Essential Elements FOR Effectiveness

OPTIMAL FUNCTIONING THROUGH POSITIVE PSYCHOLOGY

SEVENTH EDITION

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Laurel Brucato
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Optimal Functioning Through Positive Psychology

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Preface

Hey you! Yes, you. We *are* talking to you. At least that's what we would really like to establish with you - a dialogue. Now you might ask yourself: "What do you mean . . . a dialogue? To dialogue takes two people; all I have is me and this book!" But that's not true. You have your classmates, your professor, your friends, your family, *and* this book. We sincerely hope that you take the principles and ideas contained within its pages and discuss them. Talk about them. Consider their validity. And most importantly, try them out in your own life.

You see, the material you encounter in this book will best serve you if you use it. We recognize that using it will likely require some changes on your part. And we all know that changing is not always easy. Dialogue about that too. With others for support, explore ways in which what you are learning can have an impact in your life. Expect it to happen, and you might be pleasantly surprised.

So, let's begin. To make the most out of this book, we suggest you take a moment to think about what motivated you to pick it up. Why are you reading it? Even if your initial response is that it was required for the course, think . . . is there something else you want to get, other than a good grade, from reading this book? If you were able to change something as a result of your experience with this book, what would that be? What would be different about you? How would you look, feel, and act differently? Take a moment now to think about these questions.

There is a story about a group of scientists who were walking along the countryside when they saw a field of fruit-bearing trees. A local inhabitant told them that the fruit was called "Mango" by the natives of this land. This kind of fruit was unknown to them and they wanted to learn all they could about it. Half of the scientists went into one side of the field and began measuring the mangoes' weight and their size. They noted the color and the shape and recorded their findings. These scientists now *knew about* mangoes. The other half of the scientists went into the field; each took down a mango from the tree and tasted it. These scientists *knew* mangoes.

Did you do what we suggested in the first paragraph? Did you take a moment to think about what you wanted to get from using this book? If you did, you are like the scientists who ate the mangoes. Continue tasting what we have to offer and we can promise that you will notice a significant positive difference in your life. But if you didn't, your tendency might be to read this book much like the scientists who measured and weighed the mangoes. With that approach, this book might provide you with some interesting facts and general knowledge, but it is doubtful that it would create any significant changes in your life. The material discussed in this book will work for you only if you use it; only if you *do it*. Merely knowing about it is not enough. So if you have not considered the questions posed earlier, we invite you to go back and think about what you want to get, how you want to be different, and notice the results *after* you've tasted the mangoes. This way, you will not just know a lot *about* effectiveness when you are done. Instead, you will know how to *be* effective.

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The authors would like to thank all of the faculty members who have used our book for their invaluable feedback and encouragement in the development of this edition. Your comments and your anecdotes about students have been inspiring. We would also like to acknowledge and thank the many students who have not merely read, but used this book in their lives and shared their experiences with us.

Section One

Personal Effectiveness

This applied Positive Psychology textbook has been organized into three umbrella sections, recognizing the fact that optimal functioning occurs within three broad domains: (1) your personal life, (2) your interpersonal relationships, and (3) your work life. Effectiveness in each of these wide-ranging areas depends upon mastering core attitudes, behaviors and habits which are presented in this volume in a building block approach. Since success in relationships depends, at least in part, on developing habits of effectiveness in our personal life, we have begun with this domain. Likewise, in large part, effectiveness at work hinges on interpersonal effectiveness, hence the order of presentation. This first domain, that of Personal Effectiveness, covers a wide range of topics spread over eight chapters. These include how to change our paradigms, how we adopt effective mindsets, how we balance our self-esteem, how to motivate ourselves for and sustain achievement, how to master stress and adopt a healthy lifestyle as well as how to create life satisfaction. Lastly, we address how to find meaning and purpose in our life and the process of setting goals based on our purpose.

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Chapter 1
A Reality Check

Learning Objectives

After reading this chapter, you should be able to:

1.1 Explain how the processes of sensation and perception shape our understanding of external reality.

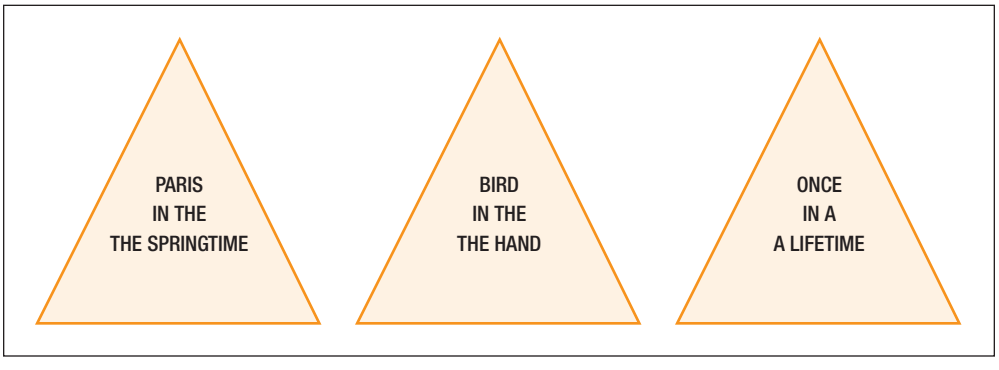
1.2 Describe how paradigms (frames of reference) help us to categorize and interpret our experiences.

1.3 Explain the role of paradigm shifts in the history of science and your everyday life.

1.4 Identify the key elements of Positive Psychology and how they relate to effectiveness.

1.5 Explain the relationship between reframing and paradigm shifts.

1.6 Describe neuroplasticity and how to maximize it.



What do you think you just read within the three triangles above? Are you sure? Why don't you go back and read them again just to make sure and come back to this point. * Are you still seeing "Paris in the springtime", "Bird

in the hand", and "Once in a lifetime"? After all, you certainly know how to read five little words. If you are so sure, would you be willing to bet your car on this? What about betting your next year's entire income? When we present this to our students in class, some of them are not willing to bet anything because they figure that something is up if the professor is setting the stakes so high and willing to wager at the same level. A small minority are not willing to bet because they recognize that it does not say what the majority of their classmates think it says. But the overwhelming majority of students are willing to bet their most prized possessions. Because after all, they can certainly trust what they see! They certainly *can* read three simple five word sentences. What about you? Did you see the double "the" and the double "a"? At what point did you see it? When you first read it, or when we invited you to reread it, or even after that? You know why? Because we really don't see what is there; *we see what we think is there*. And, believe it or not, this doesn't happen just with clever, little, five word, optical illusions like we presented above, this happens in every area of your life. Every time you face a situation, what you perceive is dependent as much upon your perspective as it is upon external reality. It turns out that reality, as we see it, is a movie generated by our brains. Because we don't realize this, we are far too confident that the stuff appearing in the movie is actually "out there" in the world when, in fact, it is not.

1.1 Sensation vs. Perception

Explain how the processes of sensation and perception shape our understanding of external reality.

To better understand how this is so, let's consider an important distinction within the field of psychology; the difference between *sensation* and *perception*. **Sensation** involves the process of receiving stimuli from our surroundings, such as light waves or sound waves. These then activate the receptors in our sensory organs, our eyes or ears in this case. Finally, through a process called transduction, the signals are translated into electrochemical impulses within our nervous system and brain. **Perception**, on the other hand, occurs when our brain interprets those electrochemical impulses and ascribes meaning to them. Perception, you see, is the process of attempting to understand the stimulation we receive. But the sheer amount of stimuli that impinges upon our senses is too much for us to capture it all. There are just too many things to hear and feel out there. In order to understand, before interpreting the stimuli, we must necessarily limit and organize it. Thus, not all the information available to our sensory organs ends up being perceived. Psychologists call this process of sensory analysis that begins at the entry level and works up as *bottom-up* processing.

A great example is **selective attention**, the fact that we focus our consciousness on only a partial aspect of all that we are capable of experiencing.

To illustrate this, consider the results of a famous experiment wherein subjects watched a short, one-minute scene of three men wearing white shirts passing a basketball, which was superimposed on a scene of three men wearing black shirts engaged in the same activity. The subjects were then asked to count the number of times the men wearing the black shirts passed the ball. About halfway through the video, a woman carrying an open umbrella slowly walked across the screen. The subjects, focused on the passes thrown by the men in black, totally failed to register the appearance of the woman. When they were subsequently shown the scene with their attention drawn to that specific aspect, they were extremely surprised to see the woman (Neisser, 1979, and Becklen & Servone, 1983).

In addition, we build our perceptions not just on the sensations traveling "up" to our brain, but also on our experiences and expectations coming down, in more of a top-down approach. Not surprisingly, psychologists call this *top-down* processing. In a classic experiment, psychologists Bruner and Postman (1949) cleverly demonstrated the fact that what we see does not always correspond to what is really there. These researchers created a standard, North American deck of playing cards except that some of the suit symbols were color reversed. For example, the nine of diamonds had black-colored diamonds instead of red. These special cards were shuffled into an ordinary deck, and then were displayed one at a time to subjects who were asked to identify them as fast as possible. At first the cards were shown very briefly, too fast for accurate identification. Then the display time was gradually increased until all the cards could be identified. The interesting thing is that while all the cards were eventually identified with great confidence on behalf of the participants, none of the subjects noticed that there was anything peculiar about any of the cards! Subjects identified the red six of spades as either a six of spades or a six of hearts, but were not aware that anything was amiss. When the display times were lengthened even more, subjects hesitated and got confused, making comments such as, "this is a six of spades but there's something wrong," but still had difficulty determining what was out of the ordinary. Subjects were eventually able to identify the cards as being the wrong color only when display times were greatly lengthened.

This result illustrates **selective perception**, the fact that we see what we expect to see, and not necessarily what is there to see. Neuroscience sheds light on how this happens at a neuronal level. When we perceive something a whole *network of neurons* in our brain is activated, not just a single brain cell. This allows us to recognize something even if a cell is damaged. This is called **distributed processing** which enables our brains to be very efficient in processing information. Distributed processing also accounts for the fact your brain can construct images even when no information is coming to your eyes, merely by firing a network. In fact, the brain structures used to imagine something are the same as those that process visual stimuli when you actually see it (Farah, 2000). That is one reason why it has been estimated that as much as 60% of vision is imagination.

The world that ends up being represented in our head, then, has been filtered by the stimuli we select to attend to, the way we organize that stimuli, as well as our expectations and past experiences. On top of that, our brains literally guess what we are seeing. To protect you from being inundated with information processing, your brain makes forecasts about what it is seeing, and changes these predictions only when it makes an error, a process called **predictive coding**. For example, did you know that for all humans there is an actual hole in the retina resulting in a blind spot? However, you don't actually see this black hole in your visual field, despite the hole in your retina. Your brain mentally fills in this void with its best guess of what should be there, much like how your cell phone tries to predict what you are texting. In our everyday life, sensation and perception blend into one continuous process and we are not aware of the distinction just described. The reality we perceive is nonetheless created by it.

Questions

1. The fact that we focus our consciousness on only a partial aspect of all that is in front of us is called _____.
   - **A.** sensation
   - **B.** perception
   - **C.** selective attention
   - **D.** transduction

2. _____ occurs when our brain interprets sensations and ascribes meaning to them.
   - **A.** Predictive coding
   - **B.** Selective attention
   - **C.** Distributed processing
   - **D.** Perception

3. The fact that we see what we expect to see and not necessarily what is there is called _____.
   - **A.** perception
   - **B.** selective perception
   - **C.** distributed processing
   - **D.** sensation

1.2 The Concept of Frames

Describe how paradigms (frames of reference) help us to categorize and interpret our experiences.

How you view any event or situation in your life is greatly influenced by your expectations, your beliefs, and your pre-conceived notions. This "way of seeing things" has been called by different terms that mean the same thing. Thomas Kuhn (1962) referred to it as a **paradigm**, in his landmark book, *The Structure of Scientific Revolutions*. Others have called it a perspective or a mind map or a **schema**. We prefer to call it a "frame." Have you ever had an unframed print, painting, or photo which you later got framed? Can you remember when you first saw your picture with its new frame? Didn't it look clearer somehow, more in focus? It was finished now. Can you recall the sense of satisfaction you experienced when you put it on display and stood back? Each and every one of us is adept at developing **frames of reference** or paradigms to enable us to organize and understand our world, our perceptions, our experiences. In every situation in which you engage, you eventually put a frame of reference around it in order to understand it, to make sense out of it. Most of the time this happens instantly and you are not even aware of it.

So how do frames help us? When you are "confused" about something, it takes longer to sort the experience into a frame of reference. Indeed, that is one definition of confusion: the inability to make sense of something or *place it within a frame*. Once we have developed a frame of reference, it is ready to help us more quickly interpret our experience the next time we encounter it or a similar one. Our brains are hardwired, genetically programmed, to create frames of reference to organize our experiences. Without this inherent ability to construct frames the world would be a very perplexing and unpredictable place. We would have to figure out each experience again and again if we didn't have frames in place to help us make sense out of our world.

Experiences are made up of multiple perceptions, sensations and bits of data which we need to categorize. For instance, imagine this situation. You are home alone and have just crawled into bed and it is really late. It is very dark and quiet. As you are just about to fall asleep you suddenly hear something moving near your front door. Then you hear a loud, scraping sound. You worry, "Is someone trying to pick the front door lock? What should I do if they break in?" You feel confused, threatened, and fearful. Sensing danger, you wonder what you should do next . . . should you call the police? Cautiously you creep over near a front window and silently peek out. There he is! You see a huge possum on your front porch clumsily moving around. Instantaneously your frame changes, and at the same moment, your thoughts, feelings, and your behaviors shift as well. You no longer think you are in danger; you now feel relieved, beginning to relax. You yell and make a banging noise on the door which scares him off, and you head back to bed. Think how powerful your frames are in determining your thoughts, your emotions, and your behavior. The very moment your perspective of the situation changed, so too did your whole being!

Figure 1.1 The Nine Dot Problem

You are fortunate that your brain is predisposed to develop frames of reference that were shaped by your learning history, including what you learned from your parents, your peers, in school, your place of worship, from the media and our culture. Some frames of reference remain in flux, but most become fixed. In fact, the more a frame of reference is used, and the more successful it is in helping you to derive meaning from your experiences, the more firmly your brain stores this frame. You tend to forget that it is only a paradigm, a frame, a habitual way of viewing things. The ability to recognize that you are operating within a frame, and shift that frame when appropriate, enhances your flexibility of thought and ability to solve problems. So how well can you do this? Try this problem now. **Connect the nine dots using only four straight lines and not lifting your pen off the paper.** By the way, use a pencil for we guarantee you will need to erase!

Were you able to solve the problem? If you are like most people you will find that it takes you five lines to be able to connect all the dots without lifting your pencil or bending the lines. Is this problem impossible to solve? It is only if you stay within the parameters and limitations of your current frame. We suggest you try going outside the box. When you look at the nine dots, what do you see? If you had to give those dots a name, other than "nine dots", what would you call it? Most people would call it a square or a box. Change that frame. As long as you hold onto the paradigm that this is a square and act accordingly, you will be unable to solve the problem. Go ahead and try it again, this time allowing yourself to go beyond the square. Were you successful? If not, here's another hint. Can you see it as a sort of an arrow? Adopting this frame of reference might help. If all else fails, go to the end of the chapter for the solution to the nine dot problem.

In another exercise designed to give you practice with shifting your frame of reference, look at the optical illusions presented on the next page. These illustrations represent what psychologists refer to as **ambiguous figures**. In the real world, we are faced with ambiguous stimuli and sensations all the time. The recognition that your perceptions are not reality, but just your perceptions, can facilitate the development of flexibility of thought, improved problem solving, and ultimately your effectiveness as a human being.

Figure 1.2 Is the Book Looking towards you . . . Or Away From You?

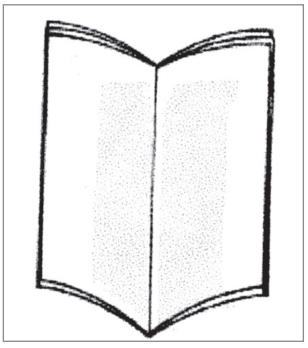


Figure 1.3 Woman in Vanity . . . Or Skull?

Hint: Move the book a bit farther away from you to see the skull or the woman looking at the mirror.

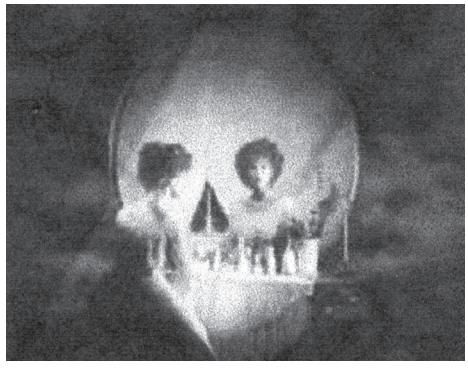


Figure 1.4 Man Playing Horn . . . or Woman Sillhouette?

Figure 1.5 A Rabbit . . . Or A Duck?

Hint: The duck is looking to the left, the rabbit is looking to the right.

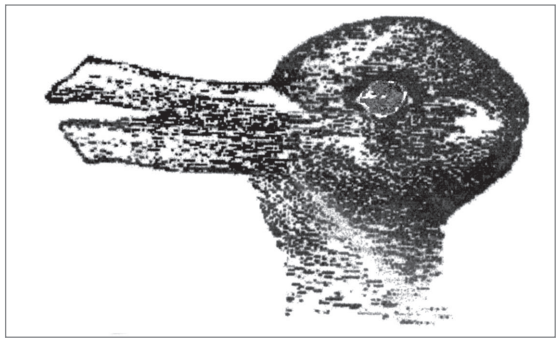
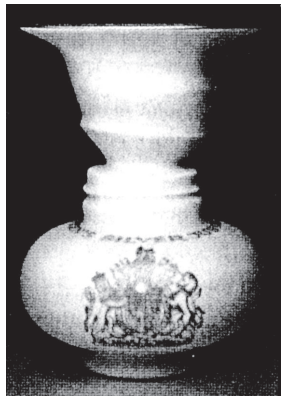


Figure 1.6 Old Woman . . . Or Young Girl?

Hint: The old woman's nose is the young girl's nose and chin.

Figure 1.7 A Vase . . . or Two Faces?



Questions

1. Humans are adept at developing _____ to help us organize and understand our world.
   - **A.** websites
   - **B.** encyclopedias
   - **C.** alternative facts
   - **D.** paradigms

2. The ability to create frames of reference _____.
   - **A.** is unnecessary
   - **B.** is hardwired into our brain
   - **C.** leads to confusion
   - **D.** leads to criminal behavior

3. When we are unable to place something within a frame of reference, we are _____.
   - **A.** in danger
   - **B.** lucky
   - **C.** confused
   - **D.** happy

1.3 Paradigm Shifts and the History of Science

Explain the role of paradigm shifts in the history of science and your everyday life.

Paradigms have also played a major role in the history of science. As Thomas Kuhn observed, most major scientific discoveries are preceded by a **paradigm shift** a change in the overriding theoretical framework that governs a scientific discipline. Kuhn described in great detail how almost every significant breakthrough in the field of scientific endeavor is first a break with tradition, a break with old ways of thinking, a change of old paradigms. For example, in the field of astronomy a paradigm shift occurred after a long, hard fought struggle that spanned centuries until scientists finally accepted the fact that the earth revolved around the sun, instead of the earth being the center of the universe. Similarly, germ theory revolutionized medicine, but was initially resisted by those who found it incomprehensible that there could be infectious agents that

could not be seen with the naked eye. Indeed, the reason we invented such tools as the microscope is that we believed in the possibility of extremely small, unseen creatures like germs.

In the *Structure of Scientific Revolutions,* Kuhn observes that the history of scientific advancement is a result of paradigm shifts. What Kuhn refers to as "normal science" proceeds by building a foundation of research and data based upon proving and expanding existing theoretical paradigms. But invariably anomalous results begin to turn up, findings which cannot be understood or accounted for by the overriding paradigm. Often these anomalies are ignored or discounted. Scientists who reveal or publicize these seemingly bizarre results are dismissed, and often even discredited within their profession. New theories or paradigms which attempt to explain the anomalies by expanding or changing the existing paradigm are often treated as heresy. Inherent in this is a struggle between the old guard of a discipline (who believe that they have the truth) and the mavericks who dare to challenge the accepted paradigm. It is no wonder that successful challenges to existing paradigms often come from outside the discipline, developed by individuals with a fresh perspective or different viewpoint. Eventually, the mass of anomalies builds to the point where the discipline must become open to a new paradigm in order to stay viable. Thus a scientific revolution occurs when the paradigm shifts. This may occur suddenly, but typically, given the resistance of the old guard, this is a more gradual process. Two or more paradigms may coexist for a while with separate adherents, but eventually the paradigm with greater predictive value will win out. But Kuhn was primarily describing the process of change within the natural sciences. The process of change in the social sciences tends to be more incremental and appears to be more a process of gradual paradigm shift or paradigm expansion.

A good example of a gradual paradigm expansion exists within the field of psychology. Early in the 1900's Sigmund Freud posited his theory of psychosexual development. Initially this appeared to explain the development of mental disorders and it provided a framework for the treatment of emotional difficulties. It was the first global theory of how personality was formed and it described both normal and abnormal behavior. This new paradigm stimulated the development of a new treatment modality, that of talk therapy, and it provided avenues for new research. But then holes began to appear in the theory. Psychoanalytic theory was a cumbersome model for explaining many emotional problems and psychoanalysis as a treatment often failed. Psychoanalytic theory had great explanatory value, but little if any predictive value. Competing models were developed.

Learning theory explained behavior in terms of conditioning and reinforcement (i.e. rewards and punishment). These theorists were called Behaviorists since they believed that behavior was not a result of repressed psychosexual impulses, as Freud believed, but was driven by the consequences that followed the behavior. At around the same time, humanistic thought came into prominence. The

humanists held man to be not quite as dark as Freud postulated, driven by sexual and aggressive impulses. Instead, they professed that humans are driven to continually improve themselves, to move towards self-actualization.

Each of these perspectives was a reflection and a natural outgrowth of the population studied. For example, Freud's patients were primarily neurotic females living in a highly repressive Victorian society. Behavior theories stemmed primarily from laboratory research (often with animals) such as the pioneering work of Ivan Pavlov on classical conditioning, and B.F. Skinner on operant conditioning. Humanistic theories evolved from studying the best society had to offer as evidenced by Carl Rogers' research with college students, and Abraham Maslow's work with highly successful, self-actualized individuals. In fact, Maslow initially studied gorillas, but they were the most dominant gorillas in the pack. With such varying experiences influencing their observations, no wonder such different paradigms emerged. For many years, perhaps even up until the present, these different frames coexisted which led to continual debate about what was truth in psychology. Currently, the majority of psychologists would agree that one of the best and well researched approaches for explaining and predicting human behavior is the Cognitive-Behavioral model. This is especially true when it comes to understanding psychopathology and abnormal behavior. Freud's original paradigm, while not completely discarded, has been greatly expanded and refined. So, to quote Kuhn:

> *. . . the historian of science may be tempted to exclaim that when paradigms change, the world changes with them. Led by a new paradigm, scientists adopt new instruments and look in new places. Even more important, during revolutions scientists see new and different things when looking with familiar instruments in places they have looked before. It is rather as if the professional community had been suddenly transported to another planet where familiar objects are seen in a different light and are joined by unfamiliar ones as well. Of course, nothing of quite that sort does occur: there is no geographical transplantation; outside the laboratory everyday affairs usually continue as before. Nevertheless, paradigm changes do cause scientists to see the world of their research-engagement differently. In so far as their only recourse to that world is through what they see and do, we may want to say that after a revolution scientists are responding to a different world* (p. 111).

Questions

1. Scientific development is facilitated by _____.

A. the old guard

B. selective perception

C. irrational thinking

D. paradigm shifts

2. Paradigm shifts _____.
   - **A.** are a primary cause of mental illness
   - **B.** are typically met with resistance by the old guard
   - **C.** do not exist
   - **D.** typically happen very easily

3. Paradigm shifts in the field of psychology have _____.
   - **A.** never occurred because the field has not changed since its inception
   - **B.** been rapid and frequent
   - **C.** typically happened gradually
   - **D.** been irrelevant

1.4 Welcome to Positive Psychology

Identify the key elements of Positive Psychology and how they relate to effectiveness.

The paradigm governing psychology continues to shift and expand, most recently incorporating theory and research in the burgeoning field of **Positive Psychology** which is based upon the growing awareness that research and application in psychology has been incomplete, focusing primarily on understanding and fixing psychological problems. The ratio of journal articles about depression compared to happiness was approximately 100 to 1. There is a new emphasis on understanding and facilitating those healthy aspects of human functioning that make us effective in our lives due to the recognition that mental health is far more than the absence of mental illness. This expansion of the existing paradigm was named Positive Psychology in 1998 by Martin Seligman, the past president of the APA (American Psychological Association), who borrowed the term from an earlier work by Maslow in 1950.

As Martin Seligman (2002) tells it, the epiphany that led to Positive Psychology was set in motion by none other than his daughter Nikki when she was only five years old. According to Seligman, he used to be quite the "grouch." He was an overly serious guy who was very task-oriented and had little time for idle chit-chat, even with his family. One day Seligman was working in his garden and little Nikki was helping him, but she was being playful in that wonderful way young children have, as she was laughing, dancing, and tossing weeds in the air. Seligman got irritated and yelled angrily at her. Little Nikki decided at that time to give her daddy some constructive criticism, so she walked up to him and said,

> *Daddy, do you remember before my fifth birthday? From when I was three until when I was five, I was a whiner. I whined every day. On my fifth birthday, I decided I wasn't going to whine any more. That was the hardest thing I've ever done. And if I can stop whining, you can stop being such a grouch.* (p. 28)

At that moment Seligman had two life changing realizations. First of all, he realized what a curmudgeon he had become, and he vowed to change. But more importantly, he realized that raising his daughter, or any child for that matter, was not about correcting shortcomings, but about nurturing strengths. This was the ideological breakthrough that led to the development of Positive Psychology. Christopher Peterson (2006) talks about this watershed insight:

> *Psychology as it existed had little to say about these remarkable strengths . . . In Nikki's case these strengths included a precocious will to improve herself and the ability to challenge her grumpy father to find that same will within himself . . . To describe anyone in terms of the weaknesses and shortcomings they do or do not have is to ignore half of the human condition—the good half, obviously, that makes life worth living. And yes the garden was eventually weeded, and yes, Seligman became less of a grouch.* (p. 26)

1.4.1 Positive Psychology and Effectiveness

If Positive Psychology is concerned with the study of optimal human functioning, then what does this really mean? Optimal functioning is really just another way of talking about being an effective human being, by being successful in your personal life, in your relationships and in your career. You could say that the guiding questions of the Positive Psychology movement are: (1) What is it that makes individuals emotionally healthy, happy and effective? (2) What combination of skills, attributes, attitudes, talents and behaviors leads to positive emotions, mental health, and effective functioning? So when thinking about effectiveness, it becomes impossible to separate this from all we can learn from the field of Positive Psychology, as they have literally become one and the same. Positive Psychology also deals with many other fundamental questions about the meaning of life including such things as what is true happiness, whether virtue is its own reward, and what constitutes the good life, along with many other questions that will be addressed later in this text. The invaluable lessons from this domain are highly relevant to the study of what makes for an effective human being, as well as to the development of skills and attitudes necessary to function successfully in the world.

Positive Psychology is actually an umbrella term, the purpose of which was to bring together isolated lines of theory and research under one unified heading. These isolated topics were all avenues of psychological research and theory relating to what makes life worth living and how we enhance optimal human functioning. The seeds of Positive Psychology were sown well before 1998, in the Humanistic Psychology movement as conceptualized by Carl Rogers (1951) and Abraham Maslow (1970), in studies of giftedness (Winner, 2000), in conceptions of multiple intelligence (Gardner, 1983), in primary prevention programs based on wellness concepts, and in the human potential movement that was popular in the 1970s and 1980s.

1.4.2 Paradigm Evolution within Positive Psychology

The early conceptual underpinnings of Positive Psychology were built upon three main pillars:

1. The study of positive emotions and how to develop them more fully.
2. The study of character, of positive traits which include strengths and virtues.
3. The study of positive institutions which facilitate character building.

By implication the three are connected, although they certainly can function independently; positive institutions facilitate the development of positive traits which in turn help to promote positive experiences and emotions. However, Seligman (2011) in *Flourish*, has refined and updated his original theorizing. Initially, he proposed that the goal of positive psychology was to increase life satisfaction. Now he advises that the primary topic for positive psychology is **well-being** and the goal of positive psychology is to increase **flourishing** in our own lives and on the planet. In order to do this, positive psychology must focus on measuring flourishing and determining what factors facilitate its development. "Flourishing" is his term for optimal human functioning. According to Seligman, well-being theory is composed of five elements summarized under the acronym PERMA. The five elements of PERMA are:

P Positive Emotions – a wide range of emotions from contentment to bliss

E Engagement – being totally absorbed in an endeavor

R Relationships – having positive, healthy relationships with significant others

M Meaning – having a sense of meaning and purpose in your life, often involving belonging to or serving something bigger than the self

A Accomplishment – your ability to achieve your goals

Each of these five elements has three distinct properties:

1. It contributes to well-being.
2. It is pursued for its own sake.
3. It can be defined and measured independently of the other elements.

In a similar vein, Huppert and So (2009) measured flourishing in over 43,000 adults across 23 European nations. As a result of their findings they defined flourishing as having the three core features of positive emotions, engagement and meaning along with at least three of six "additional features" which consist of: self esteem; optimism; resilience; vitality; self-determination; and positive relationships.

So the field of psychology has expanded to include the study of effectiveness and flourishing, but inevitably there is an old guard that resists this paradigm expansion by insinuating that it is not scientific enough. These critics of Positive Psychology have dismissed it as "Happiology," or the superficial study of happiness when nothing could be further from the truth. While a study of positive

emotions, including happiness, is part of the relevant topics we will cover, the real intent of Positive Psychology is to help you discover what it means to live an effective and meaningful life.

1.4.3 Paradigm Shifts in Everyday Life

You too may have a built-in resistance to changing your own personal paradigms regarding your everyday beliefs. There is an "old guard" within each of us that wants to hang on to the old and familiar. And what compounds the problem is that most of what we perceive supports our original frame. Remember selective perception, the tendency to perceive that which we expect to be there? You see, when we frame something, we tend to see only that which lies within the frame. Phenomena outside of it tend to be ignored or labeled anomalies. More often than not, we need to see things differently in order to discover the truth that it is so. Or as we often tell our students, if not the truth, then a whole new pack of lies to be considered until a new, more useful pack comes along. For example, as Mark Twain in his witty and clever manner noted,

> *When I was a boy of fourteen, my father was so ignorant I could hardly stand to have the old man around. But when I got to be twenty-one, I was astonished at how much he had learned in seven years.*

After a few moments of reflection, or after considering several examples, most people realize that they too experience these everyday shifts in perception. Sometimes they are trivial and sometimes they are profound. As noted earlier, you may have a good laugh after discovering that you are only the victim of an aggressive possum and not the target of a home invasion. Or you may find that your anger over a slow driver impeding your progress subsides when you finally pass her and realize that she is older than your grandmother. Most of us have had the experience of disliking someone, perhaps even intensely, at first meeting and then becoming very good friends later on when we got to know that person. First impressions are not always accurate. Our paradigms about people can change significantly as we get to know and better understand them. Sometimes the shifts are quite dramatic. On 9/11 many people went from frustration to immense gratitude when traffic problems prevented them from getting to their jobs at the World Trade Center or to their plane flights that were subsequently hijacked by terrorists. As the Dalai Lama said, "Sometimes not getting what you want is a wonderful stroke of luck."

Life will shift our perspectives without asking. What is worth asking is, how can we shift perspectives deliberately when we want our lives to be different? Effective individuals appreciate the observation of Einstein who noted that, "the significant problems we face today cannot be solved at the same level of thinking we were at when we created them." In order to solve them you are required to experience a paradigm shift, or a reframe. In his 1991 book, *The Seven Habits of Highly Effective People*, Steven Covey emphasizes that effective people are adept at questioning their frames and recognizing that "the way we see the problem is the problem." Thus, what we are after here is helping you build your skills at changing the way you think.

The Global Perspective

Spaceship Earth

Where do you live? Most of us learned our address and phone number at a very young age just in case we got lost. As we grew, we were introduced to the importance of geography and colored many maps as we learned the names and boundaries of states, cities, continents, and countries. Your family may have owned a globe where you could see the whole world turn on its axis. Just as we have discovered a truer notion of our place in the solar system, galaxy, and universe, we are realizing a truer picture of our own planet. When the astronauts began to embark on journeys orbiting our world, virtually all were struck by the vision of this beautiful blue planet as seen from space. There were no lines, no boundaries demarcating one country from the next. No latitude or longitude lines could be seen. The Atlantic Ocean did not have huge letters floating on it so that it could be clearly identified. In Buckminster Fuller's (1970) words, the astronauts had the profound realization that while they were traveling in a spaceship themselves, they had just left the spaceship that all of us are traveling on, Earth.

Effectiveness, however you define it, requires an inhabitable, sustainable world in which to be effective. All of us are traveling together on this ***Spaceship Earth***. If the air is no longer fit to breathe, everyone's breathing will be affected. If the land can no longer support food production, everyone will eventually starve, some sooner than others. Modern humans have emerged in approximately the last 100,000 thousand years. For the vast majority of that time we functioned as hunter-gatherers. We took what we needed to sustain ourselves and moved on to let Earth naturally renew itself. Only 10,000 years ago we discovered agriculture and our population began its geometric expansion. Humankind unfortunately has been laboring under a very convincing yet false belief that we now call the "*fallacy of the commons*." For so long it seemed that we could fish, harvest trees, drill wells for water and oil without limit, and the planet was so large and abundant that there were no apparent consequences. Our best science now reveals that as untrue (Hartmann, 2004; Uhl, 2003). We are affecting the Earth, all of it. These changes that our choices are bringing about have no respect for borders.

James Lovelock (1979) in *Gaia: A New Look at Life* has proposed the Gaia hypothesis which posits that the Earth is not just the third rock from the sun with living organisms on it, but that Earth itself is alive and regulates itself to support the life on it. Humans and the choices they make are part of this process. How might your choices regarding the life you want to live be affected if your paradigm shifted and you saw the fate of yourself, your loved ones, and all of life inextricably linked as passengers on the same spaceship?

Questions

1. The emphasis on studying healthy aspects of human functioning, on effectiveness, and on mental health has been brought together under the heading of _____.

A. experimental psychology

B. social psychology

C. positive physiology

D. positive psychology

2. Which of the following is an element in PERMA?
   - **A.** Mental Illness
   - **B.** Accomplishment
   - **C.** Religion
   - **D.** Assertiveness

3. What interferes with our ability to shift the everyday paradigms in our daily life?
   - **A.** predictive coding
   - **B.** the old guard within us
   - **C.** thinking outside the box
   - **D.** open-mindedness

1.5 Reframing

Explain the relationship between reframing and paradigm shifts.

There is an oft-repeated story of a Chinese farmer that goes something like this...

> *A farmer and his only son were busily plowing their fields when their horse broke free from its harness and ran off into the nearby hills. When their fellow villagers heard of their plight they began to commiserate, "Oh, what terrible luck! How unfortunate! What will you do?" To which the farmer responded, "Good luck, bad luck...who knows?" Several days later the farmer's horse returned with two other horses in tow. His fellow villagers were astonished as they exclaimed "What wonderful luck! You lose your only horse and end up with three!" To which the farmer responded, "Good luck, bad luck...who knows?" Several days later the farmer's son was attempting to break one of the horses so as to put it into service on his land. The son was thrown from the horse and broke his arm. All the villagers were united in their opinion that this was indeed bad luck. The farmer as usual responded, "Good luck, bad luck ... who knows?" The very next week the Imperial Army marched through their village conscripting all the able-bodied young men into the service. The farmer's son was spared due to his broken arm. The villagers were once again impressed with this man's extraordinary good luck and told him so. And he replied, "Good luck, bad luck....who knows?"*

This story illustrates what we call **reframing**, the process of actively changing perspectives to create paradigm shifts. Because the farmer was able to see things differently (i.e. think about them differently than his fellow villagers) he was able to respond differently, and experience an emotional calmness and equanimity that evaded those around him. Reframing allows us to be creative, increase joy, reduce suffering, and solve problems. Ultimately, all the changes we will suggest that you make are changes in perspective supported by your actions. As with most things, this is easier said than done. However, be assured it is definitely easier on you to

learn to do it than to not do it. The primary obstacle to making this change is habit. Imagine riding in a cart on a dirt road for years always going to the same destination. After a while you don't need to steer or choose a direction. The wheels have worn grooves that simply and automatically take you to the same place time after time. If you see a new direction that you would like to pursue, that cart will still more easily go in the direction of the old path. Going down a new path requires a deliberate effort to lift the cart out of the grooves of the old path and onto the new. That old guard in you will want to keep things as they are. Within your brain something very similar happens where the equivalent of grooves are cut within the networks of frequently used neurons which access our paradigms. The first time you are presented with something, multiple neurons within the network might be involved. But by the sixth time, it has become much more efficient with most of the work accomplished by only a few neurons (Kalanit, Henson, and Martin, 2006). Yet this efficiency has a downside, as it creates limitations on our perceptions. Reframing requires a reconfiguration of the well-traveled network. This shift can be consciously initiated, but it requires deliberately engaging our frontal cortex by directing our attention and imagination in a different direction (Farah, 2000). Change takes time and effort. Sometimes it is relatively easy and sometimes it is challenging. It is almost always possible.

> *An adventure is only an inconvenience rightly considered.*
> *An inconvenience is only an adventure wrongly considered.*
>
> G.K. Chesterton

Consider these two differing viewpoints on the craft of acting. Actor Alec Baldwin was asking fellow actor Gene Wilder whether he preferred acting in the movies or acting on the stage in a theater. Wilder replied that he preferred movies because "They [the audience] can't come and get you." Baldwin replied that he liked the theater better because when he saw the audience he thought, "Look! They all came to see me." These are obviously radically different ways to view the same situation and they result in totally different experiences all based on the reality they create.

Reframing in its most basic form is simply asking the question: "Is there another way of looking at this?" There always is. Please understand that this whole book is a suggestion to reframe. Shifting to various perspectives on your personal journey will maximize the possibility of a life well lived or at least a life that is lived in the most enjoyable possible way. Since we are at the beginning of this long journey together, we are going to suggest two general strategies for reframing. Bring these as you explore the world and your story unfolding before you.

1.5.1 The Importance of Humor

> *An older gentleman approached his doctor with a problem. "Every morning at eight a.m. I have a regular bowel movement," he complained. His doctor was somewhat perplexed and responded, "That doesn't seem to be a problem to me.*

> *Most of my patients would be thrilled to have a regular bowel movement at eight a.m." The patient replied, "The problem is that I don't wake up and get out of bed until nine a.m.!"*

Humor is the most familiar way in which reframing is used. We are led to believe a situation is one way and then suddenly we see it differently through an amusing lens. This contrast leads to the experience of laughter. Whenever you can bring humor to your perceptions, your emotions can shift and your effectiveness is potentially increased. Lefcourt (2005) summarized much of the research data on humor and noted clear evidence that it can moderate the effects of stress, lessen depression, enhance immune system functioning, reduce the use of pain killers, and "be a positive asset in the survival and recovery from illness." There is even research documenting that laughter is conducive to creative thinking for problem solving, as well as for changing frames of reference in general. In one study (Isen,1991) psychologists found that subjects who watched a highly amusing video were much better at solving a complex puzzle where the solution required creative thinking about combining or using familiar objects in unusual ways. Subjects who only watched a neutral video were more prone to lapse into **functional fixedness**, wherein they got locked into thinking about using objects only in the most conventional or familiar ways, therefore they had far more difficulty solving the puzzle. The researchers concluded that laughter was instrumental in promoting flexibility of thought; that it literally seems to help people to think more expansively and associate more easily, making connections that might otherwise go unnoticed. This strongly implies that one way to help someone think through a problem is to tell them a joke.

Often our most interesting and funny tales are our descriptions of harrowing or embarrassing moments from our past, told from the safety of the present moment. As we step outside of the experience and see ourselves in it, we see it differently and we can therefore feel differently. You need strategies for modifying your feelings and emotions so that you can choose an effective response. Being able to laugh at yourself is one of the best. This is a simple strategy for changing your point of view and provoking humor. Imagine that your life is being videotaped and consider what this difficult moment might look like to your viewers. One of the authors discovered this strategy accidentally while moving a very heavy sofa with several friends.

> *The sofa was so awkward and heavy that everyone had to stop periodically to rest and readjust their grip. While we were doing this, I was intermittently warning all my friends to be careful not to set this large object on their feet. At that very moment I proceeded to lower the sofa onto my own foot! (And I realized that, indeed, it really was a very heavy sofa!) Just as my mouth was opening to ask for help, I mentally shifted to an outsider's view of my situation and started laughing hysterically. I had become Jerry Lewis or one of the Three Stooges, and I simply could not stop laughing long enough to speak. Luckily, my friends, also laughing now, realized I was pointing at my foot and removed the couch.*

While we still recommend being careful with heavy objects, this incident demonstrates the power of shifting your point of view. The pain and upset would have been far more intense had our colleague not been caught up in the hilarity of the moment. Perhaps even more importantly being able to laugh at oneself not only keeps us humble but gives us an endless and always available source of amusement.

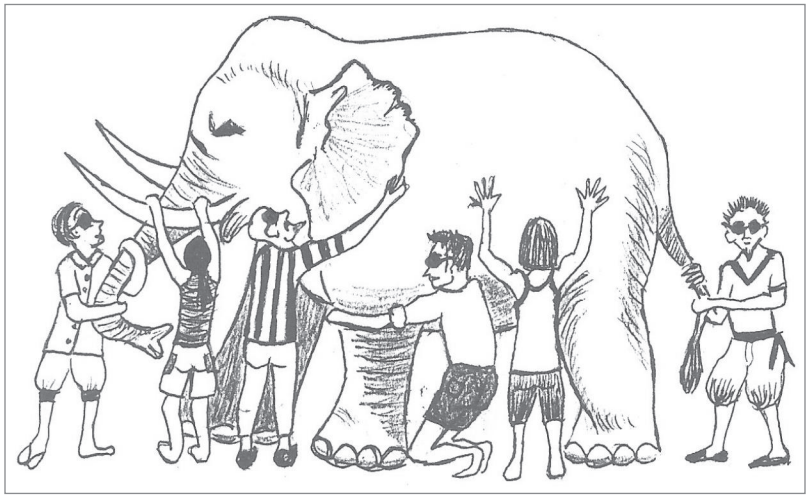
It is important to note the difference between the self-deprecating humor that we are referring to above and hostile humor which disparages others. Janes and Olson (2000) found that hostile humor is intimidating to people who merely observe it even though it was directed at someone else. These observers tend to become more sensitive to rejection and more afraid in general. The bottom line here is that the authors believe that hostile humor can lead to the social isolation of people who use it. So, while laughing at ourselves and with others can be a wonderful way to increase our sense of well-being and community, laughing at others is a far different matter. When we laugh at others, we risk, at the very least, incurring their anger or alienation. More than that, we risk becoming insensitive to the needs of others, and we fail to recognize our fundamental interdependence on other humans and forms of life. This brings us to the second important frame that we believe is fundamental on your journey to the good life, compassion.

1.5.2 Compassion: Opening Your Heart by Stepping into Their Shoes

One of the authors was educated largely in Catholic schools. To this day he considers it a mixed blessing because much of what he was taught, excessive guilt for instance, had to be overcome. However, one teaching from fourth grade always stuck with him. The phrase he was taught was, "There but for the grace of God go I." Whenever he saw someone in difficult circumstances, whether it was sadness, illness, disability, embarrassment, pain, or humiliation, he was urged to remember that under the right circumstances it could easily have been him. The message was to be grateful and be willing to help if you can. It could have been you. This, in essence, suggests a strategy for compassion. In humor we can step outside of ourselves and see ourselves. In compassion, we step into another's shoes and see through their eyes and feel what it is like to be them.

How often do we have conflict in our lives exactly because we failed to step into the other's shoes? There is a famous poem about six blind men in India who get into a heated argument about the nature of elephants. It seems that each of them approached the elephant at a different place and from a different angle, and each decided that he knew the true nature of the elephant. One decided it was like a wall because he had encountered the side of the animal. Another believed it was like a snake because he had grabbed the trunk. The others concluded that an elephant was really like a tree, a fan, a rope and a spear because they happened to approach from another angle. The poem concluded that they argued all night

Figure 1.8 What part of the elephant am I grabbing?



long about who was right and who was wrong. How much easier their evening would have been had they only taken the time to step into one another's places and feel what the elephant felt like from a different point of approach. Next time you find yourself in conflict with a significant other ask yourself, "What part of the elephant am I grabbing?"

There is a beautiful story from the Talmudic teaching tradition that illustrates the wisdom of compassion. The story is called *The Sorrows Tree*. The Sorrows Tree is the place where all souls go after they die. They go to the tree to hang the burden of sorrows that they carried in that lifetime on a branch of the tree. The magic of the tree is that as you hang your sorrows up you get to see and feel the sorrows that all the other souls have left. You are then asked to choose a new batch of sorrows from the tree for the next lifetime that you will lead. Once each soul gets to really know what it was like to feel another's pain, they invariably seek out their old bundle of sorrows since they don't seem so terrible after all.

Now we are not suggesting that many among us have not suffered extraordinary, greater than average difficulties, but we are suggesting that if you only knew what it was *really* like to be inside someone else's skin, you would feel and act differently. We can also come to know the gifts that have been received by those who have overcome great sorrow. Some losses are so great that the individuals who endure them become almost fearless in their approach to the remainder of their lives. What else can truly harm them if they survived that?

Be willing to shift perspectives. Learn not to take yourself so seriously by stepping outside of yourself. Learn to take life seriously by stepping into another's shoes.

Questions

1. Reframing involves _____.
   - **A.** always looking on the bright side of things
   - **B.** scientific progress in physics
   - **C.** putting a new frame on an old painting
   - **D.** significantly shifting how you look at things or view a problem

2. The process of reframing can be summarized by asking which question?
   - **A.** What should I do next?
   - **B.** Why am I confused?
   - **C.** Is there another way of looking at this?
   - **D.** What is in it for me?

3. When you get locked into thinking about things in the most conventional or familiar way it is termed _____.
   - **A.** reframing
   - **B.** functional fixedness
   - **C.** selective attention
   - **D.** PERMA

1.6 The Map Is Not the Territory – Neuroplasticity and the Brain

Describe neuroplasticity and how to maximize it.

Reality is an illusion, albeit a very persistent one.

Albert Einstein

So we invite you to always view your perceptions as just that: your perceptions; nothing more, nothing less. Your perceptions are like maps you use to get around in your world. Remember that a map is not the territory (Bandler and Grinder, 1975). It is just one representation of a territory. And some maps are more useful than others, depending on the circumstances. If you want to drive from Atlanta to Washington, D.C., you will need a good road map. A topographical map of the southeastern United States will be useless. On the other hand, if you want to fly a jet plane from Atlanta to Washington, D.C., a good road map will not help you, but a topographical map which helps you identify landmarks will come in very handy. The same is true of your perceptions. Given that we each have a unique set

of glasses which color our perceptions, it makes sense to wear the pair that will be most useful in a given situation. Be open to the possibility that the solution is found in a reframe. Actively seek reframes and you will find that the more you do, the easier it becomes. This is the result of what has been called brain plasticity or **neuroplasticity** the capacity of the brain to change its internal structure by reorganizing neural pathways, connections and functions based on new experiences. In addition, an area of the human brain is capable of growing new neurons in a process called **neurogenesis**.

It was once believed that as we aged, the brain's networks became fixed. In the past two decades, however, an enormous amount of research has revealed that the brain never stops changing and adjusting. For instance, London taxi drivers have a larger **hippocampus**, a structure in the brain responsible for memory and new learning, than London bus drivers (Maguire, Woollett, & Spiers, 2006). It is not a coincidence that, for the taxi drivers, this new growth (neurogenesis) occurs in the region of the hippocampus specialized in acquiring and using complex spatial information in order to navigate efficiently. Taxi drivers have to navigate around London whereas bus drivers follow a limited set of routes.

The same example of brain plasticity is also evident in the brains of bilinguals (Mechelli, Crinion, Noppeney, O'Doherty, 2004). People who speak two languages have a larger left inferior parietal cortex than those who only speak one language. It appears that learning a language facilitates these functional changes and then in turn, the changes facilitate the learning of the new language. Not surprisingly, once you have learned two languages, it becomes easier to learn three, four, or more. Another example of the malleability of the brain is the difference between musicians' brains as compared to those of non-musicians (Gaser and Schlaug, 2003). The investigators compared professional musicians (who practice at least one hour per day) to amateur musicians and non-musicians. They found that gray matter (cortex) volume was highest in professional musicians, intermediate in amateur musicians, and lowest in non-musicians in several brain areas involved in playing music: motor regions, anterior superior parietal areas and inferior temporal areas.

Finally, Draganski and colleagues (2006) recently showed that extensive learning of abstract information can also trigger changes in the brain. They imaged the brains of German medical students three months before their medical exam and right after the exam and compared them to brains of students not studying for the exam at that time. Medical students' brains showed learning-induced changes in regions of the parietal cortex as well as in the posterior hippocampus. These regions of the brain are known to be involved in memory retrieval and learning (Michelon, 2008).

It appears that intense, repeated or prolonged mental/behavioral activity, especially if done consciously and deliberately, creates an enduring imprint in your neural structure much like the before-mentioned grooves on a well-traveled road. Neuroscientists are fond of saying, "Neurons that fire together wire together." That is, your repeated mental states affect your neural circuitry

whereby your mind is literally sculpting and building your brain. This is referred to as *experience-dependent neuroplasticity*. As we learn and revise our perceptions, we actually modify the internal structure of the preexisting **neurons** in our brain, particularly at the **synapses**, the spaces where one neuron communicates with another. We also increase the number of synapses between neurons, thereby increasing our ability to create new frames. In addition, there is a new branch of biology, **epigenetics**, which examines the bridge between nature and nurture whereby your environment and your choices influence the expression of your genes and even the genetic code you pass to later generations (Suomi,1999).

Thus, the really ground-breaking news is that we can literally mold our brains by choosing to engage in patterns of thought and behavior (Hanson, 2014). For example, let's say you decided to practice breath awareness meditation on a regular basis. As a result your insula, a part of your cerebral cortex believed to be involved in consciousness, will be activated by this focused attention and will trigger a cascade of changes, some occurring rapidly and some over time. New synapses quickly form and more receptor sites are born within existing synapses, leading to greater synaptic communication. Unused synapses begin to atrophy (weaken) in a process known as **neural Darwinism** (i.e. *the survival of the busiest*). Various genes begin to be expressed due to the increased neuronal activity and your cortex will thicken. In the same way that your muscles are enlarged and strengthened by lifting weights, repeated patterns of mental and/or physical activity build your neural structure. A variety of studies on mindfulness meditation have validated this, wherein meditators demonstrated increased gray matter (a thicker cortex) in three key brain regions including the areas controlling attention in the prefrontal cortex (Lazar and colleagues, 2005), the insula (Holzel, 2008) and the hippocampus (Luders & colleagues, 2009).

Ultimately, you have the opportunity to build your brain to become healthier and more effective due to its enormous plasticity. With enough effort, skill and time you really can shift your brain to overcome the effects of adversity and maximize your strengths. Neuroplasticity can occur quickly at any age, it can develop slowly over your lifespan, and/or it can be expressed over generations through evolution. Furthermore, your experiences can go beyond merely modifying your neurons and synapses, but literally touch down into your genes and affect how they operate, that is, whether they switch on or off via the process of epigenetics. For example, if you choose to regularly practice relaxation, this will promote the activity of genes responsible for lowering your stress level and facilitating calmness (Dusek & colleagues, 2008), ultimately improving your resilience. We will address how to accomplish this in great detail in Chapter 6.

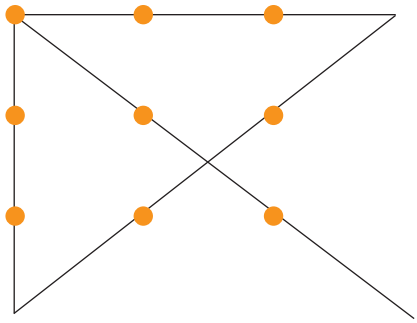
Do you know that exercising or stimulating your brain is highly recommended as part of a brain-healthy lifestyle? As neuroplasticity is becoming more apparent in cognitive science, an increasing amount of evidence has surfaced to validate the idea of "use it or lose it." When you exercise or stimulate your brain through new or merely unfamiliar activities, you can trigger changes in the brain, such as the increased connections between neurons described earlier. These

changes contribute to an expansion in what psychologists call **brain reserve**. Research suggests that the more brain reserve, the more resistant the brain is to age or disease-related damages. A great example of this is what has been referred to as The Nun Study, a longitudinal study of 678 Catholic sisters 75 to 107 years of age belonging to the School Sisters of Notre Dame. Callahan, McHorney, & Mulrow (2003) presented case studies of various nuns, some of whom were over 100 years old but evidenced no cognitive deterioration, and some who had dementia and clinically significant Alzheimer's disease. When examining convent archives, they discovered that those sisters who were more intellectually engaged and had more intellectual pursuits, i.e., those who used their brains more, appeared healthier and functioned better cognitively than sisters who had fewer intellectual pursuits. It was the latter sisters who were more likely to show clinical symptoms of Alzheimer's. So it appears that using your brain protects you against dementia. What was equally fascinating was that when postmortem neuropathologic evaluations were performed, they found that the brains of the healthy sisters actually exhibited the same or more of the plaques typical of Alzheimer's than those of the afflicted! So their intellectual endeavors did not prevent the Alzheimer's from developing, rather, it led to the build-up of more brain reserve so the disease did not affect these sisters!

The experimental evidence is by now compelling that learning a new skill produces structural changes in the brain. The new skill could be learning a new language, a musical instrument, human anatomy, a city map, or even a seemingly frivolous activity, such as juggling. Using a sophisticated whole-brain imaging technique to detect changes in gray matter, researchers demonstrated that mastering how to juggle led to a 3 to 4 percent increase in the size of gray matter, the processing portion of your brain tissue. Young adults were randomly assigned to either a juggling group who had three months to show that they could juggle three balls for at least 60 seconds, or a control group that continued with life as usual. Baseline MRIs revealed no significant difference between the two groups prior to the experiment. Only the jugglers evidenced the increase in gray matter after three months. Then, after not practicing for three months, repeat brain scans showed a decrease of 1 to 2 percent from the size they had attained when they were practicing juggling every day (Draganski & colleagues, 2004). A similar study, published in the *Journal of Neuroscience*, using individuals with an average age of sixty rather than young adults, demonstrated that older brains also have the flexibility to grow. Although the older adults did not learn to juggle as well as the younger adults, those that did learn showed similar increases in gray matter (Boyke & colleagues, 2008).

These increases are not limited to our gray matter. Even the white matter, the area of the brain where neuronal communication primarily occurs, shows an increase as a result of learning to juggle. A group of researchers from the University of Oxford, again using young adults, a matched control group, and pre/post measurements, demonstrated that jugglers grew more white matter in the parietal lobe, an area involved in connecting what we see to how we move. No

Figure 1.9 The Nine Dot Solution



change was apparent in the brain of the non-jugglers. What is perhaps even more revealing is that the growth was evident in all of the jugglers, irrespective of how well they could juggle (Scholz & colleagues, 2009). So it is apparent that it is the learning process itself that is important for brain development, not how well you perform. The brain, like a muscle, needs to be exercised, but it appears that it also wants to be challenged to learn something new.

Thus, the ability to flex your brain is one avenue to creative thinking. What is creative thinking, if not the ability to look for innovative solutions to the problems at hand? Speaking of solutions, how successful were you in solving the problem presented to you earlier in the chapter?

Obviously, to solve this problem you had to go beyond the nine dots, beyond the originally preconceived square which you likely perceived. Your paradigm that this was a square led you to use the corner dots as the edges, which effectively inhibited you from solving this problem. Is this just another clever riddle? Or does it show us that we are predetermined to see things in a particular or familiar way, and what we see dictates how we interact with that reality (in this case how we attempt to solve the problem)? Learning to think "out of the box" is one of the cornerstones of creativity, which in many ways is all about shifting your frame of reference.

Questions

1. The capacity of the brain to change its internal structure based on new experience is _____.

   A. neurogenesis

   B. neuroplasticity

   C. epigenetics

   D. neural Darwinism

2. The structure in the brain responsible for memory and new learning is the _____.

   A. synapses

   B. frontal cortex

   C. hippocampus

   D. gray matter

3. Your behavior and experiences can affect whether your genes switch on or off due to the process of _____.

   A. the development of brain reserve

   B. neural Darwinism

   C. neurogenesis

   D. epigenetics

Summary

This chapter covered a wide range of topics which all deal with how we perceive and interpret our reality. We began by elucidating the difference between sensation and perception, while emphasizing that our perceptions are dependent as much upon our individual perspectives as by external reality, determined by processes such as selective attention, selective perception, and predictive coding. We are all hardwired to develop frames of reference, termed paradigms, which enable us to organize and understand our world. These paradigms are greatly influenced by our expectations, beliefs, and pre-conceived notions shaped by our learning history, including what we learned from parents, peers, school, and religion as well as from the media and culture at large.

When our paradigms change, whether gradual or suddenly, this is termed a paradigm shift. Most major scientific discoveries in science are preceded by a paradigm shift, which is a change in the overriding theoretical framework undergirding that scientific discipline. But such shifts are typically resisted, often vehemently, by an old guard that clings to the status quo. The same can be true for our personal, everyday paradigms as each of us can harbor an internal old guard that is resistant to change, even in the face of mounting evidence to the contrary. In the field of psychology (where historically paradigm shifts have happened gradually) a new paradigm, that of Positive Psychology emerged which focuses on the study of mental health and effective functioning rather than mental illness. One effective way of facilitating paradigm shifts is by utilizing reframing strategies.

The last section of the chapter contains an overview of neuroscience with an emphasis on neuroplasticity, the capacity of our brain to change and forge

expanded neural connections based on new experiences. Actively engaging in reframing can facilitate neuroplasticity which helps build brain reserve. Ultimately, you can build your brain to become healthier and more effective with any activity (mental or physical) which stimulates or exercises your brain.

Positive Psychology Exercise

1. Is there a situation where you are habitually stuck because you are totally unwilling to part with your point of view about it? We guarantee that if you think hard enough you will find that the answer to this question (for everyone) is typically yes. Can you think of a particular instance? Practice shifting your perspective on your issue using reframing. If you are at a loss for how to proceed, then experiment with reframing a past mistake or failure as a valuable learning experience. Think about how your life might have improved or been enriched today, either directly or indirectly, as a result of this experience. You may have to dig deep to adopt this perspective, or to see connections between past mistakes and current successes, but if you persist you will be rewarded.

Key Terms

Ambiguous Figures
Brain Reserve
Distributed Processing
Epigenetics
Flourishing
Frames of Reference
Functional Fixedness
Hippocampus
Neural Darwinism
Neurogenesis
Neurons
Neuroplasticity
Paradigm
Paradigm Shift
Positive Psychology
Perception
Predictive Coding
Reframing
Schema
Selective Attention
Selective Perception
Sensation
Synapse
Well-being

Shared Writing

In the same vein as the wise words of the Dalai Lama, there is an old quote, "When God closes a door, he opens a window." Think of a time when an important door closed for you. What windows opened? Write about your experience.

Chapter 1 Questions

1. _____ involves receiving stimuli from our environment while _____ involves interpreting these stimuli and giving them meaning.

   A. Selective perception; predictive coding
   B. Sensation; perception
   C. Perception; sensation
   D. Selective attention; transduction

2. When the brain makes forecasts about what it is seeing and changes these predictions only when it makes an error, it is engaging in a process called _____.

   A. distributed processing
   B. transduction
   C. predictive coding
   D. selective perception

3. It is estimated that as much as _____ of vision is imagination.

   A. 20%
   B. 40%
   C. 60%
   D. 80%

4. Major scientific discoveries are usually preceded by a _____.

   A. natural disaster
   B. feud between rival scientists
   C. prophetic dream
   D. paradigm shift

5. Frames of reference _____.

   A. cause us to be confused
   B. help us understand and organize our world
   C. are constantly in flux
   D. are useless

6. Flexibility in thinking is a component of _____.

   A. the old guard
   B. effectiveness and creativity
   C. the high-level practice of yoga
   D. functional fixedness

7. Positive psychology involves the study of _____.

   A. mental illness
   B. mental and emotional health
   C. the negative effects of positive thinking
   D. statistics that prohibit inclusion of negative numbers

8. Which of the following is an example of reframing?

   A. detaching and compartmentalizing emotional upset
   B. engaging in denial
   C. putting a new frame on an old painting
   D. seeing the humor in a difficult situation

9. Reframing involves _____.

   A. making up alternative facts
   B. suppressing your thoughts
   C. shifting how you look at something
   D. asking others what they think about something

10. The brain is capable of growing new neurons in a process known as _____.

    A. brain reserve
    B. neural Darwinism
    C. neuroplasticity
    D. neurogenesis

Chapter 2
Making Positive Choices

Learning Objectives

After reading this chapter, you should be able to:

2.1 Describe the concept of soft determinism and how it relates to positive psychology.

2.2 Explain the ways in which the paradigm of proactivity guides the behavior of effective individuals.

2.3 Define the concept of self-efficacy and list some of the ways it can be increased.

2.4 Identify strategies for identifying and replacing irrational beliefs.

2.5 Identify some practical ways to develop an optimistic outlook and lead a more effective life.

Have you ever wondered, at some time in your life, "Why am I the way that I am?" One of the authors recalls a question frequently asked of him at the start of his graduate career while in training to become a psychologist:

> *'What made you choose to become a psychologist?' people would ask me. My traditional retort was, 'because I'm screwed up and I want to figure myself out'. I guess that I was searching for the truth about myself. Along the way I discovered that I was not as screwed up as I feared I was, the "I'm OK, You're OK" school of thought as proposed in the book with the same title by Thomas Harris (1967). And later I concluded that maybe I was a bit screwed up, but that wasn't so bad, the "I'm not OK, You're not OK, and that's OK" school of thought proposed by Sheldon Kopp (1972), in his book If You Meet the Buddha on the Road, Kill Him! But most importantly I realized that there was no one truth, since the truth was dependent upon the frame of reference, or school of thought that I*

adopted. Early in my career, while enveloped in the Freudian mystique, I blamed my parents for my troubles and felt that I was the victim of, at times, a traumatic childhood. When studying Behavioral theories I concluded that I was the product of an unusual reinforcement and conditioning history. But the Humanists and the Cognitive- Behaviorists helped me realize I had some choices in the matter of who I was, and who I would ultimately become. I realized I was who I was, not because of what had happened to me, but because of the choices I had made in response to what had happened in my life. Lately, I have come to be intrigued by the positive psychologists who suggest that I am what I am by what I choose to focus on. I can entertain misery and wallow in it, or wonder what awaits me in the happiness and acceptance camp. In my life, I attempt to choose the latter.

2.1 Determinism vs. Free Will

Describe the concept of soft determinism and how it relates to positive psychology.

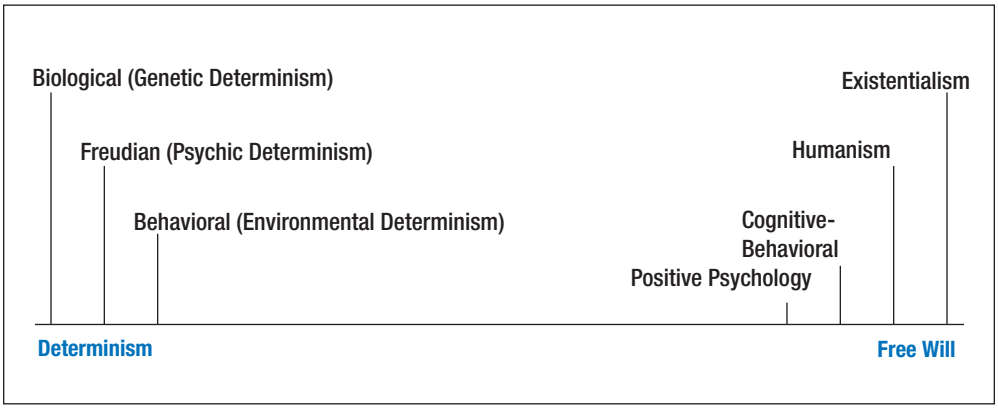
The history of science reveals that the various scientific disciplines developed, in part, in order to determine the causes of events. Meticulous observations and measurements led scientists to the conclusion that everything which occurs in nature has a cause. Theories of causation were postulated and then tested by scientific experimentation. This belief in cause and effect relationships has been termed **determinism**.

As psychology matured as a science, social scientists, in turn, began to posit that human behavior may also be the product of causal relationships, and therefore determined. That is, if nature encompasses all of humanity, then human behavior must also be the result of various determining factors. Determinists espouse the view that all human actions are caused by something, even if we are oblivious to these causative factors. Strict determinists go so far as to imply that free choice does not exist, that all our actions and decisions are the product of outside determining variables over which we have no control. At the other end of the spectrum we find the **Free Will** camp. According to this point of view humans can and do typically ignore so-called determining factors, such as genetics or environmental influences, and freely choose how and when to act.

Psychological theories of personality and behavior can be placed on a continuum between determinism, the belief that who we are is largely governed by outside forces, and free will, which obviously assumes that who we are is a result of the choices we make.

There are three main deterministic theories. The first of these are the biologically based theories which postulate that we are almost exclusively a product of our genetic heritage. Proponents of these theories claim that all of our behavior, both normal and abnormal, can be traced back to particular configurations of our genetic makeup. Support for these theories comes from the obvious fact that abilities, talents, and certain emotional and physical disorders clearly run in families.

Figure 2.1



For example, it is evident that singing ability is passed down from generation to generation. Just look at the late, great reggae artist, Bob Marley, and his son Ziggy Marley, or Julio Iglesias and his son, Enrique Iglesias, or Nat King Cole and his daughter Natalie Cole, or Judy Garland and her daughter Liza Minnelli, or in acting ability where actor Michael Douglas followed in his father Kirk's footsteps. Or consider athletics where sons often follow in their father's footsteps like quarterbacks Eli and Peyton Manning and their quarterback father Archie Manning, or basketball superstar Stephen Curry and his father Dell Curry. As another example, let's take the rather severe emotional disorder known as **schizophrenia**. Individuals suffering from this malady have difficulty differentiating traditional reality from their own internal fantasies or fears. Schizophrenic individuals are prone to **"psychotic episodes"** where they lose contact with reality, and suffer from **hallucinations** (seeing or hearing things that aren't really there), and/or **delusional thinking** (believing in ideas that are not reality based, like those involving fears of persecution). Research clearly shows a strong genetic component to this disorder (Mirsky & Quinn, 1988). The **concordance rate** (the probability that two individuals display the same trait or characteristic) of schizophrenia is much higher for identical twins (who have the same genetic makeup) than for fraternal twins (whose genetic makeup is the same as any sibling), or siblings in general. All of these, however, were much higher than for non related individuals raised in the same environment (Gottesmann, 1991; Cannon et. al, 1998). So theories of genetic determinism espouse a view of reality that "my grandparents did it to me. I am who I am because of my genes."

A second set of deterministic theories are those of psychic determinism which postulate that you are who you are because of how you were raised. The most famous of these is Freud's (1924) **Psychoanalytic Theory**. Proponents of this theory believe that your personality is determined by your early experiences,

and that by the time you reach six years old, it is pretty well set. So such things as the tenure of your toilet training or your mother's style of feeding you have a profound influence on your later development. This theory says "my parents did it to me. I am who I am because of the way they brought me up."

The third set of deterministic theories, known as **Behaviorism**, postulates that we are a product of our conditioning and learning histories, and of our current reinforcement schedules. There is a wealth of data that the aforementioned factors greatly influence the behavior of both animals and humans. In order to ensure that psychology be accepted as a "science," Behavioral theorists argued that the only unit worthy of study was overt, observable behavior. According to theorists such as B.F. Skinner (1953), and Ivan Pavlov (1927), it is our overall environment that shapes our personality and behavior. Thus, you became a good student because you were rewarded for academic achievement. Or you learned how to be fearful because you copied the behavior of significant others who modeled being afraid. These theories say, "my environment (parents, teachers, bosses, coaches, siblings, peers, etc.) did it to me. I am who I am because of the pressures they exerted and the rewards they provided."

But are these theories based on reality? Is this really all there is to human behavior? Are we just essentially victims of our genes, our upbringing, and our environment? The proponents of the Free Will theories would argue that these deterministic paradigms only tell a part of the story. They are accurate maps of a portion of the territory, but fail to include a key component of the human existence. The fact is, we believe that while you are certainly influenced by all of these factors, human beings are ultimately free to choose. Perhaps the earliest of these theories is based on the European philosophy of **Existentialism**, as popularized by Jean-Paul Sartre and Albert Camus. These philosophical theories, when translated into psychological thought, basically posited that although, undoubtedly, life throws waves at you that are outside of your control, how you ride those waves is up to you. You could choose to be drowned by the rising waters, or you could learn to tread water, or you could master surfing.

Here in America this view was developed further by the **Humanists**, such as Abraham Maslow (1970) and Carl Rogers (1959). They too hypothesized that our personalities and our behavior were not so much a product of our conditioning and our conditions, but of the choices we made in response to those. They were much more optimistic than the existentialists by promoting a belief that if anything occurred naturally, it was human beings striving towards self-actualization, towards becoming all that we can be. These humanistic theories developed partly in reaction to the strictly deterministic Freudian view which dominated psychology and psychotherapy practice at the time.

Cognitive-Behaviorists, such as Albert Ellis, Aaron Beck, and Martin Seligman pointed out that when studying humans, we should not focus solely on the study of overt behavior, as the strict Behaviorists would have it, but must take into account "covert behavior," our thoughts, the internal self-talk that preceded

the behaviors. Steven Hayes and colleagues (1999) along with Russ Harris (2009, 2011), proponents of Acceptance and Commitment Therapy (**ACT**), similarly emphasize the role of covert behaviors (thoughts, emotions and images) along with the choices at our disposal for coping and behaving effectively. The strict Behaviorist model is an S - R (stimulus - response) model. Simply stated this cause and effect model holds that all behavior is controlled by the stimulus which precedes it. For example, you walk into your house and your spouse or parent screams at you for being late (the stimulus), and as a consequence of this you get angry and yell back (the response). This model was based on research with animals, which appear to be more stimulus bound. But for humans a more descriptive model is that of S - O - R (stimulus - organism - response). A stimulus impinges upon you, but before you respond, you have a thought about that stimulus, you imbue it with meaning. It is *that thought* that leads to your particular response. To go back to our earlier example, after you've been screamed at, if your first thought is, "how dare you?" or "that jerk, she/he is always picking on me," you are likely to respond in kind. However, if your first thought is "he/she must have been really worried about me," you are much more likely to respond with an apology. You see, it was not the screaming that led to your response, but what you said to yourself about the screaming. It is here, between the stimulus and the response that choice resides. To quote Steven Covey (1991), "Between stimulus and response humans have the greatest freedom, the freedom to choose that response." The difficulty lies in the fact that our thoughts tend to be automatic and rather telegraphic, and we are generally not aware of them. But more on this later in this chapter.

Human history is replete with examples of individuals who, when faced with extraordinarily difficult situations, stimuli which would overwhelm most of us, exercised this freedom to choose their responses. Take, for example, the incredible life story of Nelson Mandela (1918–2013), the first black president of South Africa and the driving force behind the dismantling of apartheid. Mandela spent 27 years in prison after being convicted of treason for advocating resistance to the racist government. He was confined to a tiny prison cell without a bed or plumbing and forced to do hard labor in a quarry. As a black political prisoner he received fewer privileges and far more meager rations compared to other inmates. He was routinely subjected to harsh punishments for even slight offenses. However, he refused to allow prison to rule his life. His goal while in prison was not to be bound by the routines and proscriptions of prison life, but to make his own world within the prison walls. Despite such deplorable circumstances, while confined Mandela earned a law degree from the University of London and mentored his fellow prisoners. He smuggled out political statements to encourage change through nonviolent resistance and he wrote his autobiography *Long Walk to Freedom* (1999). He never allowed his own mistreatment to affect his goal of creating racial equality and harmony while emphasizing restraint against retaliation. After being freed from prison in 1994, he led negotiations with the government

and various South African political organizations to end apartheid and establish a multiracial government. In 1994 Mandela became the first black president of South Africa and established a government based on majority rule while prohibiting discrimination against minorities, including whites. His bold agenda involved improving race relations, discouraging blacks from retaliating against whites, and rebuilding the international image of South Africa. He established the Truth and Reconciliation Commission to promote both public accountability of wrongdoing by the government along with forgiveness from the people at large. To help facilitate improved relations between the races, he successfully encouraged all Afrikaners to rally around their popular rugby team, a strategy that helped ease racial tensions. For a different kind of example, we recommend that you *choose* to view the movie *Life is Beautiful*, the 1998 Academy Award winner for best foreign film, which provides a perfect example of our freedom to choose our actions even when faced with intolerable conditions. Lest you think that this is just a romanticized version of a possible response to the tragedy which was the Holocaust, we urge you to read Victor Frankl's (1959) autobiographical account of his time in a concentration camp, as described in his book *Man's Search for Meaning*.

If we take an objective look at the body of knowledge and data amassed in psychology over the last hundred years, the inescapable conclusion is that human behavior can best be understood as lying somewhere in the middle of the free will vs. determinism continuum. There is conclusive research evidence that certain emotional disorders (such as schizophrenia and bipolar disorder) have a strong genetic component, in the same way that inherited predispositions towards diabetes or heart disease run in some families. Likewise, we cannot ignore the overwhelming evidence that we are strongly affected by environmental factors ranging from our past experiences, our learning history (including what we have learned through operant and classical conditioning as well as observational learning), to our current situation. Could it be that our belief in free will is just a fantasy? Do we harbor an illusion of free choice because at any given moment we are bombarded with so many determining variables that we are unable to perceive them or sort them out? Most psychologists have come to the conclusion that human behavior is affected by a combination of determining forces along with each individual's inherent ability to choose, to set and pursue goals, and to decide to change the path set by determining factors. Not all humans rise to this challenge, however, but the capability to do so exists nonetheless. This mixed viewpoint has come to be known as *soft determinism*.

Where does positive psychology fit on this continuum, you may wonder? Positive psychology is not just one theoretical framework or orientation but an umbrella orientation that subsumes aspects of many theories that pertain to human flourishing. So in this regard it incorporates much of Humanistic psychology, aspects of the Cognitive-Behavioral approach, even aspects of the Psychoanalytic/Psychodynamic models (see attachment theory in Chapter 11), as well as recognizing the genetic/biological link involved in both positive emotions

and our signature strengths (which we will elucidate in later chapters). But while positive psychology acknowledges the role of genetics, it puts its focus on what we can do about our situation, placing it more squarely on the free will end of the continuum. Research in neuroplasticity and epigenetics, as presented in Chapter 1, shows that when you change your choices and thereby your behaviors, you can change your genetic expression. Even more surprising, when you change your own genetic expression, your future generations profit from the choices you make today.

Questions

1. Theories of personality and behavior fall somewhere on a continuum between _____ and _____.
   - **A.** internal; external
   - **B.** determinism; free will
   - **C.** operant conditioning; classical conditioning
   - **D.** liberal; conservative

2. The _____ theory of personality claims that you are who you are because of your learning and reinforcement history.
   - **A.** Biological
   - **B.** Psychoanalytic (Freudian)
   - **C.** Behaviorist
   - **D.** Humanistic

3. The _____ theory of personality claims that you are who you are because of your early upbringing.
   - **A.** Biological
   - **B.** Behaviorist
   - **C.** Humanistic
   - **D.** Psychoanalytic

2.2 Proactivity

Explain the ways in which the paradigm of proactivity guides the behavior of effective individuals.

This freedom of choice, referred to in the current literature as **"proactivity,"** is an important paradigm guiding the behavior of effective individuals. We

have found that a good way to begin to understand the nature of proactivity is to consider your first responses to the word *responsibility*. What first comes to mind when you hear this word? If you are like most of our students you think of things such as paying your bills, doing your homework, picking up the kids, cleaning the house, cooking dinner, washing your clothes or your car, and so on. These are things you feel you should be doing. The image that frequently comes to mind is that of a large ball and chain attached to your ankle, which drags you down and limits your freedom. But, proactivity involves placing a different frame around the concept of responsibility, as aptly described by Covey (1991) in his seminal book, *The Seven Habits of Highly Effective People*:

> *While the word proactivity is now fairly common in management literature, it is a word you won't find in most dictionaries. It is more than merely taking initiative. It means that as human beings, we are responsible for our own lives. Our behavior is a function of our decisions, not our conditions. We can subordinate feelings to values. We have the initiative and the responsibility to make things happen. Look at the word responsibility—'response - ability'—the ability to choose your response. Highly proactive people recognize that responsibility. They do not blame circumstances, conditions, or conditioning for their behavior. Their behavior is a product of their own conscious choice, based on values, rather than a product of their conditions based on feelings. (pgs. 70–71)*

2.2.1 Locus of Control

The concept of proactivity has also been previously referred to, by psychologist Julian Rotter (1966), as an internal locus of control. **Locus of control** is on a continuum ranging from external to internal. Individuals with an **external locus of control** see themselves as victims, buffeted and abused by external events over which they have no control. Individuals with an **internal locus of control** believe that they are responsible for the ultimate outcomes in their life. They do not wait for fate to lead them in a direction, rather they endeavor to take active control over their own life. For Covey, an internal locus of control is "proactivity," while an external locus of control is "reactivity." Reactive persons are at the mercy of forces beyond their control. Have you ever heard someone say, "It's raining outside, how can I be happy?" or, "It's Monday so I don't have any energy." For these people their mood or their energy level is determined by the weather or the day of the week. Proactive people, while certainly influenced by their environment, recognize that they are response-able to choose their responses to these conditions. If you are curious to see where you fall on the continuum of locus of control, we suggest you take the time to complete the following inventory.

Student Locus of Control Inventory

Check True if you agree with a statement; check False if you do not agree.

TRUE	FALSE	
____	____	1. If I can do the work, I can get a good grade in any course no matter how good or bad the instructor may be.
____	____	2. If the teacher isn't a good speaker or doesn't keep me interested, I probably won't do well in the class.
____	____	3. I believe that I have the power to control what happens to me.
____	____	4. I believe that I have very little control over what happens to me.
____	____	5. When I make a mistake, it's usually my fault.
____	____	6. When I make a mistake, it's usually because someone didn't make clear to me what I was supposed to do.
____	____	7. My grades are the result of how much studying I do.
____	____	8. My grades don't seem to be affected by the amount of studying that I do.
____	____	9. I can adapt easily to a change of plans or events.
____	____	10. Adapting to change has always been difficult for me. I like things to be as predictable and orderly as possible.
____	____	11. When I fail a test, it's either because I didn't study or I didn't understand the material.
____	____	12. When I fail a test, it's either because the test was unfair or the instructor did not cover the material sufficiently.
____	____	13. I usually don't need anyone to push me or make me study.
____	____	14. I can't seem to make myself study.
____	____	15. I am a self-motivated person.
____	____	16. I need someone to motivate me.

If you selected "true" to mostly odd-numbered statements, then you tend towards having an internal locus of control. We congratulate you! The rest of this chapter will help you refine and polish skills to make you an even more proactive individual. On the other hand, if you found yourself endorsing more even-numbered statements, then we suggest you consider the possibility that your locus of control is more external. If effectiveness is your goal, then we strongly recommend that you take the ideas and strategies presented in the rest of this chapter and incorporate them into your behavior. Remember, as we discussed in the preface of this text, it is not enough to know about mangoes, you must be willing to taste them.

Students with an internal locus of control recognize the connection between the effort they put forth and the grades they receive. These students tend to be self-motivated and optimistic. They believe in themselves and that they can do whatever they set out to accomplish. They welcome challenges and are not afraid

of change. If a student with an internal locus of control fails a test, he does not blame the teacher or the test questions. He takes responsibility for the failure, and attempts to determine what action is needed to avoid this in the future. When these students make mistakes, they endeavor to figure out what they did wrong or what they did not understand. These students don't believe that their grades are a function of luck or fate. When things go wrong, they look to see what they can do to put things right.

Students who have an external locus of control cannot see a connection between the effort they put forth in a course and the grades they receive. If they do poorly on a test or in a course, these students may focus their blame on the teacher in their belief that the tests were too hard or the grading standards too stiff. These students tend to be pessimists who need someone to motivate them and give them a push to succeed. They believe that many of the things they want in life are out of reach or that other people are holding them back. They may be afraid of change and prefer to follow familiar routines. When they make mistakes, they blame others for being unfair or for not giving them the right information. They see themselves as victims in the drama that is their lives. When something goes wrong, they may feel there is nothing they can do about it. They forget that the way they see the problem is the problem.

Research in Positive Psychology has helped to illuminate the connection between effectiveness and locus of control. Studies (Myers, 2004; Burger, 2004) demonstrate that individuals with an internal locus of control are more likely to do the following:

- Succeed academically
- Cope better with stress
- Experience higher levels of job satisfaction
- Be happier with their lives
- Work more diligently towards long term goals
- Be more independent
- Deal more directly with marital problems
- Be more persuasive
- Successfully stop smoking
- Wear seat belts
- Use birth control (rather than depend on fate or luck for protection)

In general, people with an internal locus of control take charge in many areas of their lives and accept responsibility for the outcomes of their actions (Larson & Buss, 2002). In addition, internally oriented individuals are more disposed towards working for social and political change or causes (Levenson, 1981). In sharp contrast, those with an external locus of control are more likely to suffer from anxiety and/or depression. They tend to avoid challenges and give up when faced with obstacles or setbacks.

2.2.2 Three Ways to Increase Proactivity

Perhaps we have convinced you that being proactive is a skill worth cultivating. You might ask, "OK, but how do I go about doing that?" We have found that a useful method for increasing proactivity involves focusing on three key areas: (1) your thoughts; (2) your language; and (3) your actions. We believe that all things are created three times. First, when you think about it; second, by how you speak about it; and lastly, when you take some action to make it happen. Creating the reality of becoming a proactive individual involves a sustained focus on all three areas.

FOCUSING ON YOUR THOUGHTS Reactive individuals tend to be worriers. If a worrier was conscious of the direction of his or her thoughts, he or she would discover that the focus is mostly on the bad things that could possibly happen. We are not suggesting that you should not plan for the possibility of negative outcomes, but to spend most of your time on this is clearly counterproductive. This is particularly the case if you consider that *fully 80% of what we worry about never happens!* Yet the effects on our emotional and physical health, as well as our productivity, are similar to what might have occurred if the feared event had actually happened. This topic will be dealt with in more detail in Chapters 5 and 6. Are you a worrier? Proactive people make a conscious effort to give more time for considering what might go right and how to make it go right. In other words, they are more likely to be considered optimists.

FOCUSING ON YOUR LANGUAGE Have you ever heard yourself saying things like "he made me angry," or "I couldn't make it to class, I was just too tired to get up on time?" If you have said things like this, and who among us has not, realize that you are speaking reactively. You were giving your freedom to choose away and giving someone else control of your emotions in the first example, or letting circumstances (i.e. apparent fatigue) determine what you could or could not do in the second example. Proactive individuals realize that they are ultimately in control of their feelings and emotions, and speak in a way that creates and reinforces this reality. So instead of "he made me so mad," they might say, "I am angry about what so and so did." We hope the difference between these two is clear. When you say, "I am angry about what he did," *you* are in control of your response. Please don't think that this is merely semantics. Our language is one of civilized man's prominent ways of defining reality. How we speak has a profound impact on how we view the world.

FOCUSING ON YOUR ACTIONS Increasing your proactive actions simply requires adopting two habits: (1) making promises and keeping them; and (2) setting small goals and working to achieve them. Proactive individuals are keenly aware of the power of their word. Unfortunately, the authors have noticed that many people fail to grasp or heed this important concept. So people say things like "I'll call you," after running into someone they haven't seen in a while, when, even at the time, they know they are highly unlikely to follow through. Or many students promise themselves that they will study for that test in plenty of time, only to, at best, end up cramming desperately at the last minute. Such behavior

has the unfortunate consequence, not just that others stop believing in what you say, but more importantly, that you stop believing in yourself. We recognize that it might not be possible to keep your promises 100% of the time. You can, however, own up to it. Be willing to acknowledge the lapse and seek ways of amending it.

Many people can't wait to be successful so they can do just what they feel like doing. It is this thought, however, that can interfere with ever achieving success in the first place. The bottom line is that *effective people do the things that ineffective people don't feel like doing*. They don't feel like doing those things either, necessarily, but they want to do them out of the strength of their purpose. We strongly believe that there is a big difference between wanting and feeling. Feeling is merely a momentary desire ("I don't feel like getting out of bed"); wanting encompasses not just the present but the future consequences of the present behavior. A proactive individual acknowledges his present feeling ("I feel tired"), but decides to get out of bed because he wants the results of this action, like doing well in class, or keeping his promise. Now at this point you might be thinking, "This is all well and good, but it is easier said than done." You are absolutely right. As is often remarked, "Talk is cheap." But the bottom line can be simply stated as, "To be effective you must be willing to do what is necessary." Perhaps even more proactively stated, "You want to be willing to do what is necessary." So what about you? What do you choose?

Questions

1. Students who take responsibility for their performance if they fail a test have a(n) _____ locus of control, while students who blame the teacher if they do poorly have a(n) _____ locus of control.

A. pessimistic, optimistic

B. internal; external

C. external; internal

D. reactive; proactive

2. Proactivity is a characteristic typical of _____ individuals.

A. pessimistic

B. ineffective

C. irresponsible

D. effective

3. In order to increase proactivity, you need to focus on your _____.

A. thoughts, language, and actions

B. do's, don'ts, and manners

C. friends, family, and social media postings

D. values, morals, and behaviors

2.3 Self-Efficacy

Define the concept of self-efficacy and list some of the ways it can be increased.

In the Positive Psychology literature this whole notion of proactivity and locus of control is approached somewhat differently or more broadly, with what is termed **"self-efficacy,"** a perception of perceived competence. This is one of the most heavily researched areas in positive psychology and it is an outgrowth of Albert Bandura's Social Cognitive theory. So what is self-efficacy and how does it differ, if at all, from proactivity and locus of control? Bandura (1997) defined self-efficacy as "your belief in your capability to produce a desired effect by your own actions." In a similar vein, Maddux (2005) characterized self-efficacy as "what I believe I can do with my skills under certain conditions." The bottom line is that self-efficacy is all about believing that you can accomplish what you want, if you do what is necessary in order to reach a desired goal, after you first examine what is required of you in order to reach that goal. In a sense, self- efficacy represents a marriage between an internal locus of control, that is, the belief that you can control your destiny, and proactive behavior defined as making the appropriate choices and taking the necessary action steps for success. Self-efficacy in many ways appears to be a dimension of effectiveness with both a cognitive component (locus of control) and a behavioral component (proactivity).

Snyder and Lopez (2007) explain that the self-efficacy model flows from Bandura's Social Cognitive theory where humans learn by modeling or copying other humans; therefore self-efficacy is a learned pattern of thinking and behaving rather than a genetically determined pattern. That is, we actively shape our lives rather than passively react to our environment (Bandura, 1986). That's the good news. You have a choice to think and behave in ways that are self-efficacious.

There are three main components to Social Cognitive theory: (1) humans can create powerful symbolic cognitive models of their experiences; (2) humans can then compare their own actions to those of their symbolic models and make course corrections if necessary; and (3) there is an interaction between those cognitive models and the environment which further shapes our personalities. In simpler terms, we can watch how someone acts in order to successfully achieve a goal, and make a mental map (i.e. model) of that and learn from it. We can then choose to copy such successful behaviors based on our mental map (i.e. modeling) which then causes interactions between our cognitions, behaviors and the environment further shaping our behavior and our personalities. These "interactions" typically revolve around whether our efforts worked out or not. If not, we continue to modify our behavior until we obtain some success or reach the desired goal.

To obtain a measure of your own level of self-efficacy, fill out the inventory on the next page developed by Fibel and Hale (1978), which assesses your expectancy of success.

The Expectancy for Success Scale—A Measure of Self-Efficacy

Indicate the degree to which each item applies to you by circling the appropriate number, according to this key.

1 = highly improbable
2 = improbable
3 = equally improbable and probable, not sure
4 = probable
5 = highly probable

In the Future I Expect that I Will:

1. Find that people don't seem to understand what I'm trying to say	1	2	3	4	5
2. Be discouraged about my ability to gain the respect of others	1	2	3	4	5
3. Be a good parent	1	2	3	4	5
4. Be unable to accomplish my goals	1	2	3	4	5
5. Find my efforts to change situations I don't like are ineffective	1	2	3	4	5
6. Not be very good at learning new skills	1	2	3	4	5
7. Carry through my responsibilities successfully	1	2	3	4	5
8. Have a stressful marital relationship	1	2	3	4	5
9. Deal poorly with emergency situations	1	2	3	4	5
10. Discover that the good in life outweighs the bad	1	2	3	4	5
11. Handle unexpected problems successfully	1	2	3	4	5
12. Get the promotions I deserve	1	2	3	4	5
13. Succeed in the projects I undertake	1	2	3	4	5
14. Not make any significant contributions to society	1	2	3	4	5
15. Discover that my life is not getting much better	1	2	3	4	5
16. Be listened to when I speak	1	2	3	4	5
17. Discover that my plans don't work out too well	1	2	3	4	5
18. Find that no matter how hard I try, things just don't turn out the way I would like	1	2	3	4	5
19. Handle myself well in whatever situation I'm in	1	2	3	4	5
20. Be successful in my endeavors in the long run	1	2	3	4	5
21. Be very successful working out my personal life	1	2	3	4	5
22. Experience many failures in my life	1	2	3	4	5
23. Make a good first impression on people I meet for the first time	1	2	3	4	5
24. Attain the career goals I have set for myself	1	2	3	4	5
25. Be able to solve my own problems	1	2	3	4	5
26. Succeed at most things I try	1	2	3	4	5
27. Have difficulty dealing with my superiors	1	2	3	4	5
28. Have problems working with others	1	2	3	4	5
29. Be a good judge of what it takes to get ahead	1	2	3	4	5
30. Achieve recognition in my profession	1	2	3	4	5

Scoring: In order to calculate your total score for this inventory, first reverse the scores for the following items: 1, 2, 4, 6, 7, 8, 14, 15, 17, 18, 24, 27, and 28. That is, change a 1 to 5, a 2 to a 4, leave a 3 alone, change a 4 to a 2 and 5 to a 1. Then add up all of the scores.

The range of total scores can vary from 30 to 150. The higher your score, the greater your expectancy for success in the future, and according to Bandura's social learning and self-efficacy theory, the more motivated you will be to apply yourself in facing difficult challenges in your life. The researchers who developed this inventory (Fibel & Hale, 1978) administered this test to undergraduate students taking psychology courses and found that women's scores ranged from 65 to 143 and men's scored ranged from 81 to 138. The average score for each gender was 112 (112.32 for women and 112.15 for men).

2.3.1 The Practical Impact of Self-Efficacy

Research in self-efficacy has varied depending on whether researchers measured self-efficacy in specific situations, an approach favored by Bandura, or whether they looked at a more overall (global) measure. There are a variety of questionnaires that measure self-efficacy, some from a global standpoint and others from a much more situation specific context. Snyder and Lopez (2007) summarized Bandura's (1997) research with situation specific measures of self-efficacy. They concluded that high levels of self-efficacy are associated with:

1. better academic performance
2. lower anxiety
3. higher pain tolerance
4. following diet and exercise regimens
5. more political participation
6. good dental hygiene
7. sticking with smoking cessation programs

Bandura pointed out that high levels of self-efficacy play a protective role in helping individuals cope with psychological problems. By virtue of what he termed enablement factors, people make choices to structure their environments in ways that increase the likelihood of positive outcomes. It is reasonable to assert that this would apply more to a global level of self-efficacy. Research supporting this comes from Maddux (1995), who demonstrated that self-efficacy is associated with successful coping with a variety of psychological problems, and DiClemente, Fairhurst and Piotrowski (1995), who found that it was an important variable in overcoming eating disorders.

Self-efficacy also plays an important role in maintaining physical health, as individuals with high levels are far more likely to engage in healthy behaviors, to eliminate unhealthy ones, and to live healthy lifestyles in terms of diet, exercise, avoidance of tobacco products, etc. Furthermore, high self-efficacy enables

such individuals to maintain this lifestyle over time. This may be due to the same enablement factors which offer a protective role with psychological problems, but in this case operating within the realm of physical health. Ultimately it comes down to making wise choices and believing you have the power to control the outcomes in your life. Many of the methods utilized for helping people to adopt healthier lifestyles often focus on building self-efficacy in order to accomplish this. Increasing self-efficacy does appear to improve physical health, whether the focus is on resistance to infection (O'Leary and Brown, 1995), levels of neurotransmitters in the brain that affect mood, or endorphin levels for decreasing pain (Bandura, 1977).

2.3.2 How to Increase Your Self-Efficacy

Bandura (1997) explained that self-efficacy develops when individuals have opportunities to:

- Experience success in similar situations and call upon those positive memories.
- Watch others who have succeeded and copy them (modeling).
- Imagine or visualize behaving effectively to reach a desired goal.
- Be reassured or persuaded by others who are trusted or have special expertise.
- Pair positive emotions with arousal to heighten their sense of competence.

Therefore, it follows that if you want to enhance your personal level of self-efficacy, it would be useful to practice the following suggestions . . .

- Recall in vivid detail success experiences you have had. Remember the steps you took to get there and the behaviors that led to those positive outcomes.
- Observe other people who you know are effective and successful in various situations. Pay exquisite attention to how they behave; watch what they do that works in detail and try to make a mental map or cognitive model of their behaviors. Anyone is fair game to watch including friends, relatives, teachers, mentors, co-workers, even people you read about or see on TV. But be careful with the latter; and make sure you are watching a realistic model. Don't pick a superhero or a glamorous movie star to model yourself after because you will be setting yourself up to follow an unrealistic standard.
- Imagine yourself stepping into the picture, performing those same behaviors effectively and reaching your desired goal.
- Accept reassurance, praise and advice from those you trust or who have knowledge/expertise you do not possess. This will enhance your expectations for success.
- Maintain your sense of humor and learn to relax (See Chapter 6). This will create comfortable physiological sensations and a calm demeanor which will then help to boost your level of confidence in your abilities.