Another important finding from Eisenberger's work is that your level of distress and feelings of social pain are correlated with how strongly the Uh Oh Center is activated. For example, in a landmark study, Eisenberger's team asked participants to track their social distress and how disconnected from people they felt at the end of each day. After ten days, the participants played the same ball-tossing game and Eisenberger watched what happened. Interestingly, the more distress the person reported during his daily social interactions, the more the Uh Oh Center lit up in the brain scanner during the game.

Even more intriguing, people who reported that they had more feelings of social disconnection (e.g., those participants who strongly disagreed with statements like "Today I generally felt accepted by others") had more unhelpful Self-Referencing Center activity while in the scanner when being excluded in the ball-tossing game. This meant that when the unhelpful aspects of their Self-Referencing Center fired, it associated the mild social rejection as having something to do with themselves. If the unhealthy aspects of your Self-Referencing Center are activated in a similar way, taking social pains too personally, then you are much more likely to feel generally unaccepted by others.[24]

And if you repeatedly "buy into" the deceptive brain message and overanalyze what happened in that social situation or how you should respond in the future, your brain will *wire* the overanalyzing response into its routines. Because you sharply focus your attention in these ways, a vicious cycle forms, which will drive your future responses, decisions, choices, and actions. So, the more your Uh Oh Center fires and the more you use your Self-Referencing Center to process the information as being personally related to you, the more likely you are to overanalyze the situation and conclude that the interaction means something is wrong with you.

As a result, an unhelpful brain pattern sets in: The deceptive brain messages that cause you to take things too personally will lead you to overanalyze and make assumptions. This bad brain pattern can then drive you to repeatedly respond to social distress with the same unhealthy reaction, such as more overanalyzing, leading to avoiding social interactions and other problematic responses to social pain.

SOCIAL DISTRESS FINDINGS

- Increased Uh Oh Center firing results in more *momentary*

distress during social interactions.
• The distressing aspects of physical and social pain are processed by the Uh Oh Center.
• The stronger your Uh Oh Center fires, the more distressing emotional sensations you will feel.
• The unhealthy aspects of your Self-Referencing Center can cause you to take things personally and lead to more end-of-the-day feelings of disconnection or experiencing a lack of acceptance from other people.

Relabel and Reframe Calm the Uh Oh Center and Strengthen the Assessment Center

How can you calm down the Uh Oh Center in healthy ways after it's been agitated by social pain, sadness, anxiety, cravings, or other states? With the Four Steps! Eisenberger's findings, along with the work of her colleague Matthew Lieberman, provide compelling reasons for why you should use the Four Steps whenever you can. Relabeling, as Lieberman showed, enhances the calming activity of the Assessment Center, as well as the helpful aspects of the Self-Referencing Center, which calms the Uh Oh Center—resulting in healthy ways to manage your emotional sensations that do not involve devaluing or belittling yourself.

Suppressing Your Emotional Responses Negatively Impacts You and Those Around You

In addition to Eisenberger's and Lieberman's brain research, James Gross, Ph.D., of Stanford University has found that changing your relationship to your deceptive brain messages and experiences (as you do when you Reframe) can have a beneficial impact on your body and blood pressure. In one of his

experiments, he showed people a “disgusting arm amputation” and then instructed them to (a) *reappraise* the situation in a way that makes the images less upsetting, such as telling yourself you are just “watching a medical video,” (b) just watch (with no instructions provided), or (c) hide their emotional reaction so that it does not show on their faces (i.e., *suppress* their emotional reactions). Interestingly, he found that *suppressing emotional reactions led to increased blood pressure*, likely by increasing the levels of stress hormones, whereas just watching and reappraising did not.

Gross followed this work with an experiment that demonstrated that *suppressing emotions resulted in decreased memory of information and events*. Participants were shown slides depicting injured men while they received verbal information about each man shown. When the participants were later given memory tests related to the stories of the men, the people who suppressed their emotions scored the lowest. Gross concluded from this experiment that suppressing your true responses is unhealthy because it causes the brain to dedicate significant resources to the act of suppressing, which results in less memory of events and impaired learning of new information.

As significant, Gross showed that suppressing or hiding your reactions can negatively affect those around you. In this study, he showed a movie to pairs of women and asked them to discuss their reactions with each other. One of the women in the pair was told to suppress, reappraise, or respond naturally, while the other woman was in the dark about these instructions. Interestingly, Gross found that *when the women suppressed their reactions, their counterparts experienced significant increases in blood pressure*. This did not happen when the women reappraised the videos or watched naturally.

Taken together, Gross’s work demonstrates that *suppressing* emotional reactions leads to:

- Increasing your blood pressure (likely through stress hormones being activated)
- Decreasing your memory of events—thus impairing learning
- Increasing the blood pressure of those around you

From our perspective, the main point of Gross’s work is that the more you try to suppress your reactions to deceptive brain messages (i.e., deny, neglect, or dismiss your true self), rather than accept that they are present and use the Four Steps to constructively deal with them, the more your blood pressure, stress levels, and uncomfortable sensations will rise and the worse you and those around you feel.

Reframing: A Way to Change Your Experience of Deceptive Brain Messages

Combined, the work of Eisenberger, Lieberman, and Gross demonstrates that the way to deal with deceptive brain messages, uncomfortable sensations, and maladaptive habits is to change your relationship to them *without trying to suppress your responses to the sensations, urges, impulses, cravings, or desires.* This is the goal of Step 2: Reframe—to use your knowledge that these are just deceptive brain messages, not a real part of you, to explain to yourself why they are bothering you so much. As you do this, you will be able to change your perception of the deceptive brain messages and uncomfortable sensations.

So, when you use Step 2 to Reframe your experiences in an accurate way, you begin to see how false the Uh Oh Center's alarm is. It's at that point that you begin seeing them as the false intruders they truly are. At that point, you will no longer feel compelled to act on the automatic unhealthy habits or responses. Instead, you will see what's really going on—that it's the *power you give* to these false messages and *how you associate* those thoughts with specific outcomes or meanings that's the problem. As this happens, you change your relationship to the deceptive brain messages and uncomfortable sensations in a positive and beneficial way.

What's more, *Relabeling and Reframing can change the Self-Referencing Center from a nagging scold to an empowered enabler, helping to calm the Uh Oh Center.* Rather than causing you to take things too personally and feel a lack of acceptance, putting a true label on emotions and Reframing the situation help the Assessment Center enlist the healthy aspects of the Self-Referencing Center to calm down the Uh Oh Center's anxiety-provoking responses. Reframing also reminds you to invoke your Wise Advocate so that you can reevaluate the situation from a healthy, loving perspective.

Although Gross's work is intriguing and makes practical sense, there is one major difference between his version of reappraisal and Step 2: Reframe: Reappraisal includes anything you tell yourself to decrease your emotional and physical sensations—including creating a false reality to calm yourself down. Obviously, this is not something we want you to do, since we are trying to teach you how to align your actions with your true self and stay firmly rooted in the truth. Therefore, we want you to Reframe your experiences based on what's

really happening *and let the sensations be there without acting on them.* You do not want to try to change the sensations or make them go away. Rather, your goal is to change your experience and perspective on the deceptive brain messages and uncomfortable sensations—to gain a better understanding of their cause and learn that through constructive and adaptive actions your reactions and responses can change in dependable and durable ways.

We know this is no easy task. As our patients have told us time and again, sitting with the uncomfortable sensations without attempting to act to directly relieve their distress by engaging in harmful behaviors can be extremely difficult and painful. To deal with the discomfort, they remind themselves of how detrimental it is, biologically, to give in to the sensations by acting in unhealthy ways. As John explains, "I would remind myself that the deceptive brain messages and sensations are part of the mechanics of my brain. I would look at it more mechanically and say, 'My brain is going through that but it won't be there forever. It's just a momentary, passing cloud.' By doing that, I'm looking toward the future, looking at those other times when these sensations will not be there, when it will not be the case that I will react in this way to whatever the false messages are telling me."

Similarly, Steve experienced the deceptive brain messages as causing "a sensation that feels very bad and you really want to get rid of it—that's why you do those [unhealthy actions] again and again. It's an unending cycle. So, the first thing would be to live with the uncertainty, the fear, and the pain that the deceptive brain messages and uncomfortable sensations leave you with." Rather than fighting them or denying their existence, Steve says, you need to "stay with the intense feelings until you are able to look at them more objectively, from another perspective—then the deceptive brain messages and sensations are less damaging or upsetting." The act of Relabeling and Reframing can actually make the deceptive brain messages less damaging by weakening the brain circuitry associated with those unhelpful thoughts, urges, impulses, and desires.

To help you understand that uncomfortable, upsetting sensations do pass on their own, try the following exercise.

EXERCISE: LEARNING THAT SENSATIONS WILL PASS

A major theme in classical mindfulness training is learning that physical and emotional sensations will pass on their own, even if you

do nothing about them. For example, if you are sitting in meditation and notice an itch arise in your leg, you are taught to notice the itch, including how it feels and what it's like, but to not give it any special significance or try to change the sensation in any way—much like what we tell you to do with the uncomfortable physical and emotional sensations that arise because of deceptive brain messages.

If you think about it, intuitively, this principle makes sense. How many times have you noticed an itch or slight pain that seems to stop bothering you when you focus your attention elsewhere?

To make this point more clear, complete the following exercise: Think back on an event (or events) that occurred in the past few weeks that evoked a strong reaction in you at the time it occurred. As you look back at that event (or events) now, answer these questions:

- What happened?
- Why did you react the way you did? What upset you?
- Thinking about it now, does it still cause the same reaction in you? If so, why? If not, why not?
- When you think about the situation now, do you still have the same emotional and physical reactions you did at the time? Why or why not?

Completing this exercise should help you see that in many cases (though not all), your initial strong reaction is based on your brain's reaction to social pain and is not a result of some true problem or danger. The more you complete exercises like this, the more you will be able to see that in many cases, what seems like a big deal in the moment is not that important in the grand scheme of life—and that acting impulsively when the sensations arise tends to make things worse.

The goal, as you saw in our discussion of the biology of Relabeling and Reframing, is to change your relationship to the event so that you can see what happened with clear eyes and not believe the false alarm coming from your Uh Oh Center. The truth is, the less you personalize the incident, the more your perception of what transpired changes in a productive way. As this happens, you are less likely to become upset because you are not automatically equating the negative event with something *you did* or that you perceive is being *done to you.*

We'll talk about this more when we discuss thinking errors in the next chapter—the point for now is to see that your memory and

perception of events change with time and that reacting impulsively or automatically in the moment likely is not the best strategy (unless you truly are in danger).

Option #1: Reframe the Biology——It's Not Me, It's Just My Brain

As we mentioned, you can Reframe in innumerable ways as long as you are seeing what's really happening and basing your actions on your true goals and values. One of the most effective ways to Reframe, especially at the beginning of your work with the Four Steps, is to focus on the biology—specifically the bad brain wiring that resulted from your repeatedly responding in the same way to the deceptive brain messages.

In the most simple of Reframes, our patients would simply say, "I'm having a bad brain day," "It's not me, it's *just* my brain," or "It's just *the* brain." The more they did this, the more they were able to *separate* their healthy, adaptive side from the deceptive brain messages and accept that while some days would be more difficult, they would not derail them or stop them from continuing on in a healthy direction. This ability is at the heart of a concept we mentioned in chapter 1, that biology (or your current brain wiring) is not destiny.

Whether you say it's *just your* brain or *the* brain makes little difference as long as you are clear that the initial thoughts, impulses, urges, and cravings are beyond your conscious control. When you are able to conceptualize the deceptive brain messages and sensations in this way—as coming from your brain, but not representative of you or who you are—you are able to change your behaviors without shaming yourself in the process. For example, just like you would never tell a person with Parkinson's disease to stop their tremor or to feel bad because they keep shaking, you should not berate yourself for having these deceptive thoughts and impulses. Similarly, you would never tell someone with cancer to "just get over it" or that they brought it on themselves.

This same logic and compassion holds true with anxiety, depression, addictions, and anything that evokes deceptive brain messages—you did not ask for them to be there. Rather, *the deceptive brain messages stem from biological problems that developed despite you, not because of you.* It's not your fault that they are present and bothering you, but fortunately, unlike many medical

conditions, you can do something about your deceptive brain messages that results in permanent, positive changes in your brain.

How can you start Reframing biologically? Let's look at how some of our patients Reframed their deceptive brain messages as being part of their biology, not their true self. Abby says she often did so in this way: "I would say to myself, 'This certainly feels real, but no, this is just the brain's synapses firing.' Of course it feels true because my brain is sending those signals, but those signals are coming from something that is not really real. There's no need for those signals to be there [because there is no real danger]. But they are there, so I have to deal with them [by not taking them at face value or paying attention to them]. I realize that if I keep reacting to them [in unhealthy ways] the signals only get stronger and I cannot afford to do that."

Similarly, Steve, who often experienced physical cravings when he had the impulse to drink alcohol, says, "The trick is not to react to the deceptive brain messages because doing so is not going to stop the pain. Even though I feel physical pain and craving, I know it's coming from my brain and it does not have to be acted on. There is no injury and there is no real need to fulfill that craving, but yet the little nerves in my head are just going wild. So, I told myself, it's the brain that is making me crave alcohol right now."

Likewise, for those dealing with depression, you can Reframe the fatigue, low motivation, urge to isolate, and so on as being caused by the brain. For example, Sarah says, "When I have the deenergizing feelings, I Reframe them as symptoms of depression . . . it's a medical issue. It's not me. It's not that I'm lazy or weak, it's that I have certain chemical imbalances. I Reframe it for myself with Step 2 as something that has a biological origin and a psychological origin, too. Either way, it's something the brain is doing that I do not have to listen to."

Similarly, when dealing with panic attacks, Sarah would Relabel those experiences as "anxiety," "panic," or "rapid heartbeat," and then Reframe the reason why she was distressed by saying to herself, "Hey, the brain is causing this anxiety that's making my heart beat faster and making my palms sweat . . . it's just a brain thing that causes the heart pounding and sweating—it's not me."

Option #2: Reframe the Social Pain——"I'm Feeling Rejected, This Is Social Pain"

As she became more adept at using Step 2, Sarah began to note all the times in her day when the uncomfortable sensations, emotional and physical, were triggered by social pain and feelings of rejection. This helped her understand why she felt so nervous or even awkward in some social situations and allowed her to see that she did not have to respond by overanalyzing.

With increasing insight, generated by repeatedly using the Four Steps in social situations, Sarah started employing a more advanced version of Reframing that allowed her to recognize that her true emotions and needs were being masked by overpowering emotional sensations coming from her experience of social pain generated by the brain. In these cases, Sarah would recognize the uncomfortable sensations she experienced in social situations as being related to *social pain*. With this knowledge, she could *reinterpret* her anxiety as a helpful *signal* that she was somehow ignoring, denying, or neglecting her true emotions and true self in those situations. In doing so, she would acknowledge that part of her reaction (and social pain) had roots in her childhood when her mother or brother evoked similar pains in her (related to her true emotions), while another part was coming from her brain and how it inaccurately interpreted the current social situation as dangerous. When she was able to do this, she could recognize that the anxiety she experienced was telling her two things: (a) she was dismissing or disavowing a true emotion or a part of her true self and (b) she was dealing with a deceptive brain message.

With this understanding, she would use the anxiety to help guide her—to allow a true emotion to surface or recognize that she was squelching one of her true wishes, values, or interests. What she did not do is personalize that pain too much, agree with any deceptive brain messages that accompanied it, or act in a destructive, unhealthy way because of it. Rather, she would acknowledge the discomfort and Reframe the anxiety as a healthy signal that she was about to ignore her true self yet again. When she Reframed in this way, she was able to see that her brain was simply responding to the social interactions in the same way it responded to physical pain—that's why the sensations felt so strong and intense. From this more balanced view, she could Refocus on a healthy activity and allow her true emotions to arise, knowing that the anxiety was a helpful signal encouraging her to pay attention and tend to her true self.

Option #3: Reframe Your Thinking Errors

A third and highly effective way Sarah dealt with her deceptive brain messages was to note the thinking errors that occurred throughout her day. By seeing when and how her brain inappropriately filtered information or applied meaning to situations that did not warrant such conclusions to be drawn, she was able to list yet another reason why the deceptive brain messages elicited such strong uncomfortable sensations. Given how important it is to recognize them, we'll take an in-depth look at those *thinking errors* in the next chapter.

For now, let's review what you have learned about Step 2: Reframe:

- Reframe answers the question: *Why* do these deceptive thoughts and uncomfortable sensations keep bothering me?
- When you cannot see that the thoughts, urges, sensations, impulses, or cravings are deceptive, you assume they are a part of you.
- Your goal is to change your perspective and start seeing those deceptive brain messages as false foreign invaders.
- Social pain is generated by the Uh Oh Center, as are the distressing aspects of physical pain.
- Taking things too personally is often a deceptive brain message coming from the unhealthy aspects of the Self-Referencing Center.
- Relabel and Reframe enhance the Assessment Center and calm the Uh Oh Center, thus helping you make healthier choices by seeing that the sensations are false.

CHAPTER 10

Reframing Your Thinking Errors

In chapter 9, you learned to Reframe many of your deceptive brain messages as resulting from bad brain wiring by saying: (a) "This is *just* my brain" or (b) "I am experiencing *social pain.*" By doing this, you were answering the question, "*Why* do these thoughts, impulses, desires, urges, and sensations bother me so much in a biological way?" While helpful in many situations, biology is not the only way you can Reframe your experiences. You can also use your Wise Advocate to help you see *how* your brain is *misinterpreting* and *misperceiving* information and making many thinking errors. This kind of Reframing is powerful because invoking your Wise Advocate helps you see how false and destructive those deceptive brain messages can be.

Commonly referred to as *thinking errors*,[25] these are ways your brain distorts information and causes you to see life through the lens of deceptive brain messages:

THINKING ERRORS

> Ways your brain erroneously and inaccurately filters information or applies meaning to situations. When you engage in thinking errors, your brain distorts or misinterprets what's happening, causing you to make inappropriate and false conclusions about people, situations, and yourself.

Why are thinking errors important to catch? First and foremost, thinking errors are *actions*, not thoughts. In this way, they are habitual**,** *automatic ways* you respond once a deceptive brain message comes into your head. This means you can do something about them. Remember, the repetitive overthinking and overanalyzing occur *after* an initial deceptive brain message arises. So, even

though overanalyzing and other forms of thinking errors *feel* natural and appropriate, they are quite detrimental habits and actions. The truth is, once the initial thought or impulse emerges, you actually do have control over whether you follow that first deceptive thought with endless loops of analysis fueled by thinking errors or whether you stop the progression of thoughts before they get out of hand.

The second reason thinking errors are important to identify is that your inaccurate beliefs about yourself are entwined with these negative thought processes. Remember, your Self-Referencing Center is active whenever you engage in thinking about yourself, which means the more you repetitively think about what you've done (or haven't done, but should have done) and the more you focus on the false aspects of your self, the more the unhealthy aspects of your Self-Referencing Center are negatively activated and the more distress you will feel (because of the extremely strong links to your Uh Oh Center). Rather than diminishing your distress, you perpetuate it further and, in the process, as Eisenberger found, you end up remembering the negative aspects of your experience. *These memories, caused by taking things too personally, lead you to propagate and maintain a negative concept of yourself and act in unhealthy ways*—thus taking you further away from your true self, goals, and values.

The good news is that once you are aware that you are engaging in these patterns of thinking, you can *choose to focus your attention* differently—not to indulge the thinking errors and their endless thought loops and instead Refocus your attention in healthy, constructive ways. That's why assertively Relabeling and Reframing your deceptive brain messages is so important—it is your gateway to awareness and making new choices.

Psychiatrist and author Dr. David D. Burns, who has studied desire and effort, categorized these thinking errors to make them easier to spot (and Reframe) in his bestselling book *Feeling Good.* To help you incorporate knowledge of thinking errors into the Four Steps, we recategorized Burns's initial ten thinking errors (i.e., cognitive distortions) into the six listed below and then added two of our own: faulty comparisons and false expectations.

Why? Three of his thinking error categories, *filtering*, *minimizing*, and *personalizing*, are universal processes related to all deceptive brain messages. Remember what we told you in chapter 6: Deceptive brain messages cause you to ignore, minimize, dismiss, neglect, or devalue yourself and your healthy needs (or the opposite, to overvalue and excessively focus on them). Whenever you listen and respond to a deceptive brain message, you are inherently *filtering* the information, *minimizing* your (or someone else's) contributions or worth, and *personalizing* the interaction in a way that makes you think something is wrong

with you (or the other person). Therefore, we do not see these as separate thinking errors, but a by-product of living with deceptive brain messages and having an overactive Uh Oh Center and the unhelpful aspects of your Self-Referencing Center in charge. Let's look at each of the thinking errors in more detail.

ERROR #1: ALL-OR-NOTHING (BLACK-OR-WHITE) THINKING

When you engage in this thinking error, you evaluate information (including situations, people, and yourself) in extremes, such as perfect or ruined, excellent or horrible, the best or the worst, and so on. In particular, this kind of thinking tends to go hand in hand with perfectionism, as Sarah knows all too well. She describes using all-or-nothing thinking to inappropriately guide many of her actions. For example, in the past if she couldn't do something perfectly, she probably wouldn't do it at all. As she explains, "I had days where I got absolutely nothing done or other days when I got everything done, but seldom were there happy mediums. That made it hard because there were days I needed to get specific projects done but I just felt like no matter what I did, it would be wrong, so I just didn't do it. This led to procrastination and a lot of stress around deadlines. So, whenever I noticed it, I Relabeled the procrastination as a habit I engaged in and then Reframed it as all-or-nothing thinking."

Thinking in all-or-nothing terms can also easily be turned on oneself. When that happens, people view themselves as either doing really well or horribly—again, there seems to be no in-between. In fact, what happens most often is that people repetitively devalue themselves, which results in their seeing themselves as "all bad" while simultaneously seeing others as "all good." When done repeatedly, this leads you to see any misstep or mistake as proof of your inadequacy and to set high, likely unachievable expectations of yourself.

Similarly, that all-or-nothing thinking often is applied to the people around you and opportunities in your life. For example, because of perfectionism you might miss out on a great romantic partner—someone who could be much more than "good enough" for you, who could connect with your true self, cherish you, and treat you well. Kara often experienced these kinds of deceptive thoughts and regrets the toll they took on her life. As she explains, "I spent a lot of time waiting around for the 'perfect' man to come along. This led me to think to myself, 'I can't date this guy because what if there's a more perfect person coming along?' It caused me to miss out on a lot of great people and waste a lot of time."

Perfectionism can also wreak havoc on your career, as it did to Liz. In terms

of choosing jobs, all-or-nothing thinking can lead you to hold out for a mythical employment opportunity that never exists. For instance, Liz always wanted to work overseas as an executive director for a human rights foundation or watchdog group, but never found the "perfect" opportunity. She had received many offers, but the countries or the particulars of the job were not exactly what she hoped for. "I ended up passing on all these great options," she laments. "I wish I had just taken one of them for the experience, but no, my thinking was that it had to be the best or I was not going to do it at all. I wish I could have Relabeled those deceptive thought processes and Reframed them as black-and-white thinking, but I just didn't realize I was doing it at the time."

Another way all-or-nothing thinking can derail you is in terms of making decisions. Many of our patients have come to us saying that they became virtually paralyzed when they had to make even the smallest, seemingly inconsequential choice, like picking where to go to dinner. While they initially were very frustrated by this indecision, when they reflected back on their lives, they usually could remember being ridiculed for making the wrong decision or for having important people second-guess, or be disappointed in, their choices. As Ed remembers all too clearly, "My mom always gave me the message that no matter what I did, it wouldn't be right. Say, for example, I actually did make a choice, like where we were going for dinner. Once I made the choice, then she'd say, 'Well, we could have gone here.' Even after the dinner was over, she'd go on for hours saying, 'Well, you could have done this, too, you know. I mean, your choice is fine, but you should have also considered this.'" These interactions led Ed to view himself as a "second-class citizen" and perceive himself as "flawed." To deal with this kind of all-or-nothing thinking, Ed would say to himself, "You're doing it again. You're thinking in absolutes and are not taking in the truth—you are a good person and you are allowed to make choices that are best for you. Stop the all-or-nothing thinking, make a decision, and don't look back."

ERROR #2: CATASTROPHIZING (AKA FORTUNE-TELLING OR WORST-CASE-SCENARIO THINKING)

When you catastrophize, you *exaggerate or amplify* your current experiences or predict that *something bad has happened or is going to happen*. Often, this kind of thinking is referred to as *fortune-telling* or *worst-case-scenario thinking* because it causes you not to see other explanations, possibilities, or outcomes—just the ones suggested by your deceptive brain messages. For example, if you were giving a speech and slipped up on a word or two—despite the rest of the presentation going extremely well—you might assume that everyone noticed your mistakes and that when you were done your boss was going to call you

over and fire you. Similarly, if you were studying for a big exam and told yourself that you had to get an A on this test or you weren't going to get accepted into grad school, you would be catastrophizing as well.

Obviously, people who overanalyze, overthink, and engage in lots of "what-if " thought processes rely heavily on catastrophizing, fortune-telling, and worst-case-scenario thinking. As Abby explained, "My brain would go to the worst-case scenario over and over." Whether it was worrying about the safety of her children or how to structure a deal at work, this repetitive thinking and analyzing was an unhealthy habit Abby engaged in to try to alleviate her anxiety. Unfortunately, it never worked out the way she hoped. Instead, she says, if she solved the problem or stopped worrying about one thing, "My brain would find another scenario to worry about. No matter how I tried to solve the problem, my brain would just find something else to worry about." And, regardless of what initial thought started the chain of overthinking and overanalyzing, the result was always the same: "I constantly worried that something bad was going to happen and that if I could only figure it out, I could somehow prevent it." But, the truth, Abby reminds herself, "is that in most cases, what I worry about doesn't come true or isn't as bad as I think. I worry myself sick for no reason at all. The more I Reframe those false thoughts as catastrophizing and overthinking, the less true those [repetitive thoughts] seem."

Like Abby and Liz, Sarah's brain would "mull things over" to the point that she would worry about even the most far-reaching scenarios. As she recalls, "If there was even a remote possibility it might happen, I would worry about it." With her boss, she was often worried that he would find some glaring flaw—something he had until now overlooked but soon would realize—and fire her, despite the fact that she had been working with him for five years and had received only glowing annual reviews and a promotion within the last year.

Similarly, John's catastrophic thinking and fortune-telling about Alicia and their relationship is what led him to compulsively check his e-mail and constantly worry that Alicia would figure out she was too good for him. To deal with this erroneous thinking, John Relabeled his urge to check e-mail as "reassurance" and Reframed the experience as "catastrophic thinking" or "fortune-telling." As he explained, "If I looked at the urges and negative thoughts objectively, I saw that I really have no evidence for the fortune-telling or catastrophic thinking. Therefore, I tell myself, 'Don't pay attention to it,' and a few moments later, all of a sudden, I have a different perspective on those urges, negative thoughts, and uncomfortable, anxious sensations."

ERROR #3: DISCOUNTING THE POSITIVE

In this thinking error, you take minimizing, ignoring, and devaluing to the extreme by severely downplaying your positive qualities, attributes, or contributions, or by failing to notice the positive reactions someone is having toward you. Going back to our presentation example, if someone says he likes the way you presented the information, but all you can think about are the two minor errors you made, you are discounting the positive information coming in. Somewhere in your brain, you assume that because you are thinking poorly of yourself for making those mistakes, the other person is doing the same and is "only being nice" by saying he liked the presentation. If you were able to see things from his perspective, you would realize that he really did enjoy the presentation and never even noticed the two minor mistakes you made—to him, it really was great, but you cannot take that information in and cannot believe it is true because your brain discounts the positive aspects of your experience before those positive aspects can ever reach your mind.

Ed knows all too well what happens when you discount the positive. Despite often receiving rave reviews for his performances and booking many jobs, he never thought he was good enough or that his performances actually were well received. As he recalls, "I would have these directors telling me, 'God, you're such a wonderful performer,' and in my head I was thinking, 'That was a horrible performance. What the hell is he talking about?' I realized that my brain was projecting my negative thoughts and assessments, which weren't true, onto these other people. What was happening was so weird because what people were telling me was not matching up with how I felt about my work or myself. My experiences were tainted by these deceptive brain messages and the horrible sensations, but I just couldn't see it until I started using the Four Steps and began separating *how my brain was making me feel ,* which wasn't true, from the reality of the situation—that I had done a good job and that these reviews from others were accurate." Although Ed has largely conquered his stage fright and avoidance of auditions, whenever such negative thoughts come into his head, he Relabels them as "false thoughts and misleading sensations" and Reframes them as "being caused by my tendency to discount the positive."

Another dangerous area where discounting the positive emerges is when you make *faulty comparisons*. These comparisons can be with other people, as is often the case in the "grass is always greener" syndrome, or it can be with the life you imagined you would have. This is something Liz struggled with, despite living comfortably and being successful financially. As she explains, "The fact is I have an Ivy League degree, acted in leadership roles, live in a nice place, and have great friends—those are all things to celebrate. But I compare my life as it

is with the dream life I had constructed as a kid. I compare my life as it is now to that life I imagined and that discrepancy really fuels the deceptive brain messages. Instead of being able to look at what I have and say, 'Isn't that great?' I focus on what I have not done, what I have not achieved, and what I do not have. It's a miserable way to live because no matter what I did, it was never enough." Now, if such thoughts arise in her head, Liz Relabels them as deceptive brain messages and Reframes them as "comparisons" or "dismissing the positive."

Obviously, discounting the positive can also be deceptively and inappropriately directed toward other people, such as when Steve cannot see the ways his family and coworkers are taking care of themselves and acting independently.

ERROR #4: EMOTIONAL REASONING

Many of the thinking errors our patients described result, in part, from emotional reasoning, just as Ed's discounting the positive came from his overwhelming negative feelings about his performances. Remember what we have been telling you—when dealing with deceptive brain messages, *don't believe everything you think or feel.* As you have seen time and again, the deceptive brain messages often are what's causing your Uh Oh Center's alarm to go off, not some real danger. This is the biggest problem with emotional reasoning—it causes you to buy into your Uh Oh Center's alarm and assume that what you feel is true and accurate. This causes you to believe that those uncomfortable sensations are signaling some kind of real danger or indicating that there *is* something wrong with you (or the people in your life). In these cases, your erroneous and false thought process would include some variation of the following: "If I feel like this, something *must* be wrong (with me or the world)." It is the role of your Wise Advocate to correct any distortions and thinking errors that are bubbling (and sometimes gushing!) up from the depths of your brain.[26]

Similarly, if you are not living up to excessive and unreasonable expectations of yourself, your Uh Oh Center likely will fire repeatedly and cause similar uncomfortable sensations that lead you to believe that something is wrong with you. Blindly listening to the Uh Oh Center in those situations takes you down a path that is unhealthy and leads to irrational or harmful behaviors that are not based on the truth of what is actually transpiring. The key is to *notice whenever you are about to do something based solely on how you feel, rather than what's in your best interest. If you find that you are dealing with a deceptive brain message and are about to act in an unhelpful way, immediately Relabel and*

Reframe those experiences and then Refocus on a healthy, constructive behavior.

To Reframe such thinking errors, our patients often would simply say to themselves, like Liz, "If I am making a choice from the energy of the deceptive brain message, it's going to be an unhealthy choice. If instead I make it from an adult rational perspective, from the Wise Advocate, that would be a good, healthy choice."

ERROR #5: MIND READING

Mind reading overlaps with several of the other thinking errors, such as catastrophizing and discounting the positive, but it is given its own category because of how often people engage in this inaccurate thought process and how destructive it can be in relationships. Mind reading is defined as assuming you know what the other person is thinking, feeling, or believes based on either (a) your behavior (what you are saying or doing, how well you are communicating, your physical or emotional sensations, and so on) or (b) how you are interpreting the other person's gestures, language, tone, or behaviors. For example, when Ed went to auditions, he would watch the casting agents closely and often thought he knew what they were thinking. In one case, he saw an agent who had a puzzled look on his face, which prompted Ed to think to himself, "That guy in the middle can see that I'm sweating, that I'm scared. He knows I can't act and is going to tell the others to pass on me and choose someone else." Here, Ed jumped to conclusions and catastrophized while also believing he could read the agent's mind.

Similarly, if Alicia looked away while she and John were talking at dinner, he says, "I would get the sense that she didn't like what I said or that she was bored with me. I would become anxious and guess that she was thinking of ways of ending the dinner early or was daydreaming about being with someone else. Of course, this wasn't the case, but I made all these false assumptions just based on one look off to the side. It was agony when I did that. Now, I Relabel the anxiety I feel and then Reframe why it's bothering me as me 'jumping to conclusions' and 'mind reading.'"

ERROR #6: "SHOULD" STATEMENTS

Similar to mind reading, "should" statements are abundant and often accompany other thinking errors. The major problem with thinking in terms of "should," "ought to," or "must" is that they often are based on *false expectations* of how things should be, not what they actually are. For example, if you believe there are only certain ways to act, and you are not able to live up to those standards all

the time, you are bound to feel demoralized and guilty because you are not acting according to your inordinately high standards. While it may be true that it would be good for you to behave in a different way, shaming yourself into action helps no one and actually has the opposite effect—it ignites negative emotional and physical sensations (most notably depression, anxiety, or anger) that can paralyze you.

Sarah often reminds herself, “What I need to do is stop rehashing the past. What’s happened has happened and I cannot change it. And overanalyzing it isn’t going to change the way I feel right now. I need to be moving toward positive things in life, not focusing on all these false expectations and ‘shoulds.’ All it does is make me feel worse.” And it causes Sarah to discount all the positive things she is doing in life, the good choices she’s making, and the healthy ways she acts that are in accordance with her true self.

When they are inappropriately applied (i.e., meant to shame you, not spur you to act in accordance with your true goals and values), “should” statements and false expectations directed toward yourself tend to cause feelings of guilt, remorse, regret, sadness, or anger *toward you*. When repetitively applied, this kind of “should” thinking often causes you to feel hopeless or helpless, resulting in depression, anxiety, addictions, or other maladaptive sensations and behaviors, just as Sarah’s perfectionism led to periods of depression and anxiety.

Similarly, when the “should” statements and false expectations are incorrectly directed outward (e.g., you hold inappropriate expectations of other people or society to fulfill needs that you can provide yourself), you experience anger, resentment, or frustration *toward others*. This can occur in benign situations, such as when someone is driving too slowly in front of you in the fast lane, or it can be more serious, such as what often happened to Steve when he dealt with his coworkers or his family. As mentioned previously, Steve often became frustrated by his inaccurate perception that everyone was incapable of taking care of themselves, which led him to adopt the stance that the people in his life *should* be able to handle more on their own. “If only they were more capable,” Steve thought, “then I would not be this stressed out all the time. I am so annoyed by all of them!” His response to these “should” thinking errors (which we know were not based in the truth, since his coworkers and family did many things independently and effectively) was to become angry and drink often. In this way, his “should” statements and false expectations were controlling his life and his perceptions.

The way many of our patients Reframed these kinds of thinking errors was to call this process “the Should Monster” or use some similar name. By doing this, they took the sting out of the emotional sensations and separated what was truly

happening from what their brains were trying to tell them to do. After they Relabeled their thoughts and sensations, they would Reframe the *why* of the deceptive brain messages to thinking in terms of *false expectations, "should" statements,* and not seeing the truth.

False Expectations and Faulty Comparisons

Clearly, false expectations and faulty comparisons can profoundly affect your life, especially if you are not aware of their presence. One particular place where these deceptive brain messages and thinking errors can wreak havoc is in relationships.

For example, what would happen if you inappropriately try to get other people to fulfill the 5 A's (Attention, Acceptance, Affection, Appreciation, and Allowing) for you more than 25 percent of the time? Most likely those well-intentioned people will be unable to meet your expectations, and you will quickly become disappointed and likely quite frustrated. Why will you not get what you want? When you expect and desire too much from other people, you are placing an unreasonable and *false expectation* on the other person to take care of you or put you first, rather than appropriately caring for yourself and prioritizing your needs in a healthy and constructive way. Granted, there *are* times when you will need someone to care for you—that's not what we're talking about. Nor are we talking about genuine love and affection that is freely shared. Rather, we are referring to things you *can* do for yourself, but choose not to for some reason. Usually, this kind of behavior stems from childhood and is an unconscious attempt to obtain the 5 A's we did not receive as children. Although it's understandable why you might do this (just remember how important emotional attachment and social bonds are for all of us), it's not a healthy way to seek out affection or attention from others. The way to constructively deal with these desires is to call them what they are, such as "I'm trying to get someone else to take care of me" or "false expectation," and remind yourself that you can and must learn how to meet your own needs on most occasions.

If you don't believe that expectations can have such strong effects, consider the research analyzed by James Gross, Ph.D., and Kevin Ochsner, Ph.D. (of Columbia University). In their review of scientific studies dealing with

emotional regulation, they found that *anticipating* (expecting) something negative, like pain, heat, or an injection, can provoke that same part of the Uh Oh Center that processes social and physical pain to fire and actually makes you feel pain when no painful stimulus is applied. In essence, *if you anticipate or expect that a specific outcome will occur, your brain prepares for and can actually cause those sensations (physical and emotional) to arise in your body.* This likely explains why just thinking about a loved one makes you feel warm and comforted and why conjuring up a scary image causes you to experience fear.

When viewed in this way, false expectations and faulty comparisons are also thinking errors. When you anticipate or expect a certain result, all you can see and look for is that result (or evidence that it's not going to happen). Similarly, when you inappropriately compare yourself to others, all you can see is what the other person has or what you do not have. This causes your brain to filter the incoming information, just like with the other thinking errors, which clouds your ability to see the truth and results in harmful sensations or actions. In short, false expectations and faulty comparisons bias you and your brain from seeing the truth. The way to deal with such problems is to Reframe them as "expectations," "desires," or "comparisons," or note the specific thinking error associated with the inaccurate expectation.

To see how prevalent expectations are and how they unconsciously guide your behaviors, complete the exercise below. This will help you start noticing your expectations, which will allow you to begin making new choices based on the truth, not the "fiction of my brain," as Liz likes to think of it.

WHAT ARE YOUR EXPECTATIONS?

In this exercise, we want you to start becoming aware of your expectations to try to "get" things "from" other people or achieve a specific result on your agenda. Find someone who is willing to set aside time to practice talking with and listening to you. To start, have your partner talk—uninterrupted—for two minutes about anything he or she wants. During this time, you cannot speak. Instead, listen closely to what the person is saying and notice any reactions you are having. Specifically, notice if you have the impulse to jump in and say something, if you have the thought to correct the other person, if you are empathizing with the person, or if you are disagreeing with what

the other person said. Then, switch roles and you talk for two minutes without interruption. As you talk, notice what emotional or bodily sensations arise—do you feel comfortable, scared, anxious, sad, upset, irritated, or something else?

Throughout the exercise, as you notice any reactions you are having, allow the associated sensations to be there while you remain focused on the person, how he or she is communicating and what is being said. When you are done, ask yourself these questions:

- How did I want the other person to react? What did I want the person to say?
- What was I trying to achieve (e.g., connection, understanding, empathy, transfer of information, receive the 5 A's)?
- What did I want the person to understand or take from what I said?
- What did I want the person to do with that information?

Becoming aware of what happens when you communicate with others will help you see what situations (e.g., unfulfilled expectations, specific interactions, or specific content) trigger your emotional sensations, physical sensations, deceptive brain messages, and habitual responses.

With time, you can increase the time spent talking and listening, such as one person talking for five minutes at a time or increasing the number of times you switch between talker and listener. As with all mindfulness exercises, the more you practice this in your everyday interactions, the more you will become aware of what triggers your uncomfortable sensations and how your expectations and desires affect you and your actions.

Now that you have experienced learning how to examine your expectations, let's review all of the thinking errors that can negatively cloud your perception and lead to deceptive brain messages.

THINKING ERRORS–SEEING LIFE THROUGH THE LENS OF DECEPTIVE BRAIN MESSAGES

In every case of a thinking error, the brain is *filtering* out information that could be helpful to you (because the maladaptive aspect of the Self-Referencing Center is in charge) and making you look solely through the lens of deceptive brain messages. In these cases, you *minimize* the positive attributes or contributions of yourself or others and *personalize* events or interactions to somehow make them your fault or see them as *occurring* to you (as if you are a victim or helpless, when in fact you are not). In a word, at these times, your false self (i.e., deceptive brain messages) is in control of your thinking.

All-or-Nothing Thinking: Evaluating situations, events, people, or yourself in the extremes of perfect or horrible. Also called black-and-white or polarized thinking. Example: "If I do not do this perfectly, I have failed."

Catastrophizing: Blowing events out of proportion (exaggerating what happened) or taking it as proof that something bad is going to happen. Also called fortune-telling or worst-case-scenario thinking. Includes "what-if" thinking. Example: "What if Keith realizes I made a mistake yesterday on the project and he fires me"—even though Keith thinks highly of you.

Discounting the Positive: Devaluing your (or others') positive qualities, attributes, or contributions, or failing to notice the positive reactions someone is having toward you. Example: "Even though I helped Keith move today and he was appreciative, I am still a loser because I forgot to bring the packing tape."

Emotional Reasoning: Believing something is wrong with you or with your life because you are experiencing uncomfortable emotional or physical sensations generated by your Uh Oh Center. Example: "If I feel like this, something *must* be wrong (with me/the world)."

Mind Reading: Assuming you know what the other person is thinking, feeling, or believes based on your behavior (what you are saying, doing, how well you are communicating, your sensations, and

so on) or how you are interpreting his gestures, language, tone, or behaviors. Example: “He looked away when I said I was happy to see him. He must be mad at me.”

“Should” Statements: Believing that there are only certain ways to act, behave, or interact with others. Also includes “must” or “ought to” statements that reflect and generate false expectations. When “should” statements are directed toward you, you experience guilt, remorse, regret, or anger toward yourself. When “should” statements are directed outward (e.g., other people, society), you experience anger, resentment, or frustration toward them. Example: “I should help Keith with his move today or I am not a good friend.”

The above thinking errors are adapted from David D. Burns, *Feeling Good* (New York: Harper, 1999).

Faulty Comparisons: Believing that your current situation is somehow worse than someone else’s or how you imagined it would be. When you compare, you discount the positive and rely heavily on “should” statements (among other thinking errors).

False Expectations: Allowing your anticipation of a specific result to negatively affect your brain and body. Often occurs with “should” statements, but can occur with any of the thinking errors and can equally apply to you, to situations, or to the people in your life.

What Are Your Thinking Errors?

From Ed’s story of interacting with the casting agent who he thought did not like him, it’s clear that more than one thinking error can occur at the same time. In that example, Ed was simultaneously using emotional reasoning, mind reading, and fortune-telling/catastrophizing. How do thinking errors affect you? Use the exercise on pages 218 to 219 to identify all the thinking errors you use on a

regular basis. If it is helpful to you, copy this form and fill it out at the end of your day or when you've just experienced an upsurge in uncomfortable emotional or physical sensations. The goal of this exercise is to help you become familiar with and rapidly spot when your brain is making a thinking error.

IDENTIFYING YOUR THINKING ERRORS

Describe the situation/event: _____

_____

_____

_____

_____

Describe the emotional and physical sensations: _____

_____

_____

_____

_____

Describe the thoughts: _____

_____

_____

_____

_____

Check off all of the thinking errors involved:

- Catastrophizing, Fortune-Telling, Worst-Case Scenario
- All-or-Nothing
- Discounting the Positive
- Emotional Reasoning
- Mind Reading
- "Should" Statements