are underneath is a cauldron of destructive impulses relating to either self-preservation or sex!

In the same unpublished note, Maslow then went on to ponder why people could be so cruel. He concluded that it's due to "the insecurity cycle—from this flows everything. . . . The person who behaves badly behaves so because of hurt, actual and expected, and lashes out in self-defense, as a cornered animal might. The fact is that people are good, if only their fundamental wishes are satisfied, their wishes for affection and security. Give people affection and security, and they will give affection and be secure in their feelings and behavior." Continuing his train of thought, Maslow argued that everything that is "nasty, mean, or vicious" is an overcompensatory attempt to satisfy the basic needs of security, affection, and self-esteem.

Many contemporary studies from a wide range of perspectives support Maslow's thinking on the behavioral manifestations of the "insecurity cycle." The common core of this cycle is *fear*. Whatever the particular form it takes, some sort of fear pervades the deprivation of each of the needs that comprise this cycle.

If you have too many psychological fears, this may be an indication that you may be too caught up in securing your boat, with potentially serious consequences to actually moving along the expansive ocean. This first section of the book is dedicated to helping you curb your insecurities, so that you can stand on as secure a foundation as possible and really focus on the things that give you the greatest meaning, growth, and creativity in your life.

Let's start with the most essential need that comprises security: safety.

CHAPTER 1

Safety

The average child and, less obviously, the average adult in our society generally prefers a safe, orderly, predictable, lawful, organized world, which he can count on and in which unexpected, unmanageable, chaotic, or other dangerous things do not happen, and in which, in any case, he has powerful parents or protectors who shield him from harm.

—**Abraham Maslow, *Motivation and Personality* (1954)**

While overall the world has dramatically improved in many ways—people are living longer, healthier, freer, and more peacefully[1]—many people around the world in the first quarter of the twenty-first century still find themselves living in an unpredictable, chaotic world, and for many, chaos invades their personal environment. In the United States alone, around ten million Americans working full time are still living below the official poverty line. Basic fundamental needs such as housing and health care are in crisis for large swaths of Americans, despite the striking growth in incomes of the top 1 percent. Indeed, over thirty-three million Americans do not have health insurance, and over half of Americans do not even have $400 on hand to help deal with a catastrophe.[2]

As the author Ruth Whippman has pointed out, we have created a societal narrative around health and wellness that essentially inverts Maslow's hierarchy of needs, placing self-actualization as a viable alternative to these fundamentals, instead of something that is built on a strong foundation of safety and security. In her article "Where Were We While the Pyramid Was Collapsing? At a Yoga Class," Whippman writes, "We are focusing on the tip of Maslow's pyramid at the clear expense of its base."[3]

While Maslow never actually created a pyramid to represent his theory (see Introduction), he repeatedly emphasized the need for the most fundamental needs to be met in order for one to even have the opportunity to realize their full potential. Maslow's own working-class upbringing as the eldest son of Russian Jewish immigrants, and being the target of constant anti-Semitic bullying as a child, influenced his lifelong focus on social change. One of his students who took his class in the 1960s noted that Maslow fiercely advocated for the reduced-price meals in schools as a way of reducing the roadblocks to the healthy growth and development of impoverished children.[4]

Modern-day science makes clear that unpredictability has far-reaching consequences for the lives we can envision and create for ourselves. The need for safety, and its accompanying needs for stability, certainty, predictability, coherence, continuity, and trust in the environment, is the base upon which all the others are fulfilled. The need for safety is tied to the struggle to make sense of experiences and a motivation to gain control over violated expectations. Having a safe base allows a person to take risks and explore new ideas and ways of being, while also allowing the opportunity to become who you truly want to become. In the absence of that base, people become overly dependent on the protection, love, affection, and esteem of others, which can compromise growth, development, and meaning in life.

The need for safety is tied to a particular form of meaning in life. Psychologists have identified three different forms of meaning: coherence, purpose, and mattering.[5] Purpose involves a motivation to realize future-oriented and valued life goals. Mattering consists of the extent to which people feel that their existence and actions in the world are significant, important, and valuable.

The need for coherence is the form of meaning that is most strongly tied to the need for safety. Does my immediate environment make sense? Is there any predictability and comprehensibility in my life? Coherence is necessary to even get a chance to pursue one's larger purpose or pursue various ways that one can matter in this world.[6] As the meaning researchers Frank Martela and Michael Steger put it, "We need something to anchor our values upon, and when our lives feel incomprehensible, finding the things that make our lives worth living might be hard if not impossible."[7]

There are constructive routes to coherence. For instance, researchers have found that coherence is associated with greater religiosity, spirituality, and the ability to grow from trauma, such as enduring cancer.[8] But there are also more destructive routes to coherence, and the need to regain a sense of safety can lead to aggression and antagonism. Too much chaos and unpredictability pitches us into a state that psychologists call "psychological entropy."[9]

PSYCHOLOGICAL ENTROPY

The human brain is a prediction machine.[10] We are constantly processing incoming information and assessing how it matches our expectations. Instructed (but not completely determined) by a blueprint from our genes, the brain attempts to help us satisfy our basic needs by directing our behaviors, thoughts, and emotions in ways that will reach its goals. Keep in mind that "goals" is used very broadly here, ranging from security goals, such as acquiring food, belonging, status, and mates, to more "purpose"-related goals, such as becoming a world-class athlete or helping poor people in developing countries. As noted earlier, humans are quite unique in their flexible repertoire of goals.

First applied to the operation of physical systems, entropy is a measure of disorder. But the very same principles of entropy that apply to physical thermodynamic systems, such as self-organization, apply to all information-processing systems, including the brain, nervous system, and psychological processes of humans.[11] All biological organisms—including humans—survive insofar as they are able to effectively manage internal entropy.[12]

In the state of psychological entropy, we experience uncomfortable feelings such as anxiety and distress. Stress systems in the body are activated and set off a cascade of hormones—including cortisol—that circulate throughout the body and prepare it to take some kind of action.[13] Additionally, particular brain areas associated with vigilance, emotion, memory, and learning are activated, as are genes that control inflammation and longevity at a cellular level.[14]

To be sure, there will always be a certain amount of psychological entropy in our lives: we never achieve full mastery over our environment, and things we thought we could predict are constantly changing. A certain amount of stress and unpredictability is healthy and normal. As the British philosopher Alan Watts put it, "There is a contradiction in wanting to be perfectly secure in a universe whose very nature is momentariness and fluidity."[15] Or as mathematician John Allen Paulos notes, "Uncertainty is the only certainty there is, and knowing how to live with insecurity is the only security."[16]

Some people—those with high levels of neuroticism, need for closure, and obsessive-compulsive disorder—find uncertainty *particularly* aversive. Neuroticism is a personality trait characterized by a pattern of negative affect, anxiety, fear, and rumination. When people high in neuroticism are exposed to uncertain feedback compared to negative feedback, the nervous system delivers an outsize emotion-laden response.[17] As psychologists Jacob Hirsh and Michael Inzlicht note, people scoring high in neuroticism "prefer the devil they know over the devil they do not know." The implications of neuroticism for mental health are tremendous, with some researchers going so far as to argue that neuroticism is the common core of all forms of psychopathology![18]

While some people are hypersensitive to cues of threat, most people feel at least some discomfort when facing the unknown. And there are some fears that everyone has to some degree, such as the fear of failure, fear of rejection, fear of losing control, fear of losing emotional connection, and fear of losing reputation.[19] The ability to reduce, manage, and even embrace uncertainty is important for everyone seeking to develop the whole person. It is critical not only to health and wellness but also to survival.

Persistent fear and anxiety can have serious consequences on learning, behavior, and health.[20] Repeated exposure to discrimination, violence, neglect, or abuse can have lifelong consequences; they alter connections in areas of the developing brain that are particularly sensitive to stress.

While many brain alterations are adaptive—they make sense in relation to detecting threat—they have costs to the organism as a whole. Indeed, our genes don't "care" about our happiness or even our mental health; if they could speak, they'd tell us that they care only about propagating themselves into the next generation. If that means obtaining biological goals at the expense of higher-order goals (such as your purpose), so be it. Even though you may deeply desire to put your full powers toward composing a new symphony or solving a complex mathematical proof, the system can't perform the work at full capacity—can't use all of its energy—when there is too much psychological entropy.

At various levels of biological functioning, our bodies are constantly attempting to minimize surprise—the experience of entropy and unpredictability—by adjusting the response to environmental input. If internal entropy levels become too great, we are forced to develop alternative strategies to minimize entropy and satisfy our basic needs. If nothing works, over time, the system fails to adapt and eventually deteriorates.

There are deep implications here not just for our physiological functioning but also for our psychology. We use a fair amount of physical energy to run our brains, which allows us to maintain a reasonable degree of predictability and coherence in order to determine what actions will move us closer toward our goals. The more uncertainty we perceive in our lives, the more metabolic resources we waste and the more stress we experience. When internal disorder becomes too great, we are at risk of resorting to strategies that are destructive to others, not to mention to our whole selves. Our sense of possibility shrinks, and we are dominated by an exquisitely narrow repertoire of emotions, thoughts, and behaviors, leaving us with diminished potential to become the person we truly want to become. If you've spent the entire previous night lying awake worrying about an ambiguous blood test result, it might be hard to compose a symphony the next day.

Research is clear that our psychological processes are deeply intertwined with our physiology. For that reason, I feel comfortable combining the physiological and safety needs that Maslow proposed. When safety needs are severely thwarted, people react in quite specific ways to restore balance, or homeostasis. Looking at human behavior through such a lens allows us to see maladaptive behavior nonjudgmentally yet gain a good understanding of our fellow humans.

Any person at any point in time could become dominated by safety needs and would likely act in a predictable fashion in accordance with fundamental principles of human nature. When safety needs are thwarted, we lose trust in others and regard people with suspicion. We can very easily turn to destructive routes in order to regain safety, such as involvement in gangs and organized crime. As Maslow put it, "There is a character difference between the man who feels safe and the one who lives his life out as if he were a spy in enemy territory."[21]

Let's begin with an example we can all relate to: hunger.

FEELING HUNGRY

We should never have the desire to compose music or create mathematical systems, or to adorn our homes, or to be well dressed if our stomachs were empty most of the time, or if we were continually dying of thirst, or if we were continually threatened by an always impending catastrophe, or if everyone hated us. . . . Obviously a good way to obscure the higher motivations, and to get a lopsided view of human capacities and human nature, is to make the organism extremely and chronically hungry or thirsty.

—**Abraham Maslow, *Motivation and Personality* (1954)**

"Hangry"—literally a combination of "hungry" and "angry"—has emerged as a cute little expression often used in a joking manner. But true hunger is no laughing matter for the billions of people around the world who experience food insecurity on a regular basis.

There are serious consequences of hunger for both humans and nonhumans. Lack of a reliable source of food gives rise to food insecurity, which tends to produce a specific cluster of negative behaviors: increased impulsivity and hyperactivity, increased irritability and aggression, increased anxiety, and a propensity to use rewarding narcotics.[22] The evidence that food uncertainty begets this cluster of behaviors is striking and vast; it includes studies of induced food deprivation among insects, birds, and mammals (including humans); studies of people who are crash dieting and forced to undergo "therapeutic" starvation; and studies of people with clinical eating disorders.

The cluster of behaviors results specifically from extreme hunger, not from preexisting personality differences. In one classic study, researchers noted that patients began the experiment compliant, pleasant, and optimistic but became increasingly impulsive and angry—to the point of engaging in physical abuse—during therapeutic starvation.[23] In one instance, a "man asked for help after discharge because he was so angry when in traffic that he feared he would kill any aggravator by smashing his car into them."[24]

Hunger increases the motivation to work or pay for food, while it decreases motivation to work or pay for any kind of non-food reward.[25] The suite of behaviors associated with hunger is best viewed not as a system failure but as an adaptation, a response consisting of alternate strategies to improve the location, capture, and defense of food resources, even at the expense of achieving other goals.[26]

If the alternate strategies keep failing to achieve their aim, anxiety and hyperactivity may eventually give way to depression and lethargy. This point is really key: it is prolonged food uncertainty that produces this cluster of behaviors, not complete deprivation. Prolonged food uncertainty causes so much psychological entropy that a sense of helplessness eventually sets in and other systems start deteriorating. British psychologist Daniel Nettle contends that some behaviors commonly seen among the economically deprived—such as impulsivity, aggression, and anxiety—result more from regular hunger deprivation than from any preexisting differences among social classes.[27]

Most strikingly, many of the behaviors that arise from hunger significantly reverse upon refeeding.[28] We are hungry until we're not. And when we're not, we forget what it was like to feel hungry. Until the next time.

Now that we covered an example that all of us can resonate with, let's start to build up to more complex and psychological forms of insecurity, starting with our next example, attachment.

THE NEED FOR ATTACHMENT SECURITY

Life is best organized as a series of daring ventures from a secure base.

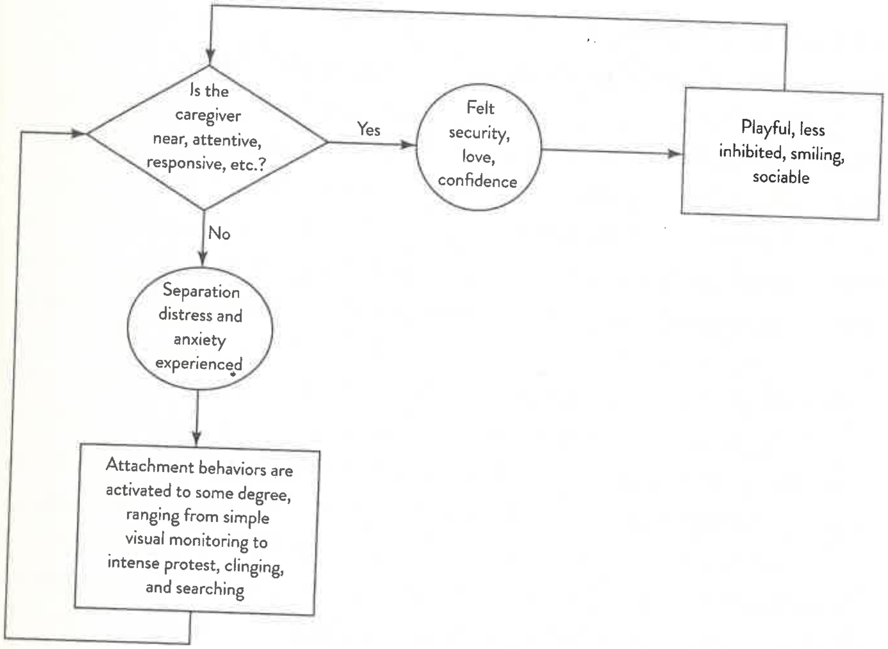
—John Bowlby

The human infant starts life as a totally helpless creature, completely dependent on a caregiver to get basic physiological needs met. Through the responsiveness and reliability of the caregiver, the infant develops a sense of security that needs will be met. At the same time, the infant develops an emotional attachment to the caregiver, and that bond provides a secure base and safe haven for the ever-growing infant to survive, deploy curiosity, and explore the environment.

Integrating Freudian theory with the emerging science of ethology (the study of animal behavior through an evolutionary lens), cybernetic theory, control systems theory, and developmental psychology, British psychologist John Bowlby proposed the existence of an "attachment behavioral system" designed over the eons of human history to motivate the desire to increase proximity between caregivers and vulnerable infants, children, or adults.[29] Proximity-seeking behaviors, according to Bowlby, serve the function of reducing feelings of fear and anxiety and are activated when the infant feels scared or vulnerable.

In outlining this sytem, Bowlby drew a lot on core principles of control theory, which rely on if/then procedures. Indeed, we have many unconscious drives that are encoded into our system in an if/then manner, and as we'll see later in the book, that insight is precisely what allows us to consciously override the system and take control of our automatic habits. However, as children we don't yet have the cognitive brakes of reflection that allow us to halt the attachment behavioral system.

Bowlby argued that the attachment system goes through a series of if/then questions, starting with "Is the caregiver near, attentive, and responsive?"[30] If the child perceives that the answer is "yes," she will feel loved, secure, and confident and be more likely to explore, play, and socialize with others. If the child perceives the answer to be "no," she will experience anxiety and be more likely to show a range of behaviors designed to bring a caregiver close, including heightened vigilance and vocalizations of distress (crying). Bowlby theorized that such behaviors would continue until the child is able to establish a comfortable level of proximity to the attachment figure. And if the attachment figure failed to respond, the child would completely withdraw, as so often happens with prolonged separation or loss.



Is the caregiver near, attentive, responsive, etc.?
Yes
Felt security, love, confidence
Playful, less inhibited, smiling, sociable
No
Separation distress and anxiety experienced
Attachment behaviors are activated to some degree, ranging from simple visual monitoring to intense protest, clinging, and searching

Exquisitely attuned to how we are treated at times of stress, the attachment system keeps track of successes at obtaining proximity and comfort from attachment figures—beginning with parents but eventually expanding to friends and romantic partners. Bowlby argued that from the physical presence of the caregiver we gradually develop mental representations, or "internal working models," of others and of the self, which allow us to forecast the behaviors of others based on prior experiences. Through interactions with various attachment figures over the course of our lives, we develop models of the availability and sensitivity of others to our needs, as well as views of our own goodness and worthiness of love and support.

These internal working models influence the expectations and beliefs we often implicitly hold of relationships more generally.

Bowlby's ideas were put to the test by Mary Ainsworth, an American Canadian developmental psychologist, who found that infants predictably display one of several distinctive "attachment patterns."[31] In the "strange situation procedure" she developed, a nine- to twelve-month-old infant comes into the lab and after getting comfortable, is briefly separated from the parent and left alone with a stranger before being reunited with the parent.

Bowlby's prediction proved correct: the presence of the stranger provokes anxiety in infants, causing them to look to the parent for reassurance that everything is all right. And when the parent leaves the child alone with the stranger, children show additional distress: they appear distracted in playing with their toys or they vocalize distress. When the mother returns, most children (around 62 percent) crawl toward her, seeking to reestablish comforting proximity to the familiar caregiver.

That's *most* infants. What Ainsworth noticed is that some infants (about 15 percent) are extremely distressed by the separation, but when the caregiver returns, they crawl toward her yet resist contact—arching their back, flopping around, or otherwise signaling that they are definitely *not* OK with being abandoned.[32] Ainsworth saw this as an insecure form of attachment. The child is not able to completely regulate and restore emotional equilibrium after having been left unprotected. She labeled this "anxious-resistant attachment."

Ainsworth observed another form of insecure attachment, which she labeled "avoidant," among another 25 percent of the infants. These infants are clearly distressed by the separation, but when the mother returns, they behave as if they do not really need her comfort, contact, or support. It is as if they are saying, "Whatever, I don't need you anyway."

Ainsworth's pioneering work on infant attachment has been extended to the study of adult relationships.[33] Take a look at the four main attachment types that have been found among adults:

___ It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me. *(Secure)*

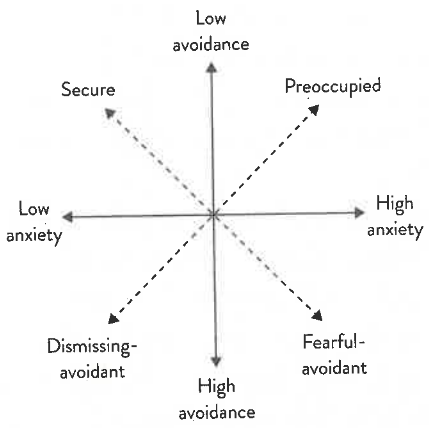
___ I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely or to depend on them. I worry that I will be hurt if I allow myself to become too close to others. *(Fearful, or Fearful-avoidant)*

___ I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them. *(Preoccupied)*

___ I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me. *(Dismissing, or Dismissing-avoidant)*

Did you deeply resonate with any of these profiles? If so, great! You've begun a process of self-awareness that can be really helpful for your relationships. Most people, however, do *not* fit neatly into a single category or they identify with more than one category. It turns out that the typology of attachment patterns may be too simplistic and too static. R. Chris Fraley and his colleagues found that people actually differ from one another in a more continuous, rather than categorical, fashion.[34] We all lie *somewhere* on each of the attachment style dimensions—ranging from *not at all me* to *very much me,* with most people somewhere in between the extremes.

It turns out that the four adult categories of attachment style—secure, fearful, preoccupied, and dismissing—can be represented as a combination of just two dimensions: anxious and avoidant. The *anxious-attachment* dimension reflects a concern about being rejected and abandoned and is the product of beliefs about whether others will be there for you in times



of need. The *avoidant-attachment* dimension has less to do with a sense of safety and more to do with how you regulate your emotions in response to stress—whether you use others as a secure base or pull away and withdraw from them.

Studies show that these two dimensions are only weakly correlated with each other, which creates the possibility that people can score high on both dimensions. A further implication is that "secure attachment" doesn't exist as a separate category; secure attachment is just the combination of low anxiety and low avoidance.* Modern research suggests that there is no such thing as a completely securely attached person (have you ever met one?); all of us are at least a little bit anxious and avoidant when stress rears its head in our relationships.

There is no such thing as a completely securely attached person; all of us are at least a little bit anxious and avoidant when stress rears its head in our relationships.

Nevertheless, your particular placement on the anxious- and avoidant-attachment dimensions has important implications. Those who score lower on these dimensions tend to report more constructive ways of coping and regulating their emotions, thoughts, and behavior, and they report higher levels of relationship satisfaction, psychological adjustment, healthy self-esteem, and even heightened altruism, volunteerism, empathy, and increased tolerance of people who are in a different social group than those who are more insecurely attached.[35] It's clear that secure attachment doesn't just set the stage for more satisfying relationships; it also sets the stage for many other aspects of growth.

On the flip side, attachment insecurity—particularly anxious attachment—has been linked to depression, anxiety, loneliness, neuroticism, impulsivity, personality disorders, perfectionism, obsessive-compulsive tendencies, substance abuse, post-traumatic stress disorder (PTSD), and a general tendency to doubt one's own ability to cope with stressful events and challenges.[36] In terms of physical health, insecure attachment has also been linked to cardiovascular disease, inflammation, poor immune functioning, and neuroendocrine activation of the stress response.[37] Since secure attachment is related to so many areas of life, let's take a closer look at just how those who are more securely attached interact with the world.

CHOOSE YOUR OWN ATTACHMENT

What is the way of being for securely attached people? In one seminal study, social psychologist Nancy Collins asked participants to describe how they would feel and behave in various scenarios designed to tap into basic attachment themes, including emotional availability when needed and reliance on a partner as a secure base.[38] Compared with securely attached adults, anxiously attached participants explained events in more negative ways and reported more emotional distress in response to situations such as "didn't respond when you tried to cuddle" and "wanted to spend an evening by himself/herself" that were more likely to lead to conflict.

In a clever variant of those studies, Amanda Vicary and R. Chris Fraley asked people to imagine themselves in a relationship and to "choose their own adventure" in a way that simulated the relationship across time.[39] Insecurely attached adults tended to make choices that were destructive to the relationship (e.g., not mentioning having lunch with an ex and allowing the partner to feel jealous), and the choices had a direct effect on their satisfaction in the relationship. Let's play along:

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* If you must know the other combinations: "fearful-avoidant attachment" is a combination of high anxiety and high avoidance, "preoccupied attachment" is a combination of high anxiety and low avoidance, and "dismissive attachment" is a combination of low anxiety and high avoidance.

You spend the evening at your partner's house. At one point, your partner gets a call and goes into the other room to answer it. Twenty minutes later, your partner comes back and tells you it was his ex calling to say hello. You know that they are still friends and talk occasionally. Your partner asks if you're okay with the fact that he still talks to his ex.

Do you say:
(a) "Yeah, I'm glad to know you can still get along with people you've dated."
(b) "Not really, I'm a little worried something may still be going on between you two."

Your partner continues talking about his ex and you're starting to feel a little jealous. The week before, someone you used to be interested in called to ask you out, but you didn't tell your partner because it wasn't a big deal to you and you'd more or less forgotten about it. While your partner is talking about his ex, you suddenly remember the incident and figure he will probably be jealous if you tell him.

Do you:
(a) Not mention the incident to him, not wanting him to feel jealous.
(b) Casually bring up the incident, hoping he will feel a little jealous.

The following week, your partner comes over to your place. You are just hanging out and having a good time when you begin to get into a discussion about the relationship. Your partner says he feels that things are getting serious and that you should have a discussion about where things are going.

Do you say:
(a) "That's a good idea," figuring it can help the relationship if you're both on the same wavelength.
(b) "Maybe we should take a break," figuring he is having second thoughts about the relationship and you should end things before he does.

Note: If you're wondering, those who are more securely attached are more likely to choose option A of these scenarios.

Still, the insecurely attached weren't *hopeless*. Although they made destructive choices at the beginning of the stories, they gradually came to make better choices (although they did not improve as quickly as the more securely attached individuals). Critically, when they interacted with a warm, concerned partner, they made a greater number of beneficial relationship choices. The same was true of securely attached participants.

So yes, insecurely attached individuals tend to make choices in their relationships that bring out the negative outcomes they most fear and even *expect*. But these findings also suggest that the sensitivity of the partner really matters. A form of marital therapy called Emotionally Focused Therapy for Couples (EFT) shows promise in improving overall relationship satisfaction by fostering secure attachment bonds in intimate relationships.[40] Partners learn to see their relationship as a safe haven, secure base, and source of resiliency in times of stress and adversity.

Couples are encouraged to express deep-seated attachment fears and needs that lead them into destructive response patterns in the relationship. Making their attachment-related concerns explicit and discussing them with a sensitive, attentive partner can be immensely helpful for both partners, boosting intimacy and relationship satisfaction.

The vulnerabilities of highly avoidant and anxious individuals, troublesome as they may be, are activated only when such individuals encounter *specific* types of stressful circumstances.[41] According to Jeffry Simpson and W. Steven Rholes, highly avoidant individuals are activated by very particular types of stressful situations, such as feeling pressure to give or receive support, to become more emotionally intimate, or to share deep personal emotions. Likewise, highly anxious individuals are activated by situations that specifically threaten the stability or quality of their current relationships.[42]

While these responses to particular relationship triggers may be adaptive or "wise" in a narrow sense, defense responses to attachment crises are ultimately destructive to the relationship and to the whole person. Fortunately, Simpson and Rholes found that even in the face of triggering events, insecurely attached individuals have the power to depart from their insecure working models, especially when they are with more committed partners who are sensitive to their specific attachment-relevant needs and concerns.[43]

Too often, adult attachment patterns are seen as fixed, unchanging, and set forever by insensitive parenting. But the most comprehensive studies of the continuity of attachment styles suggest that there is only little continuity between early childhood attachment patterns and adult attachment patterns.[44] Working models can change over time in response to new experiences or events. Even a brief priming intervention in which participants received text messages designed to promote feelings of security had the effect of reducing anxiety levels![45]

Of course, sensitivity and responsiveness to needs in childhood do matter. Training parents to be sensitive to their child's needs leads to greater attachment security in the child.[46] And in some particularly reactive children, adequate parental sensitivity can make such a difference that the child develops high levels of curiosity and exploration rather than fear and anxiety.[47]

Children are particularly vulnerable to threats to wholeness and integration when they are given tasks they are incapable of mastering, or in instances in which parents force them to make important household decisions that are beyond their capabilities, such as taking care of their parents' needs. Sensitivity to a child's needs does not mean *overindulging* the child, however. The Viennese psychiatrist Alfred Adler argued that pampering children could severely undermine social and emotional growth.[48] Inspired by Adler, Maslow wrote, "Children need strong, firm, decisive, self-respecting, and autonomous parents—or else children become frightened. Youngsters need a world that is just, fair, orderly, and predictable. Only strong parents can supply these important qualities."[49]

Think of it this way: early childhood interactions with an attachment figure serve as a foundation upon which later experiences are built.[50] A working model that says that others can't be relied on and that you are unlovable influences the developing child's life and future interactions with others in both subtle and not-so-subtle ways. But early attachment patterns are far from destiny. As attachment expert R. Chris Fraley told me,

> Think of development as an architectural process, where you lay a foundation, and then you begin to build a scaffolding, you begin to build a framework. The way development works is that you start at that ground level, and that constrains what you can do from that point forward, but it doesn't determine how high the building will eventually be—that is a function of what you continue to do as you climb the scaffolding and continue to construct the structure.[51]

Our current attachment patterns are influenced by our entire history of relationships and social interactions. Early childhood experiences need not have a lasting effect; responses can change for the better over time. Our working models can evolve and change in response to our own personal growth, as well as the sensitivity and availability of our partners. And while particular relationship dynamics can activate long-established strategies of responding, we are not slaves to those patterns. The more a couple can become aware of the pull of old patterns and work together to be sensitive to each other's needs, the greater the likelihood that a relationship can flourish.

While attachment insecurity is certainly important for our understanding of growth, what about more severe and persistent forms of insecurity? What about the consequences of maltreatment, abuse, violence, and other regularly threatening environmental conditions? Let's turn to these now.

TRAUMA ON THE BRAIN

Ensuring that young children have safe, secure environments in which to grow, learn, and develop healthy brains and bodies not only is good for the children themselves but also builds a strong foundation for a prosperous, just, and sustainable society.

—Nathan Fox and Jack Shonkoff, "How Persistent Fear and Anxiety Can Affect Young Children's Learning, Behavior and Health" (2011)

While early childhood experiences of responsive care help create a safe, secure base for future exploration and for enriching social interactions and intimate relationships, emerging research indicates that not all insecure environments have the same long-term effects. Most parenting styles do not leave an indelible mark on the child's personality as an adult.[52] But there are persistent, long-term effects of certain harsh early life stressors.

Contrary to popular conceptions, Bowlby's theory was actually not meant to be restricted to helpless infants; it was based on a more general theory about human nature. Bowlby's theory of attachment grew out of his personal experiences with adolescents who had faced early adversity. Some were foster children, some of whom had been moved around multiple times; some had lost their parents; and some were juvenile delinquents.[53] But Bowlby noticed a common thread: most of the adolescents had a difficult time forming close emotional bonds with others.

Nearly half of children living in poverty in the United States today witness violence, more than 130 million children have witnessed intimate partner violence in the home, and over 200 million have suffered some form of sexual abuse.[54] Millions more experience emotional abuse daily, such as a parent intentionally inducing feelings of guilt, shame, or fear to serve their own emotional needs, or denigrating or destroying things the child values.

Neglect can be just as damaging as abuse—a parent being repeatedly unresponsive to a child's distress and social needs, expecting a child to manage situations that are unsafe or beyond what could possibly be expected based on their development, or neglecting to provide basic needs such as food, clean clothing, shelter, and dental and medical care.

By a variety of mechanisms, external treatment by caregivers and unreliable environments get wired into the young child's developing brain. According to the predictive-adaptive-response theory (PAR), early childhood adversity serves as a "weather forecast" of the conditions into which the individual will mature, and it is adaptive for an individual who suffered early adversity to develop behavioral strategies attuned to the anticipated environment.[55] Cognitive neuroscience research has demonstrated that the brain reconfigures itself in line with the predictions it has made about the future based on prior experiences.[56] Understanding how the brain reconfigures itself to cope with anticipated trauma is key to understanding the durable effects on cognition, emotional regulation, and social functioning seen in those who experience persistent anxiety, fear, and unpredictability in childhood.

Although the potential for recovery is not completely lost—the brain does leave itself open to the possibility for future revisions, meaning there is some neural plasticity—early life stressors do create *constraints* on development. They do so by activating genes that cause critical developmental periods to come to a close.[57] As Martin Teicher and colleagues explain, "Brain development is directed by genes but sculpted by experiences."

The areas of the brain that are particularly sensitive to early life stressors include the *hippocampus*, involved in the formation and retrieval of memories and imaginings; the *amygdala*, involved in vigilance and detection of emotional significance; the *anterior cingulate cortex*, involved in error detection, impulse control, and allocation of mental resources; the *corpus callosum*, which connects the brain's left and right hemispheres; and the *prefrontal cortex*, particularly the medial and orbital prefrontal cortices, which are involved in long-term decision-making, evaluating situations, and emotional self-regulation.[58] Each of the brain areas has a different sensitive period in which stress can do the most damage.

Early childhood adversity changes the brain in very specific ways to cope with abuse and neglect.[59] In particular, alterations occur first in sensory systems and pathways that act as the brain's first filters of information from the outside world. For instance, exposure to parental verbal abuse alters the auditory cortex and language pathways. Observing domestic violence alters connections between visual-related areas of the brain and areas associated with fear and intense emotions. Sexual abuse affects areas of the brain that represent genitalia and the recognition of faces. And exposure to emotional abuse alters brain regions associated with self-awareness and self-evaluation.

Additionally, children exposed to any form of maltreatment show an enhanced amygdala-based response to threatening faces and a reduction in the strength of the neural pathways associated with the conscious perception of threat and the activation of memories from the event. This overall pattern suggests that when experiencing abuse, the brain modifies itself in such a way as to cut off conscious perception of the abusive experience while simultaneously fostering avoidance of future situations that may pose similar threats. This is similar to what some psychiatrists call "splitting."

Adaptive, of course, doesn't necessarily mean socially desirable, healthy, or even conducive to happiness. Selfish, competitive, and aggressive traits may have evolved to help "solve life's adaptive problems in the face of an unpredictable and harsh world."[60] But the adaptations people make to maltreatment do not necessarily imply psychopathology either. When Martin Teicher began studying the neurology of abuse and neglect, he expected to find a clear distinction between resilient brains and maltreated brains. Instead, he was surprised by what he found. While many individuals who underwent persistent abuse and neglect had brains resembling the brains of people who had psychopathology, many of them didn't actually require any diagnosis of psychopathology.

In fact, maltreatment-associated brain changes have very distinct clinical, neurobiological, and genetic features that differentiate it from psychopathology.[61] One intriguing possibility to explain these results is that many individuals with maltreatment-related brain adaptations are highly resilient individuals and are able to recruit other psychological and environmental resources (e.g., perseverance, social support, or community resources) that allow them to be resilient in the face of stress.

Unfortunately, not all young children who are maltreated in harsh and unpredictable environments have additional resources to help them cope with the stress—a reality that has deep implications for the long-term consequences of early adversity. In general, when people experience persistent fear and anxiety, the amygdala and hippocampus work together to associate that fear with the context that elicited the fear response. In children or adults, the resulting "fear conditioning" can have lasting effects.

As a result of physical abuse, a child tends to become fearful of both the person and the context in which the abuse occurred. Over time, the cues to context can become generalized, and the fear response can be activated by people and places bearing only a small resemblance to the original context of the maltreatment.[62] The processes occur automatically, below the level of conscious awareness; the reflective mind does not participate in or even realize what is happening. As a result, early childhood perceptions that the world is a dangerous place can affect social interactions that occur later in life under far less threatening conditions.

Such fear responses are not automatically extinguished over time. Brain science suggests that fear learning is a very different process from fear unlearning. As child development psychologists Nathan Fox and Jack Shonkoff explain, "Fears are not just passively forgotten over time; they must be actively unlearned."[63] While fear can be learned relatively early in life, and is influenced by both the frequency and emotional intensity of the event, unlearning can occur only after particular areas of the prefrontal cortex have properly matured, when they have enough power to regulate the amygdala and other subcortical brain areas associated with the anticipation of reward.[64]

The concept of learned helplessness addresses a related phenomenon. In their classic studies beginning in the late 1960s, psychologists Steven Maier and Martin Seligman found that, given enough repeated shocks, dogs eventually stop trying to escape from their situation even when they eventually are given the opportunity to do so.[65] They just gave up, apparently believing that nothing they could do would matter. The researchers called the resulting state of defeat "learned helplessness" and came to see it as a major cause of depression.

In a recent review of the evidence that has accumulated in the fifty years since their groundbreaking studies—which have since been generalized to other animals, including rats and humans—Maier and Seligman concluded that they actually had it *completely backward*.[66] The latest research suggests that the passivity and feeling of lack of control is actually the default response in animals, an automatic, unlearned reaction to prolonged adversity. What must be learned is *hope*—the perception that one can control and harness the unpredictability in one's environment. The capacity for hope relies on development of the medial prefrontal cortex, which is not completed until early adulthood.

The lack of hope may be the true source of many of the behaviors associated with harsh and unpredictable conditions, particularly those related to extreme poverty. Young people who express feelings of hopelessness and feel as though they have no promising future tend to report more violent and aggressive behavior, substance use, and sexual risk-taking than those who don't express hopelessness—even though those very behaviors make it even more difficult to escape poverty.[67]

People who regularly experience conditions of harshness and unpredictability due to poverty tend to prioritize their most pressing needs at the expense of longer-term needs. Often there is little choice: living in harsh and unpredictable environments often brings with it a range of health and safety hazards, including pollution, noise, lead exposure, environmental tobacco smoke, violent crime, and unsafe housing. The lack of wealth and influence limits future outcomes and causes a shift in priorities to the basics: survival and reproduction.[68]

Perceptions of harshness and unpredictability have an important effect on health-related decisions, such as smoking. In a clever series of studies, Gillian Pepper and Daniel Nettle experimentally altered the perceived controllability of mortality risk. They found that simply making people think that the conditions of mortality in their environment were beyond their control caused people to choose an unhealthy food reward (chocolate) over a healthier food reward (fruit).[69]

A reflection of the reliability of environments, security is built on trust. In another study, Nettle and his colleagues transported student volunteers in Britain to an economically deprived neighborhood that had relatively high levels of crime.[70] The student volunteers walked around delivering questionnaires to houses. (There was a van waiting nearby anytime anyone wanted to bail.) In just under forty-five minutes, the volunteers circulating in the deprived neighborhood showed large increases in paranoia levels and plummeting social trust—approaching the average levels of the inhabitants themselves (which were relatively high).

If just "being there" for only a brief amount of time has such an effect, imagine the consequences of living under harsh and unpredictable conditions day in and day out. As the researchers note, "This may mean that differences in social attitudes between individuals and between populations might be more labile and more context-dependent than previously thought."[71] This point is really important to emphasize. Instead of viewing the "poor" as a separate class of human, we should recognize our common humanity and acknowledge that we would all most likely act in *very similar ways under very similar circumstances.*[72]

The possibilities for reversing hostility among people living in neighborhoods with extreme poverty and instability is often underestimated. In one remarkable natural experiment, researchers set out to assess changes in aggression over an eight-year period among a representative sample of children living in poverty (one quarter of them being Native American).[73] Halfway through the study, a gambling casino opened on the Indian reservation, and every man, woman, and child living on the reservation began receiving a percentage of the royalties.

The effects of moving out of poverty were clearly visible. Those who received the royalties experienced a reduction in psychiatric symptoms so marked that "by the fourth year the symptom levels were the same in children who moved out of poverty as in children who were never poor."[74] For those who were never poor, there was little change in psychiatric symptoms. Critically, the effect of moving out of poverty was strongest for behavioral symptoms such as aggression and hostility.

Although harsh and unpredictable early life experiences do have a lasting influence on our brain and behavior, the research suggests that we are still able to respond to our immediate adult circumstances, and in the long run, people are capable of turning their earlier adversities into opportunities for growth (see Chapter 4). Maslow noted that healthy growth and development involve not only gratification of our basic needs but also the ability to endure deprivation and grow as a result.[75]

Nevertheless, every child deserves to grow up with a sense of personal control over their environment and to see real hope for themselves and others in their community. One of the most important paths to upward social mobility and possibility in life is through education. Regardless of a child's home or neighborhood environment, it is possible to instill a sense of safety and predictability and hope in children who see very little of it in their lives.

HOPE THROUGH AN INTELLIGENT VIEW OF INTELLIGENCE

Children in extreme environments have hidden strengths that can be built upon. Psychologist Bruce Ellis and colleagues argue that individuals who have grossly unmet safety needs may prioritize skills and abilities that make sense in context even though such skills may make them less likely to do well on standardized tests of academic achievement.[76]

According to his Theory of Successful Intelligence, intelligence researcher Robert Sternberg emphasizes the importance of viewing intelligence in context.[77] The kinds of executive functioning skills (such as attention and impulse control) that support doing well in school may not be the same skills necessary for survival in one's local ecology. According to Sternberg:

> Successful intelligence is one's ability to choose and successfully work toward the attainment of one's goals in life, within one's cultural context or contexts. . . . What differs is the nature of the problems encountered in various ecological contexts. . . . For example, one child may focus during the day on how to solve an algebra problem, another on how to get past drug dealers on the way to school, another on how to ice-fish so that his family has something to eat for dinner. The mental processes may be similar or identical—what differs is the kinds of knowledge and skills to which they give rise.[78]

Unfortunately, much research on disadvantaged youth operates under a "deficit model," in which individuals are seen as broken and in need of fixing. But such an approach leaves out a lot of intelligence. As Ellis and his colleagues note, "Missing from this deficit approach is an attempt to leverage the unique strengths and abilities that develop in response to high-stress environments."[79] In fact, they go so far as to suggest that disadvantaged children and youth may be "cognitively gifted" for functioning in harsh, unpredictable environments.

Recent research conducted on birds, rodents, and humans suggests that exposure to high levels of harshness and unpredictability can actually improve forms of attention, perception, learning, memory, and problem-solving that are ecologically relevant under such harsh conditions.[80] Skills range from enhanced emotion recognition of angry or fearful faces and enhanced memory for negative, emotionally laden, or stressful events to an enhanced ability for learning things at an implicit, experiential level and an enhanced ability to flexibly switch attention. Attention-switching may help those in harsh environments track new information coming from the environment at a fast rate.

Other research shows that individuals of low socioeconomic status have an advantage in social-cognitive tasks involving contextual information, such as the ability to read others' affective states.[81] In one study, high school–educated university employees outperformed college-educated university employees on a standard test of empathic accuracy, correctly labeling the emotions displayed in a variety of posed facial expressions.[82] "Enhanced empathic accuracy may promote behavioral prediction and management of external social forces and help individuals exert control over their life," note Ellis and his colleagues.

Because such skills may promote survival in unsafe, hostile environments, Ellis and colleagues argue that educators need to work *with* them rather than *against* them. They propose that curricular content, delivery, and instructional practices be designed to leverage the unique strengths of "stress-adapted" children. Such a curriculum could incorporate concepts and problem-solving skills that are more relevant to the problems children regularly face in harsh and unpredictable environments as well as encourage more opportunities for moving around and doing independent projects on the computer and with others. Many children who are labeled as having attention-deficit/hyperactive disorder (ADHD), for instance, may be better adapted to a constantly changing environment and do their best under such conditions. Indeed, recent research suggests that children who display the characteristics of ADHD show many creative strengths that can be drawn upon.[83]

At the same time, their potential to learn and climb the educational ladder must be supported, as it is a true path to personal control and opportunity. Building on the strengths of stress-adapted children can also include showing them that they don't have to make a choice between street smarts or school smarts. When marginalized urban youth are treated as failures in school and their challenges are emphasized, they are forced to develop alternative strategies to succeed. As educational psychologist Beth Hatt notes,

> It is their own way of refiguring smartness and finding some sense of agency within the institutionalized figured world of smartness where schools overwhelmingly do not allow for students to be both street smart and book smart. Allowing for both would involve reinventing the idea of the "good" student, of what counts as legitimate knowledge, and broadening definitions of success within schools beyond grades and test scores.[84]

Many individuals growing up in harsh and unpredictable environments receive messages early on that they are not school smart. As a result, they begin to disengage from school, an adaptive response to the situation. That's why those whose safety needs are grossly unmet need a *real* reason to have hope.

An emerging field in education called "possibility development" focuses on helping adolescents imagine possibilities for a better world and a better place for themselves and others. Led by educational psychologist Michael Nakkula, possibility development targets various aspects of agency, including attitude toward learning, engagement, and giving students an "authentic voice," in which they feel as though they are making choices that have a real impact on their desired future.[85]

As with all students, those who experience harsh and chaotic environments need reminders that their success is largely a matter of their own effort and engagement in meaningful activities.[86] They may need a wide array of options in courses, majors, leadership opportunities, and civic engagement opportunities—and even the choice to leave school if it's best for their development (at least for a while).

For students starting out on an uneven playing field—with an extremely unsafe environment—the path to high academic achievement can be extremely nonlinear and nontraditional. As Michael Nakkula notes, students who take a nonlinear path to school achievement—the "Crooked-A's"—can look very different from stereotypical straight-A students.

There are a number of ways that "Crooked-A's" can be supported. Research highlights a focus on future possible selves. In one study, participants who wrote a letter to their imagined future selves were less likely to agree to hypothetical illegal actions.[87] In an additional study conducted by the same researchers, those who interacted with a digitally created version of their future self via virtual reality were less likely to cheat when the opportunity arose in a subsequent trivia quiz.

In another line of research, middle school students who were asked to identify their most important personal values and explain why they mattered achieved higher grades during the semester; they were also assigned to fewer remedial classes and more advanced math classes.[88] The effects were particularly strong among those students often considered the hardest to reach.

In other research, inner-city eighth graders were asked to imagine a future possible self, to list the obstacles they might encounter in realizing that self, and to describe strategies they would use to overcome the obstacles.[89] The students were 60 percent less likely to repeat eighth grade and showed greater academic initiative, had improved standardized test scores and school grades in the ninth grade, had fewer absences and instances of misbehavior in the classroom, and scored lower on measures of depression. The effects persisted over a two-year follow-up period and proved to be directly caused by changes in the students' view of their possible selves.

Of course, there is more to life than getting good grades, and many "Crooked-A's" have immense creativity and innovative ideas because they see the world differently. As organization psychologist Adam Grant notes, "Getting straight A's requires conformity. Having an influential career demands originality."[90] Colin Seale, founder of thinkLaw—an organization that helps educators leverage inquiry-based instructional strategies to close the critical thinking gap and ensure they reach all students regardless of race, zip code, or what side of the poverty line they were born on—was himself born to a single mother and incarcerated father and raised in Brooklyn. Seale passionately believes that today's disruptors can be tomorrow's innovators, and asks us to "imagine a world where instead of thinking of students who always get into some sort of trouble as 'bad,' we see their leadership potential and own up to the necessary, albeit challenging responsibility to help them fulfill this potential . . ."[91]

Regaining a sense of coherence and hope in one's immediate environment is immensely valuable to those whose safety needs are unmet. Yet safety is only one part of a secure foundation for growth. In order for us to fully open our sails and move full steam ahead, it's also essential to have belonging and affection in our lives. That's next.

CHAPTER 2

Connection

In the fall of 1930, twenty-four-year-old Harry Harlow stepped onto the University of Wisconsin, Madison, campus for his first day as an assistant professor. As he tried to find his way across the vast campus, he kept getting mistaken for a lost freshman. When he finally reached his office, he found a student sitting at his desk. "Hello, do you know where Dr. Harlow is?" asked Abraham Maslow, only three years younger than his new professor. Harry Harlow stared at his first doctoral student for a moment. "Yes," he replied.[1]

Maslow became not only Harlow's student but also his research assistant and dear friend. They clearly admired and valued each other. Maslow respected Harlow's wit, remarking that he was a "very brilliant man . . . I had dinner at his home, and so on. And we had chats and we could talk about things." In return, Harlow once fondly reminisced that "Abe never forgot his debt to monkeys, or perhaps we should say their debt to him."[2]

Maslow's experience with Harlow inspired his own seminal contributions to primate psychology. While working on "a million boring delayed-reaction" tasks with monkeys, Maslow quickly acquired great affection for them. "The fact was that I was fascinated with them," he later recalled. "I became fond of my individual monkeys in a way that was not possible with my rats."[3] Maslow's work on food preferences later led him to distinguish between the notions of "hunger" and "appetites" and influenced his thinking about power and esteem needs. His affectionate interactions with Harlow, as well as his observation of Harlow's groundbreaking research, also undoubtedly had a lasting influence on Maslow's belief in the need for affection.

In his 1958 presidential address to the American Psychological Association, Harlow admonished his peers: "Psychologists, at least psychologists who write textbooks, not only show no interest in the origin and development of love or affection, but they seem to be unaware of its very existence." For much of the history of psychology, love and affection were ignored as a subject suitable for scientific investigation. Those who did approach the topic came at it tangentially or treated it so technically, it was hardly recognizable. The behaviorist John Watson described love as "an innate emotion elicited by cutaneous stimulation of the erogenous zones." Freud reduced tenderness to "aim-inhibited sexuality." To Freud, love was a compromise, a side effect of getting what we really want, which is sex.*

Interested in the effects of maternal deprivation of love and affection, Harlow embarked on his now-famous experiments on infant rhesus monkeys. He placed the infants in a cage and presented them with two very different mothers. One mother was made of bare wire and could give milk through an attached bottle. The second was made of soft terrycloth and looked soft and cuddly but was not capable of providing milk.

The responses of the monkeys were quite striking. Whenever they experienced anxiety, they ran straight to the cloth monkey and clung to her for support. Not only did they calm down when near the cloth mother, they also became braver. In one set of studies, Harlow placed a menacing metal robot with flashing eyes and large teeth into the cage. After clinging to the cloth mother for support, the monkeys ventured forth to confront the scary robot!

The findings were highly influential and demonstrated the importance of physical touch and reassurance in social development. Harlow's further research—including thousands of carefully controlled experiments—were likewise revelatory about the effects of a repeated lack of affection. He found that while infant monkeys could technically survive without a real mother (as long as food was provided), they grew up missing fundamental social skills, such as not being able to get along with the other monkeys. They also experienced sexual difficulties once they grew into adulthood. The females displayed little affection toward their own offspring, rarely touching them or serving as a source of reassurance. Often they were abusive toward their children, hitting and biting them.

Harlow's research identified connection as essential to normal development. Maslow proposed that belonging and affection were fundamental needs in their own right—not reducible to safety or sex. This work set the stage for the scientific investigation of the importance of connection. Now, sixty years on, a wealth of research has firmly established that belonging and intimacy are not only essential to survival of the individual and of the species but it is also essential to full development of the whole person.

* * *

> *If both the physiological and the safety needs are fairly well gratified, there will emerge the love and affection and belongingness needs, and the whole cycle already described will repeat itself with this new center. . . . He will want to attain such a place more than anything else in the world and may even forget that once, when he was hungry, he sneered at love as unreal or unnecessary or important. . . . Now he will feel sharply the pangs of loneliness, of ostracism, of rejection, of friendlessness, of rootlessness.*
>
> —**Abraham Maslow,** ***Motivation and Personality*** **(1954)**

Sam had an extreme need to belong. When he walked down the street, he smiled at everyone who passed him on the street. When they didn't smile back, or especially if they looked at him funny, he would take it personally and feel like a loser for the rest of the day. He joined many clubs in college, even ones that he found boring. But he had to constantly feel a sense of belonging, even if sometimes the club or cause he was a part of went against what he felt in his gut to be true or important. It was only later in his life, once he finally experienced a meaningful, mutual relationship, that he realized that what he had really been seeking all those years was not many superficial connections but just a few deeper connections in which he felt that his whole self was being seen (not just the aspects of himself that were appreciated by the particular group he joined), and in which he could genuinely care about the whole being of another person.

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* Although that is undoubtedly true for *some* people!

The need for connection—to form and maintain at least a minimal number of positive, stable, intimate relationships—is a fundamental need that affects our whole being, permeating our entire suite of emotions, thoughts, and behaviors. While individuals differ in the strength of this need, connection is an irreducible, undeniable human need. The need for connection actually consists of two subneeds: (a) The need to belong, to be liked, to be accepted, and (b) The need for intimacy, for mutuality, for relatedness.

While these two subneeds are often treated synonymously in the psychological literature, I believe they are worth teasing apart, since they can diverge in important ways, with important implications for health and growth.

THE NEED FOR BELONGING

When one feels belonging, one feels accepted and seen, and when one is deprived of belonging, one feels rejected and invisible. These emotions stem from a deeply evolved "social protection system" that clearly had important survival and reproduction functions during the course of human evolution.[4] Strong affiliations among small-group tribe members throughout history offered greater resources, information, and cooperation to overcome stress and threat. Since we are intensely social animals, the need to seek at least a minimal amount of acceptance while avoiding complete rejection is vitally important for gaining social rewards in virtually all social situations—from social influence to social support to group membership to acquaintances to friendships to romantic relationships.[5]

It makes sense that evolution would endow us with an exquisitely sensitive social protection system that continually tracks our levels of belonging, detects threats to acceptance, and warns us (through incredibly painful emotions) whether the perceived threat is high and whether exclusion and ostracism are possible. It is perfectly normal for perceived signs of rejection to trigger uncomfortable emotions, such as hurt feelings, jealousy, and sadness, as well as increased attention and focus on solving the problem.[6]

The social pain that accompanies perceptions of low belonging has been shown to be indistinguishable from physical pain, with severe consequences on the functioning of the whole person. "For a social species, to be on the edge of the social perimeter is to be in a dangerous position," declares social psychologist John Cacioppo.*[7] "The brain goes into a self-preservation state that brings with it a lot of unwanted effects," from "micro-awakening" in the middle of the night as the brain remains on high alert for threats, to "social evasion" and depression, to various forms of narcissism (as we'll see in the next chapter), to even such catastrophic effects as suicide and mass shootings, two phenomena that are on the rise.[8] In the U.S., suicide rates have increased by 25 percent since 1999, with the rate among fifteen- to twenty-four-year olds rising steadily since 2007.[9] In the eleven years after 2005, there were more mass shooting incidents and deaths than in the previous twenty-three years combined. It is likely that belonging and acceptance are increasingly thwarted, leading to both trends.

In times of relative safety, the need for belonging may not be as essential as in times of increased perceived instability and danger in the environment, when the social protection system is most likely to become activated and exert its effects. For instance, under such circumstances, individuals increasingly identify with specific groups, often to the exclusion of other groups.

This was so clearly shown in the Robbers Cave study, in which researchers introduced a threat at a summer camp, motivating each boy to cling to his own group especially strongly.[10] Similar behavior occurs in terrorist organizations, where members become more connected under conditions of external threat (or perceived threat).[11] Lack of resources can also be a strong motivator of belonging: in a study that awarded one group a prize based solely on a coin flip, researchers observed greater cohesion within both the rewarded and non-rewarded groups.[12]

Group cohesion can be very difficult to change, even when the group membership is essentially meaningless. One recent study randomly assigned young children to unfamiliar groups and then provided information about the nature of the group. In one condition, they emphasized that groups were based on deep and internal aspects of the child, while in the other condition they emphasized that the groups were randomly assigned.[13]

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* While I was writing this book, John Cacioppo sadly passed away at the age of sixty-six: Roberts, S. (2018). John Cacioppo, who studied effects of loneliness, is dead at 66. *The New York Times*. Retrieved from https://www.nytimes.com/2018/03/26/obituaries/john-cacioppo-who-studied-effects-of-loneliness-is-dead-at-66.html.

The researchers found that even when the groups were arbitrary and presumably meaningless, the five- to eight-year-olds developed equally strong in-group biases as children who were in more meaningful groups! Only when they went to extremes—such as actually flipping a coin to help the children understand randomness and actually switching the groups for children in order to emphasize that group assignment was arbitrary, unimportant, and very unlikely to be based on any meaningful aspects of the child—were they able to reduce bias to any significant extent on some of their measures. And even after going through such extremes, the researchers *still* found that children in both conditions were equally likely to give more stickers to their in-group. It's clear: our tribal impulses run deep and spring early.

Our tribal impulses run deep and spring early.

Independent of societal conditions, however, people differ greatly from one another in their need for belonging, which—like every other need presented in this book—is a result of a multitude of individual genes intricately interacting with personal experiences.[14] As we saw in the previous chapter, above and beyond the effects of our genes, early childhood attachment insecurity influences the development of brain regions associated with avoidance and sensitivity to threat, which can lead to the development of an extreme need for belonging. As a result, some people get stuck on this need. You can gauge the extent of your own need for belonging by seeing how much you agree with the following statements:[15]

- I try hard not to do things that will make other people avoid or reject me.
- I need to feel that there are people I can turn to in times of need.
- I want other people to accept me.

- I do not like being alone.
- It bothers me a great deal when I am not included in other people's plans.
- My feelings are easily hurt when I feel that others do not accept me.
- I have a strong need to belong.

As with all the other needs, the critical metric is the distance between your need for belonging and just how unmet this need is in your daily life. Research shows that those who report the highest levels of loneliness are those who have the highest *unmet* need to belong. The greater the discrepancy between a person's need to belong and their satisfaction with their personal relationships, the higher the levels of loneliness and the lower the levels of life satisfaction in their daily lives.[16]

This finding applies both to those who are living alone as well as those who are living with others. Simply living with someone does not guarantee that connection needs are being met. It's the *quality* of the connections that matter for predicting loneliness, not the quantity of connections or even the proximity of the connections. Let's take a closer look at this other essential component of connection.

THE NEED FOR INTIMACY

While the social protection system has as its main goal the avoidance of rejection, the intimacy system is more about connecting to loved ones, caring and protecting them, reducing their suffering, and supporting their growth, happiness, and development. Here are some statements that you can use to gauge the strength of your need for intimacy.[17]

NEED FOR INTIMACY

- I have a close, intimate relationship with someone.
- I like to fully immerse myself in a relationship.
- I want to be able to share all the good and negative emotions in a relationship.
- I don't like being separated from the people I really care about.
- My thoughts often revolve around my loved ones.

- Sometimes I feel a deep connection and complete unity with another person.
- I don't keep any secrets from the people I love.

While a secure attachment style serves as a critical foundation for connection, it does not assure intimacy. The essence of intimacy is a *high-quality connection.* What is a high-quality connection? Jane Dutton and Emily Heaphy define a high-quality connection as a "dynamic, living tissue that exists between two people when there is some contact between them involving mutual awareness and social interaction."[18] A high-quality connection makes both people feel especially vital and alive. A low-quality connection, on the other hand, can be downright depleting. As one business manager put it, "Corrosive connections are like black holes: they absorb all of the light in the system and give back nothing in return."[19]

All high-quality connections share some common characteristics. First, they involve what Carl Rogers referred to as "unconditional positive regard."[20] Each person in the relationship feels seen and cared about and feels safe expressing a full range of experiences and thoughts. According to psychologist Lance Sandelands, high-quality connections create a feeling of "living presence, a state of pure being, in which isolating worries, vanities and desires vanish within a single vital organism."[21]

High-quality connections also include a sense of *mutuality*; both parties are engaged and participating. While positive regard is a momentary feeling of acceptance of the whole being of another person, mutuality "captures the feeling of potential movement in the connection . . . born from mutual vulnerability and mutual responsiveness."[22] The feeling of mutuality often has an air of buoyancy and spontaneity to it, which Dutton and Heaphy note creates "expansive emotional spaces that open possibilities for action and creativity."[23] High-quality connections that furnish opportunities for self-disclosure, emotional intimacy, trust, and openness have been shown to increase life satisfaction everywhere in the world.[24]

Finally, high-quality connections foster what social psychologist Sara Algoe refers to as "positive interpersonal processes," defined as "the good stuff that keeps us coming back for more in a friend or loved one."[25] This includes having fun together, sharing laughs, doing kind things for one another, celebrating good news together, admiring the other person's virtues, and expressing gratitude.

The importance of fostering high-quality relationships for health and growth should not be understated. In a study of the happiest 10 percent of college students, one characteristic stood out: *they all enjoyed a highly fulfilling social life.*[26] High-quality connections affect a variety of life domains, acting as a "rising tide" that enhances the effects of other sources of well-being, such as good physical health, self-esteem, optimism, constructive coping, and perceived control over the environment.[27]

THE BIOLOGY OF HIGH-QUALITY CONNECTIONS

The biology of the modern brain reflects the evolutionary heritage of this fundamental need. When we have a high-quality connection that gets us in tune with another human being—whether it's confiding a vulnerability to someone, gossiping about a common enemy, or sharing simple moments of laughter and joy—our "calm-and-connect" system comes alive. This system involves a suite of biological responses that work together to intensify a deep connection with another human being.[28]

In such moments of "positivity resonance"—as psychologist Barbara Fredrickson puts it—one person's brain literally syncs up with the other person's brain, a phenomenon sometimes referred to as "neural coupling." Partners experience an enhanced ability to anticipate the other's stream of thought and to feel the same emotions, sometimes even physically feeling their pain.[29] As Fredrickson notes, such "micro-moments of connection" are "tiny engines" that can set off upward spirals in your life, helping you to grow and become a better version of yourself.[30]

The brain's opioid system is a key player in increasing connection. While the opioid system is not specific to social connection—in fact, the opioid system is really the "pleasure system"—it just so happens that social connections provide the most important and dramatic experiences of pleasure in our lives most of the time.[31] During heightened social connection, the opioid system downregulates the HPA axis, dampening the body's response to stress. The opioid system is also involved in feelings of loss and grief when a social bond is lost.[32] The opioid system is so integral to the connection system that one prominent team of neuroscientists deemed strong social connections "in some fundamental neurochemical sense opioid addictions."[33]

Another key player in the connection system is the neuropeptide oxytocin. Oxytocin is produced in the hypothalamus and functions both as a hormone and as a neurotransmitter.[34] There is some evidence that oxytocin increases the willingness to trust and cooperate, while also enhancing the ability to discern cues of trust and goodness in others.[35,36] Oxytocin is also part of the calm-and-connect system; it dials down the sensitivity to threats in specific parts of the amygdala, downregulating feelings of distress and fear.[37]

While some researchers have referred to oxytocin as the "love hormone" or even the "cuddle hormone," more recent research suggests that the effects of oxytocin on social behaviors are highly dependent on context.[38] Oxytocin increases in-group favoritism, taking costly risks (including lying) to improve the welfare of your group, and conformity, trust, and cooperation for the in-group.[39] However, oxytocin's effect on trust is actually reduced when another person is perceived as untrustworthy, is unknown, or is a member of an out-group that has conflicting views and values from the in-group.[40] When the in-group and out-group have similar views and values, oxytocin doesn't seem to show this in-group bias.[41]

Therefore, while oxytocin does help strengthen connections with others and is a key player in the calm-and-connect system, it is becoming increasingly clear that oxytocin is not the "universal love hormone." It might be more accurate to think of oxytocin as the "in-group love hormone."[42] For this reason, in the new integrated hierarchy of needs I present in this book, I clearly distinguish between the need for connection and the need to give unconditional love that can operate independently of the connection you feel with someone (see Chapter 5).

Yet another key player in the connection system is the tenth cranial nerve, also known as the vagus nerve. The vagus nerve emerges from the brain stem deep within the skull and connects the brain to many organs, including the heart and lungs. The vagus nerve soothes a racing heart, encourages eye contact with another person, and synchronizes facial expressions. The strength of the vagus nerve—referred to as vagal tone—can be reliably measured; it is associated with physical, mental, and social flexibility and the ability to adapt to stress. Those with higher vagal tone experience greater connection with others in their daily lives, and in turn, this greater connection increases vagal tone, causing "upward spirals of the heart."[43]

Connection (and lack of connection) clearly have powerful effects on our brain and physiology, with deep implications for our mental and physical health. In fact, they can be matters of life and death.

LONELINESS KILLS

A recent survey suggests that 40 percent of adults say they are lonely, with approximately 42.6 million adults over the age of forty-five reporting chronic loneliness.[44] In his book *Loneliness: Human Nature and the Need for Social Connection,* social psychologist John Cacioppo reports that "social isolation has an impact on health comparable to the effect of high blood pressure, lack of exercise, obesity or smoking."[45]

Loneliness is proving a serious threat to public health.[46] Studies show that social isolation impairs immune functioning and increases inflammation, processes linked to a wide range of health issues, including heart disease and diabetes.[47] One study, from the University of York, found that people who are isolated or lonely have a 29 percent higher risk of coronary heart disease and a 32 percent higher risk for stroke compared to a control group of people having a strong social network.[48]

Loneliness is not making us just temporarily ill; it is *literally killing us.*[49] One study found that the feeling of loneliness, social isolation, or living alone increases the risk of death by 26 percent, 29 percent, and 32 percent, respectively.[50] Those with a subjective feeling of loneliness as well as an objective separation from others face the greatest risk of mortality. Loneliness poses a risk of mortality comparable to that of smoking and double that of obesity, and elderly individuals and those without adequate social interaction are twice as likely to die prematurely.[51]

No human being is exempt from the dire consequences of loneliness, and no other basic human need satisfaction can substitute for a deep connection—not money, not fame, not power, not popularity, not even belonging and acceptance—even though we often seek one or another of these other routes in the false hope that they will fully satisfy our need for connection. As Leo Braudy notes in his extensive review of the history of the quest for fame, the desire for fame is often based on a "dream of acceptance" that includes the notion that becoming famous will make the person feel loved, accepted, and sought after by others for the rest of their lives.[52]

As many people who have actually achieved fame can attest, though, the dream is often very illusory and even when achieved, fame remains deeply unsatisfying. While the two motives do seem to inhabit completely different ways of being, in a well-known 1962 essay called "Love and Power" in *Commentary* magazine, the political scientist Hans Morgenthau argues that love and power are actually united in a common motive: the striving to escape loneliness. According to Morgenthau, power and love offer very different strategies for achieving the same goal: "Love is reunion through spontaneous mutuality, power seeks to create union through unilateral imposition."

But as Morgenthau notes, power is a deeply unsatisfying substitute for intimacy: "Yet of what love can at least approximate and in a fleeting moment actually achieve, power can only give the illusion." The same also applies to the quest for fame. An implication, according to Morgenthau, is that the quest for power, in an attempt to make oneself whole, always inevitably makes one want even *more* power. One consequence is the deep irony that the most powerful people tend to be the loneliest. As Morgenthau notes, this helps explain the need for continuous demands to be referred to as "our beloved leader" among those with the greatest thirst for power (e.g., Stalin, Hitler).

Loneliness may be part of the cause of celebrity suicides. As Cacioppo notes, "Millionaires, billionaires, tend to feel lonely. A lot of athletes often feel lonely. Lots of people want to be their friend, but how would you feel if all the people who want to be your friend, you had the alternative interpretation that they want material or social benefits that you could give them."[53]

Take the wildly popular and openly gay novelist Stephen Fry, who attempted suicide after interviewing a Ugandan politician who sought to make homosexuality punishable by death.[54] Soon after the encounter, Fry "paced around trying to analyse what it was that had disappeared from me. It seemed as though the whole essence of me had disappeared. Everything that was me was no longer there. Just some feeling came over me that this was the end."

After consuming as many pills and as much vodka as he could round up, he was found unresponsive in his hotel room by his TV producer and the hotel staff, who had broken down the door to his room.[55] "How can someone so well-off, well-known and successful have depression?" he later wrote on his website.

> *Lonely?* I get invitation cards through the post almost every day. I shall be in the Royal Box at Wimbledon and I have serious and generous offers from friends asking me to join them in the South of France, Italy, Sicily, South Africa, British Columbia and America this summer. I have two months to start a book before I go off to Broadway for a run of *Twelfth Night* there.
>
> I can read back that last sentence and see that, bipolar or not, if I'm under treatment and not actually depressed, what the *fuck* right do I have to be lonely, unhappy or forlorn? I don't have the right. But there again I don't have the right *not* to have those feelings. Feelings are not something to which one does or does not have rights.
>
> In the end loneliness is the most terrible and contradictory of my problems.

What has gone so wrong in our society that loneliness is so rampant? For one, there is a stigma against admitting loneliness and a taboo against openly wanting to make new, close friends. But this is just one part of a larger picture. "We are doing things that are just so unnatural with regards to our need for social connection, and then we wonder why we're not

What has gone so wrong in our society that loneliness is so rampant?

feeling connected," observes Emma Seppälä, science director at the Center for Compassion and Altruism Research and Education at Stanford University.[56] Seppälä continues:

> The way we are prioritizing our life, and what we are prioritizing, often goes against our greatest need for belonging. Whether it's material goods or pleasures, financial advancement, or social advancement, we're missing the point completely. We're not seeing that our greatest happiness comes from connection, whether from family or religious or social community, something greater than yourself, something transcendental. We are so lost and there's a reason why so many people feel lost and anxious and depressed and lonely.[57]

Let's start with money.

MONEY, MONEY, MONEY

While it certainly takes a certain amount of money to meet our most fundamental safety needs and even get an opportunity for growth and development (see Chapter 1), money is no guarantee that any of the other needs of humanity will be satisfied in a healthy fashion. You can clearly see this all around the world: despite things getting better economically, a pervasive sense of anxiety, loneliness, and social isolation still pervades even those with financial security.

Many countries that are economically deprived nevertheless find ways of increasing social belonging among their inhabitants. Even studies conducted in the slums of Calcutta, India, show that the levels of life satisfaction among inhabitants are higher than those of the average American (although not as high as the richest people in India)![58] Also, there are plenty of examples of people who choose an "environmentally friendly" or "voluntarily simplistic" lifestyle, who also score high in life satisfaction despite their low income.[59]

In fact, research shows that, beyond a certain point, having more money can even be *detrimental* to growth and happiness. For one thing, more money tends to increase the materialistic drive, and materialism has

been linked to decreases in happiness over time.[60] We adapt quickly to the rewarding feeling of getting more money—what's often referred to as the "hedonic treadmill"—leading to the constant feeling that no amount of money will ever be enough. As one team of researchers put it, "The cycle [of] . . . thrilling purchase, excitement fade, and subsequent desire for new material possessions . . . lends itself to materialism and decreased well-being."[61]

More money also gives us more choices, and research shows that not only can more choices be overwhelming and stressful—"the paradox of choice"—but those who earn more than $100,000 a year spend more of their time engaging in unenjoyable activities (e.g., grocery shopping, commuting) and less time engaging in leisure than those earning less than $20,000 a year.[62]

More money also tends to make people less egalitarian and less empathetic toward strangers.[63] Households that earn more than $100,000 a year donate a smaller percentage of their income to charity than those earning less than $25,000 a year.[64] Even participating in an experience that makes you feel that you occupy a higher relative social class makes you less likely to give to charities than if you feel you are from a lower social class.

Valuing money is equally detrimental to satisfaction. Those who value money as a source of happiness report being less satisfied with their lives, and when people work explicitly toward goals involving wealth, fame, or beauty, their well-being decreases.[65] Even the simple act of noticing small amounts of money while engaging in another enjoyable task (e.g., savoring a piece of chocolate) reduces enjoyment of that activity.[66]

The message is clear: beyond a certain income (enough to make you feel safe and secure), how you spend your money becomes more important than how much money you have.[67] One key distinction is between *material* purchases and *time-saving* purchases.[68] One large-scale study found that using money to delegate to others unwanted tasks such as cooking and cleaning is associated with higher life satisfaction, even after controlling for income.

Another key difference is between *material* purchases and *growth* purchases. Money that is used to foster personal growth—such as contributing to a charity, taking vacation and retreats with family and coworkers, or choosing housing that's closer to fostering a community or for engaging in opportunities to master a skill or hobby—is more associated with life satisfaction and well-being than spending money on material goods.[69] In fact, inducing people to think about having more time for meaningful social connections increases feelings of happiness, studies show, whereas priming people to think about money has no such effect.[70] Just how much is connection worth? In one study, researchers concluded that friends are worth more than a new Ferrari.[71]

An often-overlooked growth purchase is therapy. Research shows that psychotherapy can be highly cost-effective in satisfying people's need to be seen; it is at least thirty-two times more cost-effective in raising life satisfaction than merely gaining more income.[72]

Looking at all of this research, Rabbi Hyman Schachtel really seemed to be onto something when he said, "Happiness is not having what you want, but wanting what you have."

SOCIAL MEDIA

People will tear you apart and if you're not strong, it'll just rip through your soul. . . . [P]eople will be like . . . "You need to get your likes up." How about I try liking myself? That'll be actually a challenge.

—Social media influencer Brittany Furlan, *The American Meme* (2018)

Excessive social media use is often cited as another culprit of modern loneliness. Today there are many social media outlets to offer the allure of connection, including Facebook, Twitter, Instagram, Tumblr, and Snapchat. There are more ways to be popular to the masses, even if for just a moment, than at any other time in the history of the planet.

To be sure, for some, social media may be the only way to connect with others, and it has enormous potential for fulfilling the need for connection. Social media can be particularly essential for those with disabilities. As Asaka Park, an autistic teenager, put it, "Social media gives [disabled people] access to a social life and community involvement in an otherwise inaccessible world."[73] Having a healthy integration of Facebook and the Internet with the rest of one's life is possible and can be conducive to forming lasting friendships.[74]

The use of dating websites can also be beneficial to the growth of relationships: one study found that couples who met their spouse on a dating website that allows connection on a number of meaningful criteria reported greater satisfaction and experienced fewer divorces.[75] Nevertheless, this is not how most people use social media. The superficiality of Tinder and the push for ever more "friendships" on Facebook work against the deepening of any one connection.

Social media simultaneously enlarges the possibility of forming loving relationships while also making it easier to avoid forming meaningful ones.

Consider this modern paradox: social media simultaneously enlarges the possibility of forming loving relationships while also making it easier to avoid forming meaningful ones. This is due, in part, to the allure of mass acceptance over individual connection, a powerful, evolutionarily deep-seated allure that is steering us away from wholeness. One recent study that tracked social media habits over a few weeks found that Facebook use was associated with lower feelings of happiness and life satisfaction.[76] Interacting online with people directly (not just through "likes" and viewing their page), however, did not produce these negative outcomes. "We've gone against our instincts, and we have fewer and fewer moments together," notes Emma Seppälä. "There is something we are doing here that is profoundly unnatural yet is going against what we really desperately need, which is connection."[77]

Maybe we can learn something from cultures that prioritize high-quality connections over belonging and acceptance.

BLUE ZONES OF CONNECTION

In cultures that foster face-to-face interactions, people tend to be highly satisfied and live long lives. Author and explorer Dan Buettner investigated groups around the world, including the people of Ikaria, a Greek island in the Aegean Sea.[78] Living to one hundred is common among the Ikarians. What's their secret?

Healthy diet and moderate exercise certainly play a role. But those factors are part of a larger web of mutually reinforcing strands that all add up to longer, healthier lives. Inhabitants report that they care little about money. "For many religious and cultural holidays, people pool their money and buy food and wine to be shared communally. If there is money left over, they give it to the poor. It's not a 'me place.' It's an 'us place,'" noted one of the island's few physicians, Dr. Ilias Leriadis.

The social structure is particularly important. Instead of high social media use, inhabitants enjoy frequent face-to-face interaction and social support. "Even if you're antisocial, you'll never be entirely alone," writes Buettner. "Your neighbors will cajole you out of your house for the village festival to eat your portion of goat meat." The Japanese notion of *ikigai* (the reason for which you wake up in the morning) is pervasive. "It gets centenarians out of bed and out of the easy chair to teach karate, or to guide the village spiritually, or to pass down traditions to children."[79]

The elderly in Ikaria are celebrated and kept engaged in the community; they live with their extended family until well into their one hundreds! As one 101-year-old Ikarian put it, "We just forget to die." Americans, by contrast, "shut the elderly away," says Seppälä.[80] Buettner's findings suggest that perhaps in addition to spending $30 billion a year on vitamins and supplements, $70 billion on dieting, and $20 billion on health-club memberships, Americans should also spend a bit more money on cultivating high-quality connections.

The science is clear: social connection is not a reflection merely of the expansiveness of your social networks, your popularity, or the number of people you know. The need for connection is most likely to be satisfied when we have secure, stable, and intimate connections with at least a few people in our lives. When we feel secure and satisfied in our relationships, we are much more likely to develop a stable sense of self-worth and mastery. However, when our need for connection is severely thwarted, we tend to display a much more insecure need for belonging and care much more about status and popularity.[81]

Since we are such a social species, it would make sense that the need for connection is not only concerned with intimacy and relationships but also has a tremendous impact on our self-esteem. Let's turn now to the final plank in the foundation of our sailboat, the need for a healthy, secure self-esteem that will allow us clearer sailing.