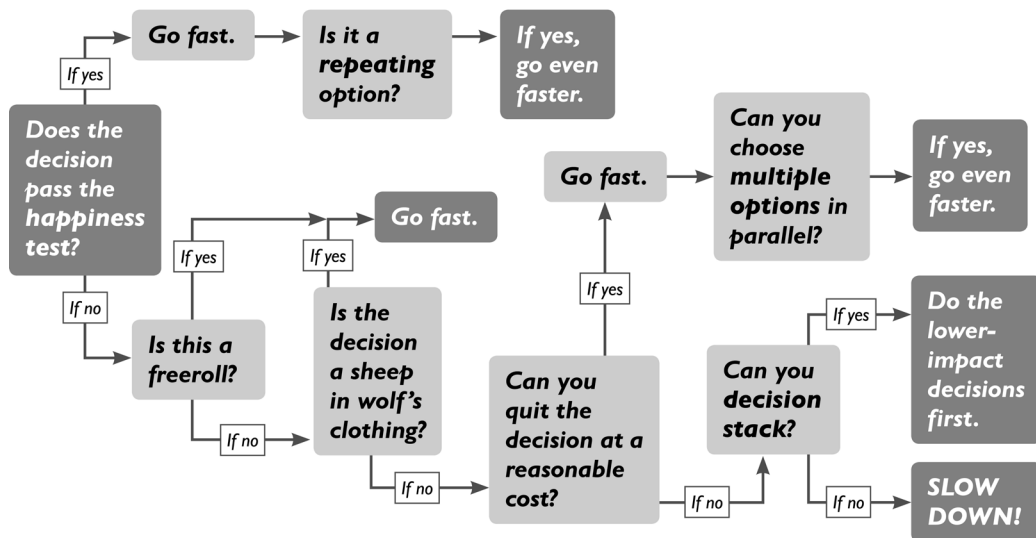**6** For this decision, describe ways in which you could exercise options in parallel, if possible.
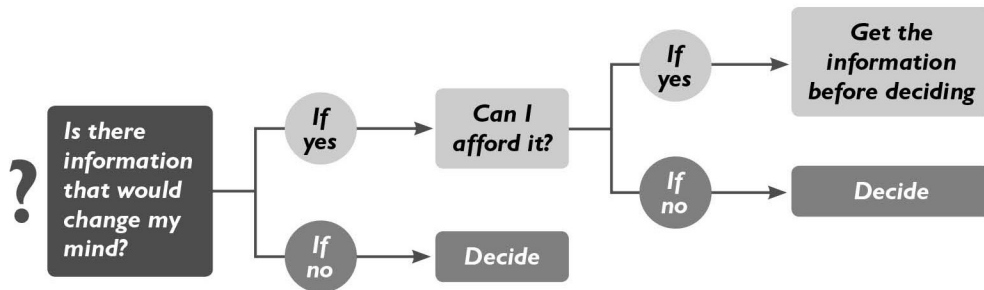
_____

_____

_____

_____

HERE IS A SIMPLE flow chart that captures the ideas offered in this chapter about how to manage the time-accuracy trade-off:

HOW FAST CAN I GO?

BREAKING FREE FROM
ANALYSIS PARALYSIS CHECKLIST

To determine whether you can decide faster, ask yourself the following questions:

☐ Does the type of thing you're deciding about pass the Happiness Test? If yes, go fast.

☐ Does it pass the Happiness Test *with* repeating options? If yes, go even faster.

☐ Are you freerolling? If yes, go fast in seizing the opportunity but take time in the execution.

☐ Is your decision a sheep in wolf's clothing, with multiple options that pass the Only-Option Test? If yes, go fast, even flipping a coin to make your choice.

☐ Can you quit your choice and pick a different option at a reasonable cost? If yes, go fast. If no, can you decision stack?

☐ Can you exercise multiple options in parallel? If yes, go fast.

☐ Is there additional information (available at a reasonable cost) that would establish a clearly preferred option or, if there is already a clearly preferred option, change your preference? If yes, go find it. If no, decide.

8

The Power of
Negative Thinking

Take a moment and think about some beliefs you held ten or more years ago that you would have defended vehemently at that time, but that now, looking back, you realize weren't so solid.

I List up to five of those beliefs.

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

2 Now take a moment to think about beliefs you hold today that you would defend vehemently. Of those, list up to five beliefs that you think are good candidates for, in ten or twenty years, looking back and realizing weren't so solid.

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

3 Which did you find easier: identifying beliefs that you held in the distant past that you now don't consider so solid, or identifying beliefs you hold today that are candidates for doubting in ten years? (Circle one.)

Beliefs from ten years ago   *Current beliefs, in ten years*

[2]

Premortems and Backcasting: Whether you deserve an autopsy or a parade, you should know why *in advance*

Premortems: An autopsy *before* the patient dies

1 Pick a goal you have or a specific decision you're currently considering.

_____

_____

2 What is a reasonable time period for achieving the goal or having the decision play out?

_____

Imagine it's just after that period of time and things haven't worked out. Why?

3 List up to five reasons why this happened because of your decisions and execution.

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

4 List up to five reasons why this happened because of things outside of your control.

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

5 Did the premortem identify any obstacles
you hadn't identified before? (Circle one.)   *YES   NO*

Backcasting: Sharing the secret of your success . . . with yourself

Using the same goal or decision that you used for the premortem, imagine you have succeeded and ask yourself why that happened.

1 List up to five reasons why you succeeded because of your decisions and execution.

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

2 List up to five reasons why you succeeded because of things outside of your control.

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

Turning premortems and backcasts into a Decision Exploration Table

I Use the Decision Exploration Table below to record the output of the premortem and the backcast you just performed. Add an estimate of likelihood of each item occurring.

DECISION EXPLORATION TABLE

	FAILURE (premortem)	%	SUCCESS (backcast)	%
SKILL (in your control)	1.		1.	
	2.		2.	
	3.		3.	
	4.		4.	
	5.		5.	

	FAILURE (premortem)	%	SUCCESS (backcast)	%
LUCK (outside your control)	1.		1.	
	2.		2.	
	3.		3.	
	4.		4.	
	5.		5.	

[3]

Precommitting to Your Good Intentions: Making a U-turn on the "road to hell"

I Using the Decision Exploration Table you just created, list up to three precommitments you can make to physically prevent yourself from acting contrary to your plans, or precommitments that will raise or lower barriers to decisions you want to discourage or encourage for yourself (or your team).

1. _____

   _____

2. _____

   _____

3. _____

   _____

[4]

The Dr. Evil Game: Outthinking the evil genius making sure you fail (P.S. The evil genius is you)

1 For the goal you considered in your Decision Exploration Table, list up to three ways Dr. Evil can make you fail. The justification for each decision must be sufficiently reasonable that someone from the outside looking in would be unlikely to question it if they didn't see the decision in the context of other, similar decisions.

1. _____

_____

2. _____

_____

3. _____

_____

2 Describe at least one category decision you can make as a precommitment to keep yourself out of these repeated "onetime" situations.

_____

_____

_____

_____

_____

_____

[5]

The Surprise Party No One Wants:
When your reaction to a bad outcome can make things worse

1 Go back to your Decision Exploration Table and pick one of the ways bad luck might inter-
vene. Use the space below to create a precommitment to how you'll react to that bad luck.

_____

_____

_____

_____

_____

_____

_____

_____

_____

[6]

Deflecting the Slings and Arrows of Outrageous Fortune: "If you can't beat 'em . . . mitigate 'em"

1 Using your premortem from the Decision Exploration Table, pick one of the ways you iden-
tified that luck can interfere with your plans.

_____

2 Explain how you might mitigate the effect of that bad luck with a hedge.

_____

_____

_____

THE POWER OF
NEGATIVE THINKING CHECKLIST

Attempt to improve your likelihood of success for a goal you set or a decision that involves future execution by doing the following:

☐ Conduct a **premortem** by (a) figuring out a reasonable period for achieving the goal or for the decision playing out; (b) imagining it's the day after that period and you didn't achieve the goal or the decision worked out poorly; (c) looking back from that point in the future and coming up with reasons why you failed, divided into "skill" (within your control) and "luck" (outside your control).

☐ Conduct a **backcast** by going through the same exercise but imagining you achieved the goal or succeeded with the decision.

☐ Combine the output of the premortem and backcast in a **Decision Exploration Table**, including an estimate of the probability that each item in the table will happen.

☐ Ask whether you should modify your goal or change your decision based on the output of the premortem and backcast.

☐ Determine whether there are any **precommitment contracts** you can create to reduce the chances of making bad decisions and increase the chances of making good ones.

☐ Plan ahead for how you'll proceed if any of the reasons for failure you identified through a premortem happen.

☐ Play the **Dr. Evil game** to determine how you might fall short of your goal by making future decisions that are individually justifiable but in aggregate will cause you to fail.

☐ Consider adopting **category decisions** that will reduce the chances you make Dr. Evil decisions.

☐ Assess what you can do to **hedge** against the impact of bad luck.

9

Decision Hygiene

IF YOU WANT TO KNOW WHAT SOMEONE THINKS, STOP INFECTING THEM WITH WHAT YOU THINK

Over the next several days, conduct the following experiment: Think about something happening in the world that most people will be pretty well aware of and ask for their opinions. It should be something on which people are likely to have a range of views. It might concern a news development, a political issue or candidate, or even something in popular culture like a recent movie or TV show.

1 Pick the topic you're going to ask about. Use the space below to write down your opinion on the matter prior to asking anybody else for theirs.

_____

_____

_____

_____

_____

_____

2 For half the people, when you ask for their opinion, tell them your opinion before they give you theirs. This is likely what you naturally do. For example, if you were asking somebody what they thought of *Forrest Gump*, you might say, "I don't think it should have won the Best Picture Academy Award or received its level of lasting critical acclaim and importance. What do you think?"

Ask at least three people and make a note of their opinions.

Among the people in this group (including you), how much agreement was there on the matter?

Very little agreement   *0*   *1*   *2*   *3*   *4*   *5*   *Lots of agreement*

3 For the other half of the people, ask for their opinion without giving your opinion first. If you were asking about *Forrest Gump*, you might say, "What do you think about *Forrest Gump*?"

Ask at least three people and make a note of their opinions.

Among this group (including you), how much agreement was there on the matter?

Very little agreement   *0*   *1*   *2*   *3*   *4*   *5*   *Lots of agreement*

4 Compare the amount of agreement in the first group with the amount of agreement in the second group. Was there a difference? (Circle one.)

There was more	*There was more*	*There was the same*
agreement in the	*agreement in the*	*amount of agreement*
first group	*second group*	*within the groups*

5 Did anybody in the second group ask for your opinion before they were willing to give their answer? In other words, did anyone ask, "What do you think?" before they gave their answer. (Circle one.)   *YES*   *NO*

[1]

"Two Roads Diverged": The beauty of discovering where somebody else's beliefs differ from your own

While making small talk at a cocktail party, you run into someone who believes the earth is flat. Obviously, you say, "That's not true. The earth is round."

"No," they say, "I used to assume like everybody else that the earth was round. But I've studied this scientifically." They proceed to give you what they consider their best arguments about why the earth is flat (or why there isn't sufficient proof otherwise).

1 Without looking up anything on the internet, use the space below to write down the scientific arguments for why the earth is round off the top of your head. Remember, the parental fallback ("Because I said so") or the equivalent ("Because all scientists say so") isn't an option. "Because I've seen the pictures" is also not an option unless you can explain how you can tell if a picture is doctored or not.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

2 On a scale of 0 to 5, how would a neutral third party rate the quality of your counterarguments?

Awful   *0*   *1*   *2*   *3*   *4*   *5*   *Terrific*

3 If you're like most people, your arguments off the top of your head weren't that strong. Now, take the opportunity to look up the top three scientific reasons for why the earth is round and summarize them here.

_____

_____

_____

_____

_____

_____

_____

4 After doing that research, do you feel that you better understand why it is that you know the earth is round? (Circle one.)   *YES   NO*

[4]

Spin Doctrine: Checklisting the relevant details and being accountable to provide them

Develop a checklist of information that needs to be shared for a decision you repeatedly make in your work or personal life. You can do this individually or as a team exercise.

1 Write down a personal or professional decision that comes up repeatedly.

_____

_____

_____

_____

2 If someone came to you and asked for feedback on a decision of that type, what are the things that you would need to know to be able to give high-quality feedback?

Use the space below to provide a comprehensive list of the information you would need to give high-quality feedback about the best course of action. Start the list with your goals, what you value, and your resources.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

DECISION HYGIENE CHECKLIST

When you're seeking feedback from others, exercise good decision hygiene in the following ways:

☐ Quarantine others from your opinions and beliefs when asking for feedback.

☐ Frame your request for feedback in a neutral fashion, to keep from signaling your conclusions.

☐ Quarantine others from outcomes when asking about past decisions.

☐ If you're asking for feedback involving multiple outcomes, iterate the feedback.

☐ Explain the form of the output you're seeking.

☐ Prior to being in the midst of a decision, make a checklist of the facts and relevant information you would need to provide feedback for such a decision.

☐ Have the people seeking and giving feedback agree to be accountable to provide all the relevant information, asking for anything that has not been provided, and refusing to give feedback if the person seeking feedback can't provide relevant information.

When you're involved in a group setting, exercise the following *additional* forms of decision hygiene:

☐ Solicit feedback independently, before a group discussion or before members express their views to one another.

☐ Anonymize the sources of the views and distribute a compilation to group members for review, in advance of group meetings or discussion.