

CHAPTER 2

BECOMING ATTUNED

Breaking Down the Barriers to Serendipity

Life is what happens to us while we are making other plans.

ALLEN SAUNDERS, AMERICAN WRITER, JOURNALIST, AND CARTOONIST

Today is your birthday. To your dismay, you have to attend a work event. Around sixty people from across your industry are coming together for broad-ranging conversations. At the event you listen to a number of talks, many of which turn out to be not as exciting as you had hoped they would be. You think, “I can’t believe I’m spending my birthday at work—I’m the only one here who has to spend their birthday at this place.” But what if you aren’t?

Each term, as part of my teaching I play a game with my incoming students. I ask them, “What do you think is the probability that you have the same birthday as at least one other person in this room of sixty people?”

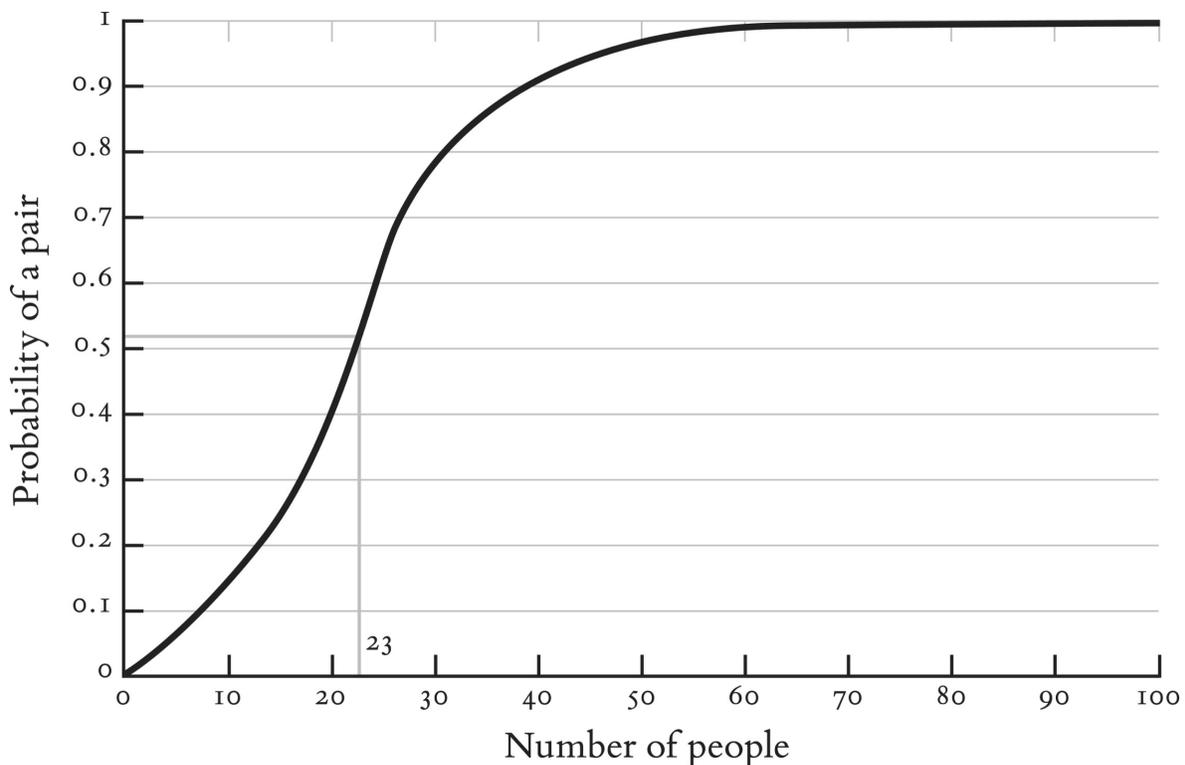
Usually, the students estimate anywhere between 5 and 20 percent. That makes sense—there are around 365 days in the year, and so logically, our tendency is to divide 60 (people) by 365 (days). So essentially, this reasoning offers a very low probability that there are two people in the room that have the same birthday.

I then ask each student to briefly state the day and month of their birthday. I ask the other students to shout out “here!” whenever they hear their own birthday. Students usually are shocked when after approximately ten or so students having announced their birthday to the class, the first “here!” daringly comes out of a corner.

Then another one, and another one. In most sessions of around sixty students, I’ve been surprised to find that three to six birthday

pairs emerge.

How is this possible? Is it magic? No, it's pure statistics. It is an exponential rather than linear problem: Each time a student mentions their birthday, there are many potential "pairs" that could happen. Student No. 1, for example, has fifty-nine other people who could potentially have the same birthday as they do; student No. 2 still has fifty-eight potential people with the same birthday (assuming the first one had a different birthday), and so on. And when we add together all of these potential pairs that could happen, we end up with what's known as the *birthday paradox* (see figure below).



The paradox states that at twenty-three people there is already a 50 percent (!) chance that two people in a random sample have the same birthday (as there are 253 "chances" or potential pairs).¹ Even more astonishing, already at seventy people it is almost certain (a 99.9 percent probability) that two people have the same birthday. (As someone who had to repeat a year in high school because of my suboptimal mathematical prowess, it did take me a while to grasp this. But it's true.)

What does this insight tell us—apart from the fact that you will most probably not be the only birthday celebrant at that industry conference?

It's proof that we often underestimate the unexpected because we think linearly—often “according to plan”—rather than exponentially (or in contingencies). But the unexpected happens all the time, even if we are either surprised when we see it, or if we don't see it at all.

Everything from the most life-changing turnaround experiences to the small improvements in life is possible once we realize that every day, every second, serendipity could happen.

As I discuss below, our natural and learned ways of thinking tend to obscure serendipity, making it harder to spot and even harder to harness. The biggest barriers to serendipity are our preconceptions of the world, the biases that often unconsciously direct our thinking and close down the possibility of serendipity. And if you don't think you have any, well that might well be your biggest preconception.

Our biases can blind us to serendipitous moments when they occur, and they can even make us misinterpret serendipity that has already happened.

When asked to explain their success, many people will describe their hard work and careful planning—the long-term vision and strategy that inexorably led to glory. Sometimes this is accurate, but often it is not. The key turning points in life often are moments of serendipity (or sometimes even just blind luck) that were reinterpreted after the fact, like when you present your CV to a potential employer as a very clear journey from A to B.

These biases are often useful and have evolved for sound reasons—it is impossible to function in a world that we perceive only as random chaos. And it is impossible to capture all the complexity that defines social interactions. But our ability to step outside these biases and preconceptions is what has allowed our species to make its greatest leaps forward, and it is what allows individuals or organizations to take their own giant steps.

These biases come in many forms, but there are four basic ones that are major obstacles to serendipity and that we need to overcome—or at least recognize—to be able to effectively cultivate serendipity. Their names are a little bit technical, but what they signify is fascinating: *underestimating the unexpected*; *conforming to the majority*; *post-rationalization*; and *functional fixedness*.

We Underestimate the Unexpected

A friend at school used to be fond of saying, “It’s very probable that something improbable will happen.” It sounded mysterious at the time, and only over the years have I started to truly understand what he meant.

The unexpected, the unlikely, and indeed the downright extraordinary happen all the time. What matters is whether we spot them and whether we grasp them and nurture them when they can be useful.

I have taught a negotiation class in which one of the exercises involves the owner of an independent gas station aiming to sell it to a large oil company. The negotiation is set up in such a way that if the two parties stick with their initial position, there is no deal possible. The company can pay up to \$500,000 for the station but the brief states the owner’s minimum demand is \$580,000. Theoretically, there is no bargaining zone, no potential outcome that both parties could accept if they stick to their positions.

I then ask students—both those playing the station owner, and those playing the company representative—to let go of their positions and to be open to capturing the real underlying needs and interests.

Once the oil company representative starts asking questions about *why* the owner feels they need \$580,000, something unexpected often happens: The station owner mentions that their dream is to retire and go sailing with their partner, and that this is the amount that they think they will need to do that.

At this point students often say something along the lines of, “Oh, I didn’t expect that. We could provide you with gas for your journey and put our name on your sails. We actually wanted to do more sponsorships like this!”—or other potential unexpected ideas that are cheap to the company but valuable to the owner.

Once you see the underlying interests come to the fore, unexpected ways emerge on how you can resolve the situation. (This comes more intuitively to students who are in a win-win mindset, and thus assume that there might be solutions that could benefit

both sides; students who start with the mindset of “I win, you lose” often take longer to identify that there are ways of “increasing the pie” that benefit both. The ones with a win-win mindset are often able to build trust and exchange information about the actual underlying interests, and they can prioritize more effectively than those that assume that a benefit for one means a loss for the other.)

There are many implications here for improving one’s negotiation strategy, but what is important to recognize is that many of us will not “see” the unexpected because we don’t realize it’s there. What was an artificial—and expensive—price tag that the station owner asked for (and that we might take for granted), obscured their real underlying interest—and other, even more exciting possibilities emerged once their real interests were articulated.

This insight is particularly important in areas such as business negotiations: an employee negotiating for a new job or a prospective homeowner trying to buy their first house. In these situations, often unexpected dots need to be connected in order to find a mutually agreeable solution. But it goes far beyond that, and once we start to connect the dots in hindsight, we can see that the unexpected shaped much of our life, from how our career evolved to how we met our life partner.

Each of us has structured a biased view of the world that we consider “typical,” the kinds of things that we expect to happen. As a result of this bias, “the expected” is what we tend to see. But what if we could broaden the range of what we expect? Then, increasingly we will see the connections and come to understand that unlikely things are happening all around us, just waiting for us to take advantage of them.² This is a central part of developing our serendipity mindset.

If you think about it, you will realize that we all actually do look out for the unexpected every day, but generally only as a defense mechanism. When we use a pedestrian crossing on a busy road, we expect the cars to stop at a red light. But most of us do not take that entirely for granted. Even when the light turns red and we step out into the road, we turn half an eye to the traffic, because we also know that occasionally a driver will not stop at a red light. In a situation like this, our field of vision is broader than usual and we are looking out for the unexpected, because we know that missing it could be fatal.

Imagine if we applied the same approach to the positive—keeping a broader field of vision and being alert to the unexpectedly good or useful things that might happen.

British psychology professor Richard Wiseman conducted a fascinating experiment about self-perception: He found people who identify as either “extremely lucky” or “extremely unlucky,” and he tested how they perceive the world.³ In one experiment, he selected two participants: Martin, who considers himself lucky, and Brenda, who considers herself unlucky (for example, she had the feeling that often bad things happen to her).

The research team asked both participants to walk down a street toward a coffee shop (separately from each other), go into the coffee shop, buy a cup of coffee, and sit down. Hidden cameras in the street leading up to the coffee shop as well as in the coffee shop itself filmed them.

The researchers placed a five-pound note on the pavement directly outside the entrance to the coffee shop, so that the participants would need to step over it. They also rearranged the coffee shop to only have four large tables, placing one person at each of these four tables: Three of them were actors, and one of them a successful businessman. The successful businessman was sitting close to the coffee counter. The four individuals were briefed to interact the same way with both participants.

Can you guess the outcome?

Martin—the lucky person—walked up the street, recognized the five-pound note, picked it up, and went inside. He ordered a coffee and sat down next to the businessman. He started a conversation and made friends with him.

Unlucky Brenda, on the other hand, failed to spot the five-pound note. She, too, sat down next to the successful businessman, but remained silent until the end of the experiment.

When Wiseman’s team asked the two later how their day had been, they received two very different responses: Martin described how it had been a great day, that he found a five-pound note and got into a great conversation with a successful businessman (it’s unclear if there was a follow-up positive outcome—but if there was, that wouldn’t be unexpected at all). Brenda, unsurprisingly, said it had been a completely uneventful morning.

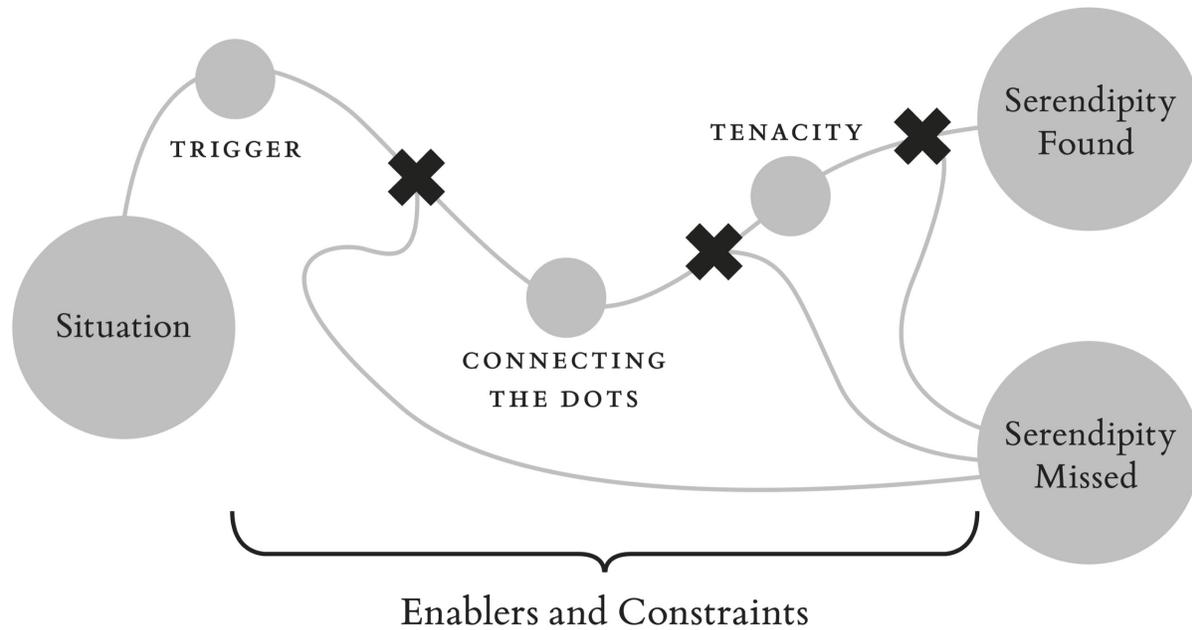
Both participants were presented with exactly the same potential opportunities, but only one of them “saw” them.

Openness to the unexpected is key to being lucky—and to experiencing serendipity. People like Martin are lucky all or most of the time for a number of reasons, but among the most important ones is their ability to recognize the unexpected. This makes the unexpected more likely to be harvested—not necessarily because it happens more often, but because we start seeing it once we start expecting to see it. It can make us luckier even if we face exactly the same situation that others do.

Haven’t we all had serendipitous happenings in our lives that we remember? Perhaps when we met our partners, when we got this unexpected job, when we came up with that random idea, or when we got that investment? But what about all the occasions on which we might have overlooked serendipity, or narrowly missed out on it?

Think back to that person in the coffee shop who accidentally spilled coffee on your pant leg. On second thought, they were kind of cute, weren’t they? Maybe they were interested, too . . . but no one acted on that spark. No contact details were exchanged to “send over the dry-cleaning bill.” A lot could have happened there, but in the end nothing did. (Later in this book we will return to the question of what we can learn from *counterfactuals*, the potential “alternative life stories” that could have unfolded instead.)

The figure illustrates how we can miss serendipity if we don’t appreciate the serendipity trigger, don’t connect the dots, and don’t have the tenacity to follow through.⁴



How can we avoid missing serendipity? There are a number of strategies you can use (which we will explore later). For now, let us take a look at an office furniture producer based in Salt Lake City that aimed to use serendipity to its advantage. Researchers Nancy Napier and Quan-Hoang Vuong assessed the results.

When an executive at the company first put forward the proposal to look at serendipity as something to be cultivated, it was met with skepticism. But despite the doubts, the company’s executives agreed to spend thirty minutes every two weeks trying to identify unexpected information they had encountered, discussing how they had noticed and evaluated it, and then deciding what could be done to take advantage of it.

During the first two months of the study, the researchers found at least six major examples of “serendipity gained” at the company. The researchers concluded that as the executives “have begun to calculate the economic impact [of spotting serendipity], their skepticism about the rather fuzzy notion has dissipated.”⁵ This experiment trained the executives to be more alert to unexpected information, and they began to find and grasp information that they might have previously dismissed or simply not spotted at all. For example, the company was launching a new product, and as usual had some market analysis carried out. In the process, the executives discovered unexpected information suggesting that their approach to setting the price might

be inaccurate. Missing—or ignoring—this information could have been a costly mistake.

People who are aware of the unexpected—like the executives in the examples of this furniture producer and Haier—are open to serendipity because they are already in the state of mind of looking out for the hidden value in unexpected data and events. Consequently, senior leaders such as Anand Mahindra, the CEO of one of India’s largest companies, Mahindra Group, ponder about installing “serendipity spotters” across the organization.

An industry dinner is coming up. What do you expect? The same as usual? To be sat next to a boring individual, half listening to his dull conversation while wondering how early you can leave without offending anyone? If that is all you expect, it is more likely that that is all you will get.

Are You Self-Censoring?

There are good reasons many of us may have a tendency to conform to the majority. Consensus is safety. And large numbers of individuals can make surprisingly accurate decisions—often better than the smartest people among them would. Daniel Martin Katz and his colleagues used the data of FantasySCOTUS—where since 2011 over five thousand everyday people have made over six hundred thousand predictions about the results of over four hundred decisions of the U.S. Supreme Court—to show that the “wisdom of the crowd” can robustly and accurately predict decisions of the nation’s highest court.⁶

Or take forecasts. Forecasts for complex systems, from the weather to the economy, are often wrong and are almost always wrong in the detail. But a crowd of forecasters is often more likely to be right than one individual.⁷

But what about the maverick, the genius—the forecaster who correctly predicts an extraordinary event that everyone else missed? Well, people who successfully foresee one unusual event tend to have a poor record of success when all of their forecasts are considered. In other words, one terrific forecast does not a seer make.

Research by behavioral scientists Jerker Denrell and Christina Fang shows that those whose predictions were most in line with conventional wisdom were the ones who were most accurate overall: Consensus is indeed more likely to be right. It is a rash person who dismisses the wisdom of crowds and follows the maverick unthinkingly. However, the pressure to conform to the majority view can kill serendipity, especially if it makes us ignore or look down on life's unexpected encounters, or if politics or unhealthy group dynamics take over.⁸

In fact, the insight that groups tend to make better decisions changes when individuals are not acting independently, but influence each other strongly (like in many company boardrooms)—then, decisions tend to become worse than those of independent individuals. This herd mentality can kill serendipity. So ignoring the majority carries some risk, but we should always question the majority view. Many of us *self-censor*, dismissing or burying thoughts or ideas, because we fear that our idea or discovery might not fit the respective context or existing beliefs.

Whenever I visit a new company or community for a consulting project, I do what I call the “watercooler test.” I sit down somewhere where people talk openly—be it the cafeteria, the kitchen area, the coffee shop, or the actual watercooler—and pretend to work on my laptop. What I'm actually doing is listening in on people's conversations.

On occasion, conversations will go something like this: “Lilly brought up this strange idea again. I don't think she understands what's going on. We've always done things this way so why should we change anything?”

Often, after listening to a few conversations, a pattern emerges: People tend to talk about what went wrong in a given situation. In these work cultures it is more difficult to share an idea or insight as tomorrow, you might be the one being talked about.

But even when we do share our insights or ideas, we may be afraid to admit that they came to us in an unconventional way. Many valuable discoveries are later made to appear as if they were purposeful and rational from the beginning so as to not rock the boat or open ourselves up to the criticism that we might not have gone through a rigorous substantiation process.⁹

This brings us to the next of our obstacles to serendipity: post-rationalization.

The Gift (and Perils) of Hindsight

How do we make sense of something after it's happened? We employ what experts call "post-rationalization." Post-rationalization is about how we think about the past. To understand its power and risks, let's start by looking at how we think about the future.

Forecasts for complex systems are often wrong, at least in the detail. But sensible forecasters are well aware of the limitations of their work, and the degree to which forecasts differ from actual outcomes. Forecasts for the sales of fast-moving consumer goods such as beverages or toiletries, film box-office revenues, and company growth often have error rates of 50 to 70 percent, and so are off by millions of dollars.¹⁰

The reasons for this are apparent: Most systems and situations are too complex to model every detail accurately. To make matters worse, we cannot hope to understand the butterfly effect—small changes that over time have larger consequences.

Plans are, in effect, forecasts. They outline what we will do, the targets of achievement we expect to hit, and the consequences and actions that we will take. Add to that the social dynamics of a workplace, the honest mistakes people make, and unexpected events, and the actual outcomes often turn out very differently from those that were expected.¹¹

And just as with forecasting, research shows that plans such as business plans rarely explain success. Seminal work in management and economics has shown that up to 50 percent of success is what experts call "unexplained variance"—in other words, it simply cannot be explained by the factors that management and economics textbooks traditionally focus on.¹²

So how does all of this relate to the past, to post-rationalization?

The point is that when we construct our story of past events, we do what forecasters do: We create a model and ignore the details and

the random events. Forecasters have a good excuse for doing this with the future: They cannot model every detail, and, by definition, cannot foresee unpredictable events. But what is our excuse for doing this with the past?

Post-rationalization is closely linked to what's known as "hindsight bias"—the common tendency for people to perceive events as having been more predictable than they actually were. We downplay or exclude the unpredictable events from our version of the past because random events that happened are no longer unpredictable. In fact, in hindsight they can start to look like they were inevitable. We then use information that wasn't available to us at the time, and construct narratives that conveniently explain everything, including how each piece of the story logically connects with the rest of the story.¹³

In our need for control, we tend to look at the world as more explainable than it is. We want to see patterns in everything. Have you ever seen the Man in the Moon? Well, others have seen the Virgin Mary in grilled cheese sandwiches.

Our minds respond to a stimulus—such as a sound or an image—by looking for a familiar pattern or for an identity we know. Often we find one when none is there—a phenomenon known as "pareidolia." People have heard indistinct voices in the whir of fans or air conditioners, they have interpreted hidden messages in music played backward or at lower-than-normal speeds, and some see faces of animals in cloud formations.¹⁴

From an evolutionary perspective, this makes sense: Our unconscious processing accelerates the process of recognition and decision making to give us an edge, the opportunity to attack preemptively, or escape more immediately.

We all recognize this tendency in ourselves when it comes to visual images. But, in fact, it goes deeper. The larger phenomenon behind this is called "apophenia," our tendency to attribute meaning to patterns or perceived connections that are unrelated.¹⁵

One of the most intriguing examples of this comes from an experiment carried out by behavioral psychologist B. F. Skinner. In Skinner's experiment, a hungry pigeon was placed inside a box. Then food pellets were released into the box at entirely random intervals.

Obviously, the pigeon had no way of predicting when the pellets dropped, and no way of causing it.

But the pigeon began to behave as if it could. If it received a food pellet while performing some kind of action (e.g., walking in a circle, turning its head to one side), it then started repeating that action it had performed before, until the next pellet appeared.

The pattern in which pellets were falling was entirely random, but the pigeon began acting as if it was a predictable event over which it could exercise some control.

This matters for serendipity because our tendency to seek recognizable patterns or identities can obscure the significance of random events. It can even lead us to creating rigid formulas for success when there is no real underlying mechanism to support them.

Put bluntly, if we airbrush serendipity out of our history, we make it far harder to spot when it happens again. This is particularly important given that serendipity is a process rather than a singular event, and it often has a long incubation period. We might not always be willing or able to track it back to the moment where it “started.” Instead, we try to make sense out of what just happened and usually tell only half of the story. Or often even a completely different story.

Creating a story can be constructive as it helps provide a focus for future progress, but if we are to learn from it, it has to be an honest one, interrogated properly, and open to reassessment.

That also plays a role in how organizations operate. Take senior executives, who often narrate milestones or decisions as if they were all planned from the beginning in order to satisfy expectations. The CEO of one of the world’s most successful companies told me how this has a lot to do with investors and employees, who might not appreciate him saying, “Well, this was luck, or this was unplanned”—because it feels dependent and coincidental.

It makes him and his colleagues feel that they should say something along the lines of “Well, of course, this was our goal, we had this in mind already, all the time.” Why? “Because that story sells, that is the story investors want to hear. I’m pushed to the so-called ‘official story,’ because it feels like you are totally in control. But I’m almost ten years CEO, and I can tell you I’m not always in

control. It doesn't always feel good to say, but I'm not always in control."

We are often trained to tell a linear story, portraying how we were in control at all times. We might retrospectively adapt the storyline to what suits best. Because this narrative is not the reality, the chance of learning what really allowed an outcome to happen is missed—along with the true learning that might allow similar insights to happen again in the future.

Which is why random anecdotes can do more harm than good. Picture the hero entrepreneur speaking at a conference about how he came up with his idea at his kitchen table, or the top CEO giving a master class on how she made her business a success. Sometimes they might even believe that the story they tell is the truth and "the full story," but each was embedded in a very specific context and set of conditions, which are almost certainly not the same for the respective listener.

Just copying a hero story such as J. K. Rowling's ascent to becoming the world's most successful writer—which almost certainly will leave out many of the initial conditions, or parts of the journey—can even be harmful given that it might lead us in the wrong direction. But a good story is often more unlikely than a less satisfactory one, and we can instead learn by trying to understand the actual underlying patterns. (In this book, I use stories to substantiate systematic patterns that have emerged—but only if those patterns emerged from different places, and if they appeared to ring true as actual experience rather than official narrative.)

What are the patterns when it comes to the reality of how things actually happen? Looking at more than a thousand purpose-driven ideas and their development, my Leaders on Purpose colleague Leith Sharp, the founder of Harvard's Executive Education for Sustainability Leadership program, in her two-decades-long teaching and research at Harvard has shown that once we are honest about it, what is supposed to be a linear story—our original plan—often becomes a "squiggle story." But then, we again tell the story as if the unexpected didn't happen (see figure).

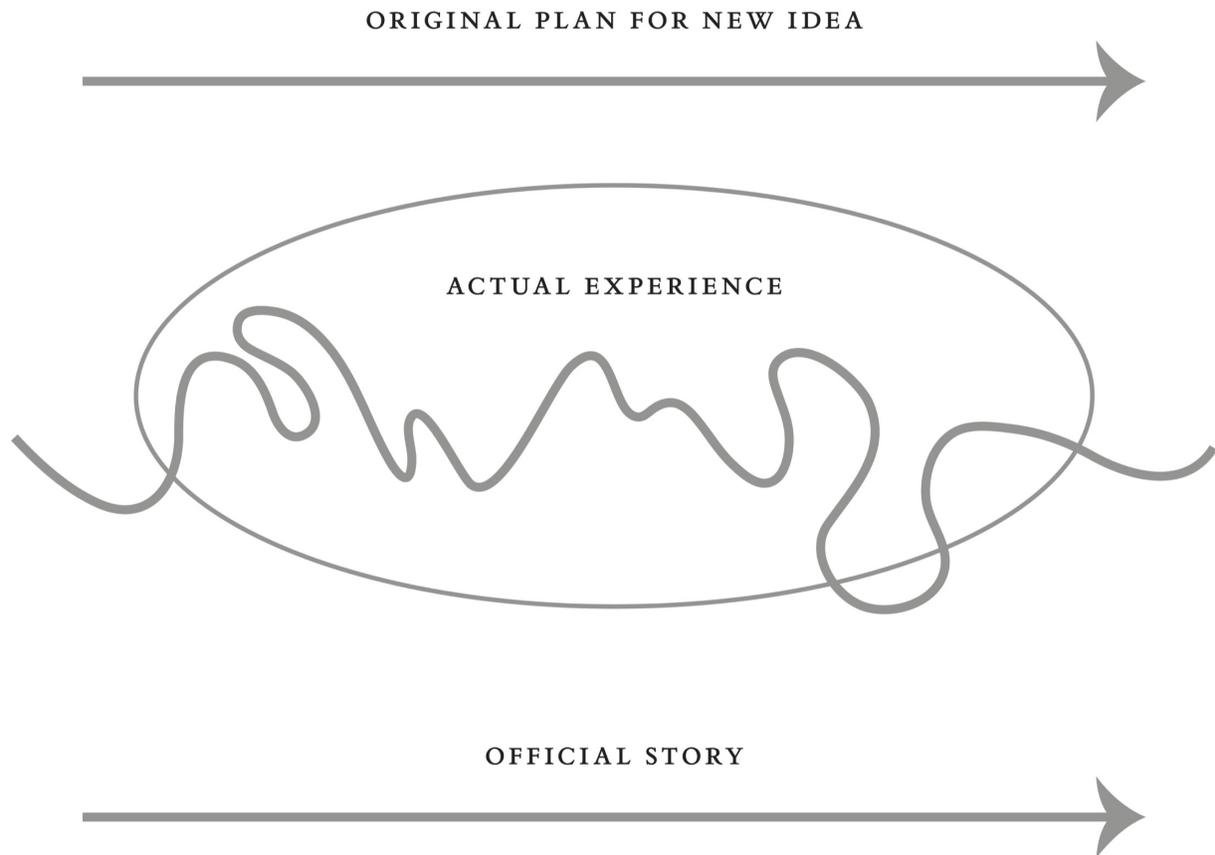


Image courtesy of Leith Sharp.

We often are more comfortable telling it as a “planning” story, even though it might have been an “emergence” story—with many turns.

Pearson’s CEO, John Fallon, succinctly summarized it in our Leaders on Purpose 2018 CEO study: “Trying to get the original plan and the official story more aligned with actual experience is a very liberating and empowering thing to do. Hard, though, but it’s the right approach.”¹⁶

This applies to other areas as well, including writing books. Seasoned novelists, such as Deborah Levy, in her words, “map out a book and then let go.”¹⁷ They allow storylines and characters to emerge over time; they plan and adapt. They often get surprised by where a story leads them—but few people (like Deborah) are open about telling it as it is, rather than pretending that they mapped it all out from the beginning.

Do You See Nails Everywhere?

Knowledge and expertise are both a blessing and a curse when it comes to serendipity.

Expert knowledge tends to be well-organized and highly accessible in our minds, and so having a deep knowledge of a particular domain makes it more likely that you will spot bisociations or connections that others might miss. But deep domain-specific knowledge can also lead to “functional fixedness.”

Functional fixedness refers to the way people who use a tool in their everyday lives, or see it used regularly in familiar ways, are often blocked mentally from seeing or using that same tool in a novel way.¹⁸ The old phrase “if you have a hammer then you see everything as a nail” rings true here—and the mental agility or openness to see that tool in a new way is essential if we are to build our serendipity mindset.

The popular portrayal of this ability is a well-known trope of action movies. The hero—usually a James Bond, Lara Croft, or Jason Bourne—esque character—is outnumbered or outgunned, but thanks to her or his quick thinking manages to turn an everyday object like a library card or a set of curling tongs into a deadly weapon.

Yes, it’s a Hollywood cliché, but we all recognize how remarkable this talent would be, and it applies not just to objects, but to all ways of thinking and problem solving.

Research has shown that individuals who are familiar with particular problem-solving strategies are unlikely to devise simpler ones when appropriate.¹⁹ Many of us recognize in ourselves a tendency at times to “do something the hard way”—because that is the way we know.

But creativity is born when we are forced to abandon the physical and mental tools that we are familiar with and find new ways to work or think. People usually display the highest degree of creativity when they use problem-solving approaches that they do not routinely use.²⁰

Companies and individuals are often rightly proud of their “core competencies”—the deep proficiency in something that enables them to create value—but we must beware that they don’t turn into core rigidities.

Just like the Hollywood superspy, we do not need to be born with the ability to overcome functional fixedness—we can practice it, and train ourselves for it. Unusual situations and new experiences are excellent training grounds. They enhance our cognitive flexibility and help us overcome this functional fixedness.²¹

One example is the work of the nonprofit organization Ojos que Sienten (which means “eyes that feel” in Spanish). Founded by Mexican social entrepreneur Gina Badenoch, it aims to transform the lives and role in society of the visually impaired. It does so by placing the emphasis not on their disability, but on their abilities. It also invites those who are not visually impaired to consider their own abilities, which only come to the fore when their ability to see is put into question.

The best-known Ojos que Sienten initiative is its “dining in the dark” experience, which is exactly what it sounds like. In a dark room, blind waiters guide guests to their seat at the table and the participants sit next to people they have never met before.

Because the diners cannot see each other, their conversation is different from what non-visually impaired people are used to: Being together in the dark can help to develop a connection without our usual judgments based on factors such as physical appearance. The diners have to use other tools, principally their ears, to do the work that previously they would have done with their eyes. Without facial expression cues, people become more attuned to vocal tones and inflections, and in turn they’re more expressive in their own speech in order to be sure they are understood correctly.

I have had some of my deepest and most meaningful conversations in these settings, because the focus is on the conversation (and the food), and nothing else. At one of these dinners during the Performance Theatre—an annual immersive leadership conference—I sat next to a man called Yves. We “went deep” and discovered a lot of common ground in our lives and thinking—some of it expected, some unexpected—which I suspect would not have emerged in a traditional dinner in the light. Yves turned out to be the director-general of the International Committee

of the Red Cross (ICRC), an organization that has won three Nobel Peace Prizes and commands fifteen thousand staff around the globe. Would we have immediately connected on such a personal level if we had seen or “known of” each other? I wonder.

Even more directly, functional fixedness disappears altogether if you have no idea what a given tool is for. If you have no idea about a particular solution, method, or system, you do not have to “unlearn” preconceptions and you are free to innovate without the constraints of fixed thinking.²²

At the same time, of course, functional fixedness never arises at all if there is no tool to begin with. Imagine someone presents you with a nail and tells you that you must drive the sharp end into a block of wood. You or I might immediately start searching for a hammer, cursing that the tools are never where you last left them.

But what if you had never heard of a hammer, never seen one, and certainly never watched someone use one to bang in a nail? You won't search for a hammer, and you won't even realize that you are missing the obvious tool. You will simply reach for the first suitable heavy object.

The absence of complex tools can even be seen to accelerate change and innovation, such as in some developing economies that are missing certain tools that developed economies take for granted—such as ATMs in almost every village. As a result, they often have not been trapped in preconceptions about how things should be, and so have often been quicker to adopt newer technologies and solutions.

Imagine a friend asked to borrow \$20 from you, and on the way to her apartment you intend to withdraw that money from a nearby ATM. But what if the ATM is out of cash, or out of order, or has even been closed down? You'd be focusing on how the system you've relied on has let you down. You might call the bank to complain, and the bank might try to devise a better-working machine.

But when you've never had an ATM nearby or live in a world where there isn't such a thing, you don't fixate on the machine itself. Instead you think about the underlying question: How do I get \$20 to my friend?

Enter MPesa, a money transfer system in Kenya that is a thriving example of banking via cell phone. In a rapidly developing society

that has never had a reliable nationwide ATM network, MPesa has thrived and is used by millions of Kenyans.

As the economy in Kenya has developed and grown, more people have begun taking part in financial transactions. But the national network of ATMs is relatively weak and physical bank branches are scarce in more rural communities. Kenya instead moved straight to mobile banking.

When it comes to mobile banking, Kenya's developing economy is now more advanced than many so-called developed economies. The fact that we have thousands of ATMs and banks across the industrialized West—and many related regulations—might actually have been an obstacle to faster development of new and more effective banking solutions.

The point is not that we must close every ATM and bank branch to accelerate the acceptance of mobile banking (though some may suspect that is what banks are actually doing). The point is broader: If we are not fixated on an existing set of tools for a certain job, there is no functional fixedness, so the space is open for a quite different set of tools to be adopted.

That's why Netflix shows such as *The Final Table*—where top chefs compete against each other—are so different from traditional TV shows such as Gordon Ramsay's *Ramsay's Best Restaurants*. Cooking shows like Ramsay's followed the reality TV model and simply applied it to food. Content, plot, and indeed the food are relatively plain. In contrast, *Chef's Table*—which inspired *The Final Table*—was driven by the philosophy and approach of people with feature-filmmaking backgrounds. And it shows: The show's producers didn't have to unlearn the focus on narrative sequences, but they did introduce their ethos and approach of slower, more deliberate high-resolution narration, in the process turning simple mushrooms into mouth-watering art.

If you ask the show's creators, they will tell you that this shift originally came from “a place of ignorance,” of inexperience.²³ They weren't functionally fixed. If there's no hammer, you don't see everything as a nail.

One way to not be trapped in mental models that place restrictions on what we regard as possible or likely is to hold multiple models in our minds. Charlie Munger, vice chairman of Berkshire Hathaway and Warren Buffett's ideas sparring partner, is renowned

for his sharpness. His belief is that remembering isolated facts often does not help. Instead, we need a “latticework of theory” to connect facts and make sense out of them. This avoids solving problems from only the basis of what we know already—our *availability heuristics*.

As Munger points out, the mind works a bit like a sperm and egg: The first idea gets in and then the mind shuts. But our tendency to settle on first conclusions leads us to accept many erroneous results and to stop asking questions. Thus, Munger suggests that we are well advised to look at the world while holding different—and potentially competing—models in our head. Munger estimates that with fifty or so models at our disposal we can be a “worldly wise person.”²⁴

This approach of holding different and potentially competing models in our minds has many parallels with one that I’ve been intrigued by since I was a teenager and walked by its inventor’s house in my home city of Heidelberg: Hegel’s process of dialectics.

Georg Wilhelm Friedrich Hegel was a German philosopher who conceived of the progress of ideas as a dialectic, meaning that we start with a perspective (a *thesis*), which we then find out is flawed. We then counter this thesis with an alternative perspective (an *antithesis*), which has flaws of its own. But from this confluence of opposites we emerge with a new perspective (a *synthesis*) that creates a fresh perspective by integrating the best elements of both the thesis and the antithesis. The synthesis then becomes the new thesis against which emerges a new antithesis, and the process continues.

Such a process would break down if ever we became rigid in our thesis and we refused to consider the antithesis. But, obviously, for a period before the synthesis emerges, we may have to somehow hold both contradictory perspectives in our head at the same time, to look at things as not mutually exclusive. This runs counter to the way many of us think about the world. But in fact, many of the most successful people in our studies indeed hold conflicting ideas all the time.

Frameworks can act in two ways—they can be a barrier to serendipity if they blind us to anomalies or if they lead us to discredit or simply miss altogether those unexpected things that do not fit. This often shows in limiting beliefs that can hold us back. But they can also allow us to organize knowledge and information and to make sense of it. Similar to muscle memory, we have patterns that

we need to unlearn in order to be able to truly move forward. What's important is that each of us should be able to use frameworks, rather than allowing them to use us.*

Writing this book turned out to be an excuse for me to reflect on my own functional fixedness, what I take for granted in my own life. In the early stages of my writing, I met my good friend and ex-girlfriend Sophie for a coffee. I had just come from a great meeting with my publisher, who mentioned that it'd be good to integrate more personal stories into the book. So I asked Sophie if she knew about beautiful love stories based on serendipity.

"Ours!" she exclaimed.

I laughed and said, "But we're not together anymore!"

What she said next changed my perception of how I gauge the positive outcome of what makes something successful, whether it's a love story or a new business venture.

Sophie had always considered herself an introvert hidden inside a person who seemed like an extrovert. Although she was a keen risk-taker in her personal life, she was more risk-averse in a working environment. When Sophie moved to London, it wasn't long before she wondered whether she had made a mistake. Her plan was to get a master's degree in global mental health at one of the schools there, and she had been advised to move to the city before she applied.

One day, when she was feeling especially lost, she went to a local Starbucks to apply for a job. She ended up, in her words, "next to a guy [me] who would become my boyfriend for more than a year, and who introduced me to a completely new world—the world of social entrepreneurs."

Though we dated, it eventually became clear that Sophie and I were not meant to be a couple but friends. But when she and I talked about it later, it occurred to Sophie that had she not gone to that exact Starbucks on that day, she and I would not have met and her life would have gone in a very different direction. As she put it, "You introduced me to The Hub [a local coworking space in London], where people were driven and passionate about social issues. I realized that even though I'm not an entrepreneur, I do have an entrepreneurial spirit, and I got to meet and talk to people who understood the power of taking personal risks, who sacrifice comfort and security for passion and dreams. Without our serendipitous meeting, I know that I would never have found this community."

In the shared workspace in which Sophie found her next job, she also met her next partner, who helped her find a new self-confidence and is now one of the most important people in her life, although they decided to continue their journeys separately.

With this new confidence, Sophie began to have a number of serendipitous encounters. More important, though, is that Sophie started to let go of social norms, such as that she needed to find a partner before the age of thirty. Today Sophie lives a life in which she is surrounded by interesting people and opportunities for development—all because she took a chance.

“Where would I be today if it hadn’t been for that Starbucks meeting?” she asked. “I must admit I don’t know. But a love story can have a happy ending even if the two people don’t stay together!”

What Sophie said made my day. And as someone who considers himself to be open-minded, it made me reflect more deeply on my own biases.

And it made me realize that I as well was put on a very different track due to the chance meeting with Sophie, which I treasure still.

Where Does This Leave Us?

These biases and types of preconceived thinking are impossible to escape altogether, and many of them have developed for good reasons. While we can’t remove them completely, we can moderate them and make a conscious effort to make room for something else.

Resisting our innate biases and thinking beyond the usual models and tools does not mean leaving everything to chaos and blind luck. Once we let go of simple narratives and pseudo-patterns and examine the real journeys of people and ideas (and the actual underlying patterns), we can see that serendipity plays a huge role. What is more, far from being about chaos or blind luck, serendipity itself has a form and a structure—it is a process that we can influence.

Looking at my own and my colleagues’ research and experience, combined with advances in chemistry, library science, neuroscience, sociology, psychology, philosophy of science, economics,

management science, and even the arts, it becomes clear that there are several clear patterns behind the cultivation of serendipity.

Throughout the next chapters, we explore these real patterns, and how the serendipity mindset can become a practical philosophy for life and for business. Then, we stop regarding luck as something that “happens *to us*,” and become an agent of our own and others’ (smart) luck.

Thus . . .

In this chapter, we encountered major biases that have the potential to impede serendipity, including underestimating the unexpected and post-rationalizing events. We can attempt to overcome these biases by opening our eyes to the unexpected, by capturing and legitimizing how decisions actually unfold—and by adding additional tools to our mental toolbox.

Being aware of and taming our innate biases and our propensity to live with preconceptions prepares the ground. The next step will explore how we can open up our mind.

But before we get to it, let’s focus on a short exercise to clear the clutter and start to overcome our biases—and build our serendipity muscle.²⁵

SERENDIPITY WORKOUT: DECLUTTER YOUR MIND

To start you off, I will ask you to start keeping a **serendipity journal**, and to write down what comes to you when reflecting on the workout below and in subsequent chapters.

1. Think carefully about the last six months of your life. What were three important moments of serendipity you experienced within that time? What did they have in common? Is there something you can learn from them?

2. Write down the serendipitous encounters and related ideas that excited you but you never followed up on. Once you have completed the list (it might take some time—no need to hurry), contact a trusted person to act as “filter” to discuss which ones might be interesting for you to consider further. Pick your favorite one, and then sleep on it. If in the morning the idea or thought still excites you, reach out to a key person in that field and discuss how to make the idea happen. Don’t be afraid to make the effort here—it will pay off.
3. Reflect on your daily routine activities, especially meetings. Which meetings are truly necessary? Do they really need the amount of time they are allocated? If they are under your control, can you restructure them?
4. Start detailing your important decisions: the reasons for them and the related information that you had at the point you made them. Ask yourself: “Based on which assumption or belief do I make this decision?” and “What would influence me to make this decision differently?” and write down your answers. Review the entry whenever you have buyer’s remorse at the decision you made or when you (after the fact) think you knew something all along.

Serendipitous tips:

- When giving advice to someone, don’t focus on what worked for you—no two situations or people are the same. Instead, start by asking the person asking for advice: “What is your intuition about it?” or “What do you think might solve your problem?” Often, the best advice you could give is already present within the person and their situation.
- When someone tells you a story that involves two potential courses of action—or when you tell such a story—ask yourself: “What could have happened instead if the other option had been taken?” and “What if the action

had been performed differently?” Thinking about different scenarios will help you understand the actual situation and how likely or unlikely it was to happen.

- For important outcomes, ask yourself: “How did we get here?” Try to reconstruct the real story based on reflections of the people involved, looking back at emails or other notes. Then try to understand what you can learn from them. Was there a particular trigger point? Did someone connect the dots who wasn’t rewarded for it?²⁶

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