THE BLIND SPOT EFFECT

HOW TO STOP MISSING WHAT'S RIGHT IN FRONT OF YOU

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sounds true
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ATTENTIONAL BLINK

What We Miss and How We Miss It

Attention, if sudden and close, graduates into surprise;
and this into astonishment; and this into stupefied amazement.
CHARLES DARWIN, *The Expression of the Emotions in Man and Animals*[1]

The Elephant in the Room

Most of us are familiar with the expression "the elephant in the room." It refers to something that is obvious to everyone in that room yet unaddressed between them, often because there are cultural or social taboos around speaking directly to it. Like when you're riding the subway and a ranting drunk person stumbles onto the train and everyone pretends they don't notice him. We have all done this. Often, the elephant in the room remains exactly what it is—seen but unacknowledged—because we know there will be some sort of challenge to face if we name it. Since we're sometimes unprepared to deal with that challenge, it can be easier to leave the elephant in the "pretend shadow"—and in fact sometimes that's the wisest response.

But have you ever stopped to think that you may be avoiding your own elephant? That you may have a blind spot that is obvious to everyone in the room except you? Your response may be to say to yourself, *I've never thought of that! I'm horrified at the possibility that I'm missing something so obvious to everyone else!* Or you may be thinking, *I don't have any big blind spots, but I sure know a lot of people who do!* Either way, this book is for you.

Uncovering our blind spots means that what we have completely (or mostly) not seen, not known, or not experienced suddenly appears

before our eyes like a huge, clumsy (at times), graceful (at times) elephant. That's why we hire psychotherapists, read self-help books, take leadership classes, or ask close friends to be honest with us—so we can focus on the gigantic, noisy, large-eared mammal standing directly in front of us that we somehow manage not to see at all.

Interestingly, it doesn't always seem like a full-sized elephant when we do discover it. It can still be a little hazy or obscured. It can take time to see and understand the fullness of the space our blind spots occupy and the impact they have. But they can be painfully—or gloriously—obvious to others! That's the twist: our blind spot can be clear as day to our loved ones or colleagues, but it might take some time for us to fully understand that it's there, and to see its enormity and its consequences, manifesting as the ways we relate to and influence ourselves and the world around us.

Hallucinations

The simple act of seeing what's there, of finding blind spots, can only happen when our attention is *available* and we're not lost in our stories and ideas or on autopilot. Doing things like continually pushing our agenda during meetings without listening to feedback and then wondering why productivity is slow, or not seeing how our constant busyness distances us from our children or how our insecurity drives us to keep secrets from our partner—all of these result in a lack of intimacy and connection.

"Hallucinations" are what neuroscientist Anil Seth says our brain creates when what we perceive doesn't match what is really there. A professor of cognitive and computational neuroscience at the University of Sussex in England, Seth researches the nature of perception and conscious experience. He studies the brain as a prediction machine: how it combines prior beliefs and expectations with sensory input to come up with its best guesses about what we sense and experience, internally and externally.[2]

If you think about it, human beings have extraordinary capacities to perceive the world and interpret it. Seth's framework of "hallucinations" connects to the mechanisms behind blind spots—how we

sometimes don't see what's there but instead what we *expect* to be there—and how that doesn't always coincide with reality. When reality and our expectations match, there's no dissonance. But when they don't match, what do we do? If we prefer our expectations over what we actually experience, we see what we want to see and miss what is there. That is the point where we go blind.

In other words, we "hallucinate" when we allow sensory signals to be blocked by the script in our heads: by what we expect and predict. These hallucinations serve to form core beliefs about ourselves and the world around us that run in the background our whole lives and drive our blinded behavior. What if a huge part of your personality or idea of yourself was based on this kind of a blind spot? Wouldn't you want to find that out?

That's what makes searching for our blind spots so intriguing! We all have varying levels of self-awareness and can examine that awareness across a spectrum: one end being emotional intelligence—aware of our inner body sensations, emotions, thoughts, and able to act from learned wisdom—and the other end being cut off from and clueless about what's going on inside (and around) us. Depending on how in touch we are with our inner and outer environment, we can miss a whole lot.

Think of someone you know who is highly emotionally intelligent—someone you learn things from just by being around them—and then think of someone who is so out of touch with themselves that they tend to bring discomfort or suffering to everyone they meet. That is the spectrum.

We have predictive brains that are constantly guessing at what we are perceiving, and the level of our emotional intelligence depends on how correct those guesses are. In some ways, we are like computer algorithms: simpler than our complex environments yet always learning based on new input. To develop self-awareness, the type of data we take in matters, as does the way we approach it. That's why one person can listen to their team at work and find creative ways to solve complex problems while another keeps repeating an inefficient strategy born out of a hallucination that they have the solution and everyone else needs to shut up and follow their orders. The two people are sorting

and processing information in different ways, and they may have radically different stories and interpretations of the same problem, which leads to a huge gap in the outcome.

In other words, how sophisticated our learning is depends on how we take in information. We form mental blind spots when we get stuck in a hallucination: in seeing what's not there or in missing what is right in front of us. Optical illusions illustrate that our minds can create something from nothing visually, but this also applies to ideas and beliefs. So the manager who is convinced that his way is correct is missing the fact that the whole team is upset and disengaged because he is seeing something that is not actually there: his infallibility, and their ignorance. These sorts of work scenarios are laborious, stressful, and inefficient. But we can learn to *learn better* when we develop awareness of our brain's tendency to predict what we expect, and hold our own views more lightly, allowing ourselves to be wrong and fallible sometimes. This creates bandwidth for increased curiosity and self-awareness, as well as more meaningful relationships.

Physical Blind Spots

Blind spots don't exist only in our minds. If you've ever driven a car you know that blind spots are actual obscurations in the visual field. We have physical blind spots in our eyes too, called *punctum caecum* in medical literature—an area on our retina that can't detect light because it doesn't have the photoreceptor cells to do so. It's the tiny place where the optic nerve passes into the optic disc. As a result, the corresponding part of the field of vision is invisible to us. We still see what is in front of us without seeing a blank spot in our field of vision—the gap gets filled in by surrounding detail and we don't even know there's something we are missing. (Interestingly, the octopus is the only creature that has no blind spots, due to the placement of its retinal nerve fibers: they don't block light coming in, so the octopus sees everything in front of itself.[3] I like the fact that our blind spots have a literal corollary, but for better or worse, we're not octopuses.) The purpose our physical blind spots serve is to allow us to see everything else in our field of vision. It is in this way that we

can acknowledge the importance of blind spots and their function in helping us see.

The same goes for our psychology and how we engage our world: the light is blocked and we miss stuff. Those obscurations were often created when we were young, to help us see other important stuff and to survive and get by okay (just as our physical blind spot means we need to rely on surrounding detail to see the world, our psychological ones helped us navigate life when we were too young to see the whole of our experience). When we're children, we often don't have the tools to cope with the fact that our needs for acceptance, safety, and love aren't getting met, in ways large or small, so we develop creative mechanisms to overlook the hurt and seek out other strategies and behaviors to try to fill our needs. Denial can be a good thing when we're under stress and don't have the tools to cope with our experience, but it's not great when it becomes a habit. It creates a breeding ground for blind spots, and if we don't see them they can hang around for our whole lives, driving our behavior without our knowledge.

The good news about psychological blind spots is that we can bring them into the light, creating the attentional equivalent of photoreceptor cells where we didn't have them before, coaxing our blind spots out of the shadows and into view. Once we recognize our blind spots, we can't *un-see* them again. They're no longer hidden; we're no longer blind; we've awakened from the hallucination and can see the elephant in the room. If we know how to mine them for their gifts, we then have a chance to discover their hidden messages and learn and grow. Blind spots, then, aren't "bad" things about ourselves but are instead helpful puzzle pieces of information in our field of awareness that, when seen, offer a fuller view of what is accurately there. We can learn to perceive light where there is shadow—that is, if we're brave (or crazy) enough.

Attentional Blink

The main reason we don't see the elephant in the room is that there is a gap between what we experience consciously and unconsciously. These gaps on the spectrum of self-awareness are places where our attention "blinks out." Like when we're talking on the cell phone while driving

and miss an exit on the freeway, or when we thoughtlessly delete a calendar notification and miss a meeting. We all miss stuff, especially the stuff that lurks beneath the surface of our conscious awareness.

Attention helps us sort, process, and choose what is important and interesting in our environment, and it allows us to omit what is irrelevant. It's hard to focus on more than one thing at a time, even though we like to think of ourselves as good multitaskers. *Attentional blink* is a scientific term for the distance or interval in time (often just a flash) that occurs when our attention moves from one thing to another. It describes *what we miss*, and is a phenomenon based on research about the brain resources we mobilize or have available to us to catch (or miss) information related to the visual field.[4]

In the same way that we hallucinate and filter the world through stories that aren't real, we also miss actual physical objects that are right in front of us, because our attention is elsewhere (like on that trip we are going to take when we retire or the fight we just had with our partner or something we just saw out of the corner of our eye). Attentional blink reveals that beyond our physical blind spot in our retina, we miss actual things in our environment that we *could* see, were our attention freed up to notice it and were it to seem relevant enough to us to remember.

In the 1990s three researchers from the University of Calgary, Jane Raymond, Kimron Shapiro, and Karen Arnell, developed a series of research experiments to test whether people could visually process two letters in a row if one was presented between 180 and 450 milliseconds after the other within a rapidly shown sequence of letters on a computer screen. In one of the experiments, the first letter was a white "T" and the second was a black "X," and the researchers called them both "targets." Raymond and her cohort found that the subjects *often did not* detect the black "X."[5] Since then, there have been many studies examining the nature and possible causes of attentional blink.

Just what was happening during the 180- to 450-millisecond gap? The subjects' attention wasn't freed up to see the second letter because, so the theory goes, their brains were busy identifying the white "T" and didn't have enough time to identify the black "X." That doesn't mean, however, that they didn't *see* the "X."

Raymond and her colleagues posited that we can't quite make something out in our field of vision because our attention is elsewhere, on something like trying to label the white "T," and we minimize the uncertainty and confusion by suppressing what we actually do see—the black "X"—and hence miss it completely. If something is not easy to see and label, we can vanquish it from our experience. *Didn't happen! Nothing to see here!* Sound like a blind spot to you? We miss stuff because we don't have attentional resources to see it: most of us don't recover our attention quickly enough after the first letter to be able to see the second.

Here is where it gets interesting. I have a friend named Chade-Meng Tan. He started his career at Google as an engineer doing "anything that was needed" but specializing in artificial intelligence. Later he became the self-titled "Jolly Good Fellow" and welcomed every famous person under the sun to Google as their ambassador. There's a Wall of Meng that displays photos of him with presidents, prime ministers, actors, and scientists. When I met Meng, these were Polaroid shots, but he's welcomed so many famous people that it's now a revolving digital display!

Enter mindfulness, stage left. Meng, with the help of psychologist Dr. Daniel Goleman, neuroscientist Dr. Philippe Goldin, and meditation teachers Mirabai Bush and Norman Fischer, created an emotional intelligence and mindfulness program for Google engineers called Search Inside Yourself (Get it? It's a play on the Google search function: *you look inside*). The program is a powerful and relevant training that has since gone far beyond the tech world to train industry leaders in the science of what's happening in our minds when we pause, and the impact of this on employee well-being. Meng created it for engineers (it takes one to know one), who tend to have high IQs and . . . um . . . who often need a little help in the emotional intelligence department: defined as self-awareness, self-regulation, motivation, empathy, and social skills (thanks, Dan Goleman, for that formulation!).[6] Self-awareness is the skill that all the others that follow are built upon.

Meng's theory is that to become more emotionally intelligent, we can train our brain using mindfulness to be more aware in the present

moment, opening our access to cues in our inner or outer environment. Like: *Oh, he's frowning, he must be upset.* Or: *My stomach is tied up in knots. I think I'm nervous about this project launch. I wonder if we should pause on this to think this through more.* It's catching this data that we would have blinked out on if we were lost in a story or distracted by pressures around us, and then working with it skillfully, that can enhance our well-being and performance at work. When we see through the unnecessary and sidetracking stuff and tune in to more of the salient and relevant stuff, we allow space for our blind spots to be revealed to us.

We hear the term all the time—in advertising, in self-help books—but what is mindfulness?

Attention Training and Insight

Mindfulness, as I'm using it here, is a way of being that is kind and attentive to our own lives—both inner and outer. It helps us train our attention to catch data we typically miss or blink out on; think of it as a pair of glasses we put on so we can filter out what is unnecessary and focus on that elephant in the room. As we slow down in any given moment, we gain access to a high-resolution view that can focus in on any one thing—like an idea or an emotion or something that was unclear to us—while simultaneously including an awareness of the larger context. This keeps us from getting lost in the details and fosters a sense of inclusiveness and kindness toward our experience. It's a powerful tool that has helped me uncover and continue to work with my own blind spots.

Mindfulness has two key components: attention and insight. Building the muscle of attentional focus and capacity to be present with ourselves and our experience can take time because it's easy to zone out and distract ourselves, but it is based on tons of tiny moments building upon each other. Once we can hang out with something—through attention practice (like placing our attention on our breath flowing in and out or the sensations in the palms of our hands or even a difficult emotion)—we become able to stabilize our awareness long enough to ask ourselves honest questions and look with curiosity and clarity into any given situation, question, or problem. This is insight.

PRACTICE Five Mindful Breaths

Since mindfulness is key to this book and to uncovering blind spots, let's jump right in and get some practice in it.

- Sit somewhere comfortable, with your feet on the ground and your hands on your thighs, gazing down. Notice how your feet and hands feel. Are they warm? Cool? Simply sit, aware of your experience as well as your surroundings.

- Feel your spine erect and your posture at ease: both alert and relaxed. Notice how it feels in your body to be awake and alert while also being open and relaxed. Your shoulders may soften and your breath begin to slow down.

- Take five mindful breaths in the following way: As you inhale, be aware of the flow of air into your body through your nose. As you exhale, be aware of the flow of air from your body through your nose.

- Follow your breath in and out four more times; with your eyes open or closed, keep your attention on your breath, following the waves of breath in and out.

- Now allow yourself to reorient to the room and to your surroundings. What do you notice in your experience right now, in this moment? How is it to simply be with your breath in and out? Did your mind race or was it quiet? There is no particular way this needs to look; simply being with your experience as it is, is the practice.

- Voila! You've practiced mindfulness attention training.

As you repeat this practice, you'll see that *how* we do it, not *what* we do—in other words, the *quality* of our attention—is more important than the stuff we are looking at and experiencing. We can feel sad and be in utter resistance to the sorrow, judging ourselves and pushing our emotion down, or we can feel sad and simply be with sorrow as it is, meeting it with compassion and giving it space to be there, feeling curious about it. It's such a radical idea to think that simple qualities like curiosity, kindness, and love—the foundational principles of mindfulness—are key necessities when we face life's challenges. The insight that results when we are with our experience in this way is astounding. Mindfulness is the great undoing: with each moment, we are invited to drop our façade and be real with what is—*right here and now*. It isn't goal oriented; it's presence oriented. It's a way of being with *what is* as we wake up to all the stuff we resist and want to change (including our blind spots). In that sense, mindfulness is a moving target: it's always fresh in the moment, and it's only ever applied in our life in real time. Our attention is a valuable resource that, when paired with this curious, open way of being, can illuminate what is in the shadows.

Now let's get into some of the science of this. It was in Google's engineer-friendly world, while getting to know Meng, that I was first exposed to neuroscience-based research on the efficacy of mindfulness practices. Meng built it into his program at Google because otherwise it's a hard sell to scientific types like engineers that shutting your eyes and doing nothing can be helpful to your life. Rather than mindfulness being some hippie phenomenon, the research points to outstanding benefits: mindfulness meditation can change the structure and function of your brain, with positive impact on all sorts of stuff from physical and mental health to attention regulation and all the way down to improved DNA sequencing.[7]

This brings us back to attentional blink. One of the studies on mindfulness that stood out to me in Meng's Search Inside Yourself program was the attentional blink research by Richard Davidson and his colleagues. Davidson is the founder of the Center for Healthy Minds at the University of Wisconsin–Madison and is a research professor of psychology and psychiatry. He's responsible for a boatload of inquiry