The Wellness Mandala: Holistic Stress Management







The Nature of Stress

"Tension is who you think you should be. Relaxation is who you are." —Ancient Chinese proverb Are you stressed? If the answer is yes, then consider yourself to be in good company. Several recent Harris and Gallup polls have noted an alarming trend in the psyche of the American public and beyond-to nearly all citizens of the global village. Across the board, without exception, people admit to having an increasing sense of anxiety, frustration, unease, and discontent in nearly every aspect of their lives. From the aftermath of the Great Recession (and the subsequent economic problems) to mounting environmental reminders of an unsustainable path of human existence, the face of stress can be found just about everywhere. Sadly, episodes of suicides, road rage, school shootings, and personal bankruptcies are so common that they no longer are headline news. Ironically, in a country where the standard of living is considered to be the highest anywhere in the world, the Centers for Disease Control and Prevention estimates that nearly one-quarter of the American population is reported to be on antidepressants. Moreover, economic difficulties persist from the national home foreclosure debacle, and college loan costs continue to escalate. Obesity rates continue to rise dramatically, and current estimates are that one in three people suffers from a chronic disease, ranging from cancer and coronary heart disease to diabetes, lupus, and rheumatoid arthritis. For a country with the highest standard of living, something is very wrong with this picture!

Furthermore, since the start of the Great Recession, a blanket of fear has covered much of the country, if not the world, keeping people in a perpetual, albeit low, state of anxiety. Global problems only seem to intensify our personal stressors. It doesn't make a difference if you're a college student or a CEO of a multi-national corporation, where you live, or how much money is in your checking account; stress is the equal opportunity destroyer! But it doesn't have to be this way. Even as personal issues collide with social and planetary problems creating a "perfect storm" of stress, we all have choices-in both our attitude and behaviors. This text will help you connect the dots between mind, body, and spirit to create positive choices that empower you to navigate your life through the turbulent waters of the human journey in the 21st century.

Times of Change and Uncertainty

Today the words *stress* and *change* have become synonymous and the winds of change are in the air. Changes in the economy, technology, communications, information retrieval, health care, and dramatic changes in the weather are just some of the gale forces blowing in our collective faces. By and large, the average person doesn't like change (particularly change they cannot control) because change tends to disrupt one's comfort zones. It appears that the "known," no matter how bad, is a safer bet than the unknown. Change, it should be noted, has always been part of the human landscape. However, today the rate of change has become so fast and furious, without an adequate reference point to anchor oneself, that stress holds the potential to create a perpetual sense of uneasiness in the hearts and minds of nearly everyone. Yet it doesn't have to be this way. Where there is change, there is opportunity.

At one time, getting married, changing jobs, buying a house, raising children, going back to school, dealing with the death of a friend or close relative, and suffering from a chronic illness were all considered to be major life events that might shake the foundations of anyone's life. Although these major life events can and do play a significant role in personal upheaval, a new crop of social stressors has added to the critical mass of an already volatile existence, throwing things further out of balance. Consider how these factors directly influence your life: the rapid acceleration of technology (from software upgrades to downloadable apps), the use of (if not addiction to) the World Wide Web (e.g., Facebook, Instagram, and Twitter), the proliferation of smartphones and WiFi use, an accessible 24/7 society, global economic woes (e.g., gasoline prices, subprime loan foreclosures, rent, food prices), global terrorism, carbon footprints, and public health issues from AIDS and West Nile virus to the latest outbreak of contagious staphylococcus infections. Times of change and uncertainty tend to magnify our personal stress. Perhaps the biggest looming concern facing people today is the issue of personal boundaries or lack thereof. The advances of high technology combined with a rapidly changing social structure have eroded personal boundaries. These boundaries include, but are not limited to, home and work, finances, personal privacy, nutritional habits, relationships, and many, many more, all of which add to the critical mass of one's personal stress. Even the ongoing war on terrorism appears to have no boundaries! Ironically, the lack of boundaries combined with factors that promote a fractured society, where people feel a lack of community and belonging, leads to a greater sense of isolation and this also intensifies our personal stress levels. Believe it or not, life wasn't always like this.

The stress phenomenon, as it is referred to today, is quite new with regard to the history of humanity. Barely a household expression when your parents were your age, use of the word *stress* is now as common as the terms *global warming, iPads*, and *smartphones*. In fact, however, stress in terms of physical arousal can be traced back to the Stone Age as a "survival mechanism." But what was once designed as a means of survival is now associated with the development of disease and illness that claims the lives of millions of people worldwide. The American Institute of Stress (www. stress.org) cites the following statistics:

- 43 percent of all adults suffer adverse health effects due to stress.
- 75 to 90 percent of all visits to primary care physicians are for stress-related complaints or disorders.

Stress has been linked to all the leading causes of death, including heart disease, cancer, lung ailments, accidents, cirrhosis, and suicide. Some health experts now speculate that perhaps as much as 70 to 85 percent of all diseases and illnesses are stress-related.

Comprehensive studies conducted by both the American Psychological Association (APA) and the Harvard School of Public Health in Association with NPR 2014 provided a host of indicators suggesting that human stress is indeed a health factor to be reckoned with. Prior to 1955, the leading causes of death were the sudden onset of illness by infectious diseases (e.g., polio, rubella, tuberculosis, typhoid, and encephalitis) that in most cases have since been eradicated or brought under control by vaccines and medications. The post-World War II era ushered in the age of high technology, which considerably altered the lifestyles of nearly all peoples of every industrialized nation. The start of the 21st century has seen the influence of high technology dramatically alter our lifestyles. The introduction of consumer products, such as the washer, dryer, microwave oven, television, DVD player, laptop computer, and smartphone, were cited as luxuries to add more leisure time to the workweek. But as mass production of hightechnology items increased, so too did the competitive drive to increase human effort and productivity, which in turn actually decreased leisure time, and thus created a plethora of unhealthy lifestyles, most notably obesity.

Currently, the leading causes of death are dominated by what are referred to as lifestyle diseases—those diseases whose pathology develops over a period of several years, and perhaps even decades. Whereas infectious diseases are treatable by medication, lifestyle diseases are, for the most part, preventable or correctable by altering the habits and behaviors that contribute to their etiology. Previously, it was suggested that an association existed between stress and disease. Current research, however, suggests that there may, indeed, be a causal factor involved with several types of diseases, particularly heart disease, obesity, and auto-immune diseases. Regardless, it is well understood that the influence of stress weakens the body's physiological systems, thereby rapidly advancing the disease process. The most notorious lifestyle disease, coronary heart disease (CHD), continues to be one of the leading causes of death in the United States, far exceeding all other causes. The American Heart Association states that one person dies from heart disease every 34 seconds. Although the incidence of CHD has decreased over the past decade, cancer-in all its many types-continues to climb the statistical charts as the second leading cause of death. According to 2012 statistics from the American Cancer Society (www.cancer.org), cancer claims the lives of one out of every four people in the United States. Alarming increases in suicides, child and spouse abuse, selfmutilation, homicides, alcoholism, and drug addiction are only additional symptoms of a nation under stress. Today, research shows that people still maintain poor coping skills in the face of the personal, social, and even global changes occurring over the course of their lives.

Originally, the word stress was a term used in physics, primarily to describe enough tension or force placed on an object to bend or break it. Relaxation, on the other hand, was defined as any nonwork activity done during the evenings or on Sunday afternoons when all the stores were closed. On rare occasions, if one could afford it, relaxation meant a vacation or holiday at some faraway place. Conceptually, relaxation was a value, influenced by several religions and represented as a day of rest. The word stress as applied to the human condition was first made popular by noted physiologist Hans Selve in his book The Stress of Life, where he described his research: to understand the physiological responses to chronic stress and its relationship to disease (dis-ease). Today, the word stress is frequently used to describe the level of tension people feel is placed on their minds and souls by the demands of their jobs, relationships, and responsibilities in their personal lives. Oddly, for some, stress seems to be a status symbol tied to self-esteem.

Relaxation, meanwhile, has been transformed from an American value into a luxury many people find they just don't have enough time for. With the current economic situation, some interesting insights have been observed regarding work and leisure. The average workweek has expanded from 40 to 60 hours. The U.S. Department of Labor and Statistics reports that, with more servicerelated jobs being created, more overtime is needed to meet the demands of the customers. Not only do more people spend more time at work, they spend more time driving to and from work (which is not considered work time). Moreover, leisure time at home is often related to work activities, resulting in less time for rest and relaxation. Downtime is also compromised. Since 2001, Expedia has conducted an annual survey on vacations (called the Vacation Deprivation Study). The 2009 results revealed that one out of every three Americans don't use all of their vacation time. One in five respondents cited work responsibilities/pressure as the primary reason for canceling a vacation. A new word entered the American lexicon in the summer of 2010; the staycation, where people simply stayed home for vacation due to financial and/or work constraints. Those who do head for the mountains or beaches for vacation often take their work (in the form of smartphones, iPads, and laptops) with them-in essence, never really leaving their job. It's no surprise that staying plugged in doesn't give the mind a chance to unwind or the body a chance to relax. In comparison to other countries, Americans take less vacation time than other global citizens. (Germans, on average, take 4-6 weeks/year.) "The stress associated with the current economy makes the need for time away from work even more important than ever, and it's unfortunate that one-third of Americans won't use all of their vacation days this year," said Tim MacDonald, general manager of Expedia.com. The "dividend" of high technology has proven to be an illusion that has resulted in a stressed lifestyle, which in turn creates a significant health deficit.

Definitions of Stress

In contemporary times, the word *stress* has many connotations and definitions based on various perspectives of the human condition. In Eastern philosophies, stress is considered to be an absence of inner peace. In Western culture, stress can be described as a loss of emotional control. Noted healer Serge Kahili King has defined stress as any change experienced by the individual. This definition may be rather general, but it is quite correct. Psychologically speaking, stress as defined by noted researcher Richard Lazarus is a state of anxiety produced when events and responsibilities exceed one's coping abilities. Physiologically speaking, stress is defined as the rate of wear and tear on the body. Selye added to his definition that stress is the nonspecific response of the body to any demand placed upon it to adapt, whether that demand produces pleasure or pain. Selye observed that whether a situation was perceived as good (e.g., a job promotion) or bad (e.g., the loss of a job), the physiological response or arousal was very similar. The body, according to Selye, doesn't know the difference between good and bad stress.

However, with new psychoneuroimmunological data available showing that there are indeed some physiological differences between good and bad stress (e.g., the release of different **neuropeptides**), specialists in the field of holistic medicine have expanded Lazarus's and Selve's definitions as follows: Stress is the inability to cope with a perceived (real or imagined) threat to one's mental, physical, emotional, and spiritual well-being, which results in a series of physiological responses and adaptations. The important word to emphasize here is perceived (the interpretation), for what might seem to be a threat to one person may not even merit a second thought to another individual. For example, not long ago a raffle was held, with the winning prize being an all-expenses-paid one-week trip for two to a beach resort in Bermuda. Kelly, who won the prize, was ecstatic and already had her bags packed. Her husband, John, was mortified because he hated to fly and he couldn't swim. In his mind this would not be a fun time. In fact, he really wished they hadn't won. Each perceived the same situation in two entirely different ways. Moreover, with the wisdom of hindsight, our perceptions often change. Many episodes that at the time seemed catastrophic later appear insignificant, as humorously stated by Mark Twain when he commented, "I'm an old man and I have known a great many troubles, but most of them never happened." The holistic definition of stress points out that it is a very complex phenomenon affecting the whole person, not just the physical body, and that it involves a host of factors, some of which may not yet even be recognized by scholars and researchers. As more research is completed, it becomes increasingly evident that the responses to stress add up to more than just physical arousal; yet it is ultimately the body that remains the battlefield for the war games of the mind.

The Stress Response

In 1914, Harvard physiologist Walter Cannon first coined the term fight-or-flight response to describe the dynamics involved in the body's physiological arousal to survive a threat. In a series of animal studies, Cannon noted that the body prepares itself for one of two modes of immediate action: to attack or fight and defend oneself from the pursuing threat, or to run and escape the ensuing danger. What Cannon observed was the body's reaction to acute stress, what is now commonly called the stress reaction. Additional observations suggested that the fight response was triggered by anger or aggression and was usually employed to defend territorial boundaries or attack aggressors equal or smaller in size. The fight response required physiological preparations that would recruit power and strength for a short duration, or what is now described as short but intense anaerobic work. Conversely, the flight response, he thought, was induced by fear. It was designed to fuel the body to endure prolonged movement such as running away from lions and bears. In many cases, however, it included not only fleeing but also hiding or withdrawal. (A variation on the flight response is the freeze response, often noted with post-traumatic stress disorder, where a person simply freezes, like a deer staring into a car's headlights.) The human body, in all its metabolic splendor, actually prepares itself to do both (fight and flight) at the same time. In terms of evolution, it appears that this dynamic was so advantageous to survival that it developed in nearly all mammalian species, including us. (Some experts now suggest, however, that our bodies have not adapted to the stressinduced lifestyles of the 21st century.)

In simple terms, there are four stages of the fight-orflight response:

Stage 1. Stimuli from one or more of the five senses are sent to the brain (e.g., a scream, the smell of fire, the taste of poison, a passing truck in *your* lane).

Stage 2. The brain deciphers the stimulus as either a threat or a nonthreat. If the stimulus is not regarded as a threat, this is the end of the response (e.g., the scream came from the television). If, however, the response is decoded as a real threat, the brain then activates the nervous and endocrine systems to quickly prepare for defense and/or escape.

Stage 3. The body stays activated, aroused, or "keyed-up" until the threat is over.

Stage 4. The body returns to **homeostasis**, a state of physiological calmness, once the threat is gone.

It is hypothesized that the fight-or-flight response developed primarily against threats of a physical nature, those that jeopardized the survival of the individual. Although clear physical threats still exist in today's culture, including possible terrorism, they are nowhere near as prevalent as those threats perceived by the mind and, more specifically, the ego. In a theory put forward by a disciple of Selye's, Simeons (1961), and repeated by Sapolsky (1998), it is suggested that, in effect, the fightor-flight response is an antiquated mechanism that has not kept evolutionary pace with the development of the human mind. Consequently, the stress response becomes activated in all types of threats, not just physical intimidations. The physiological repercussions can, and do, prove fatal. The body enters a state of physical readiness when you are about to receive your final exam grades or walk into an important meeting late, just as it does when you sense someone is following you late at night in an unlit parking lot. Moreover, this same stress response kicks in, to the same degree and intensity, even when the threat is wholly imaginary, in reaction to everything from monsters hiding under your bed when you were 4 years old, to the unsubstantiated idea that your boss doesn't like you anymore and is out to get you.

Cannon noted the activation of several physiological mechanisms in this fight-or-flight response, affecting nearly every physiological system in the body, for the preparation of movement and energy production. These are just a few of the reactions:

- **1.** Increased heart rate to pump oxygenated blood to working muscles
- **2.** Increased blood pressure to deliver blood to working muscles
- **3.** Increased ventilation to supply working muscles with oxygen for energy metabolism
- **4.** Vasodilation of arteries to the body's periphery (arms and legs) with the greatest muscle mass
- **5.** Increased serum glucose for metabolic processes during muscle contractions
- **6.** Increased free fatty acid mobilization as an energy source for prolonged activity (e.g., running)
- **7.** Increased blood coagulation and decreased clotting time in the event of bleeding

- **8.** Increased muscular strength
- **9.** Decreased gastric movement and abdominal blood flow to allow blood to go to working muscles
- **10.** Increased perspiration to cool body-core temperature

Unfortunately, the metabolic and physiological changes that are deemed essential for human movement in the event of attack, pursuit, or challenge are quite *ineffective* when dealing with events or situations that threaten the ego, such as receiving a parking ticket or standing in a long line at the grocery store, yet the body responds identically to all types of perceived threats.

Tend and Befriend

Do women respond differently to stress than men? The answer may seem obvious.

Generally speaking, men are prone to act more hostile whereas women have a proclivity to be more nurturing. Yet until recently every source on stress addressed the fight-or-flight response as if it were the only human default response. It was the work of Shelley Taylor and colleagues that filled in the missing piece with regard to the female response to stress. Curious about why only men were studied to formulate the basis for the fightor-flight response, Taylor hypothesized that the stress response needed to be reexamined, this time including astute observations of the female gender. In 2000 Taylor and colleagues proposed a new theory for the female stress response that they termed tend and befriend. Although both men and women have a built-in dynamic for the survival of physical danger, women also have an inherent nurturing response for their offspring as well as a means to befriend others. This in turn creates a strong social support system, an invaluable coping technique. Taylor suggests that the female response to stress is hardwired into the DNA and revealed through a combination of brain chemistry and hormones. The biological basis for tend and befriend appears to be the hormone oxytocin, now regarded as the "trusting hormone" or the social affiliation hormone. Although oxytocin is found in both women and men (to a lesser degree), estrogen is known to enhance the effects of oxytocin in the brain. Generational social factors may support the tend-and-befriend behavior pattern as well.

Not only do men and women have differences in their stress physiology, but there appears to be gender- specific behaviors for discussing and solving problems as well. Whereas men tend to think their way through by looking for solutions to problems, women like to talk about problems. Women bond quickly by sharing confidences. However, although talking may be beneficial, researchers note that merely talking about stressors tends to perpetuate rather than solve one's stressors. Researchers refer to stress-based conversations as "co-rumination." Although talking may strengthen female friendships, it is also known to increase anxiety and depression if solutions aren't introduced quickly. Experts warn against "unhealthy rumination" and the emotional contagion that results from it (Stepp, 2007).

It is fair to say that the concepts of survival are complex and perhaps not so neatly packaged by hormones or gender. Women are known to back-stab their "friends" and regrettably, on occasion, ditch their newborn babies in dumpsters and run away. Conversely, some men choose peace over violence (Gandhi and Martin Luther King, Jr., come to mind) and, when times get tough, men are known to bond together over a beer or game of golf.

Types of Stress

To the disbelief of some, not all stress is bad for you. In fact, there are many who believe that humans need some degree of stress to stay healthy. The human body craves homeostasis, or physiological calm, yet it also requires physiological arousal to ensure the optimal functioning of several organs, including the heart and musculoskeletal system. How can stress be good? When stress serves as a positive motivation, it is considered beneficial. Beyond this optimal point, stress of any kind does more harm than good.

Actually, there are three kinds of stress: **eustress**, **neustress**, and **distress**. Eustress is good stress and arises in any situation or circumstance that a person finds motivating or inspiring. Falling in love might be an example of eustress; meeting a movie star or professional athlete may also be a type of eustress. Usually, situations that are classified as eustress are enjoyable and for this reason are not considered to be a threat. Neustress describes sensory stimuli that have no consequential effect; it is considered neither good nor bad. News of an earthquake in a remote corner of the

The Nature of Stress

world might fall into this category. The third type of stress, distress, is considered bad and often is abbreviated simply as stress. There are two kinds of distress: acute stress, or that which surfaces, is quite intense, and disappears quickly, and chronic stress, or that which may not appear quite so intense, yet seems to linger for prolonged periods of time (e.g., hours, days, weeks, or months). An example of acute stress is the following: You are casually driving down the highway, the wind from the open sunroof is blowing through your hair, and you feel pretty good about life. With a quick glance in your rearview mirror you see flashing blue lights. Yikes! So you slow down and pull over. The police car pulls up behind you. Your heart is racing, your voice becomes scratchy, and your palms are sweating as you try to retrieve license and registration from your wallet while rolling your window down at the same time. When the officer asks you why you were speeding you can barely speak; your voice is three octaves higher than usual. After the officer runs a check on your car and license, he only gives you a warning for speeding. Whew! He gets back in his car and leaves. You give him time to get out of sight, start your engine, and signal to get back onto the highway. Within minutes your heart is calm, your palms dry, and you start singing to the song on the radio. The threat is over. The intensity of the acute stress may seem cataclysmic, but it is very short-lived.

Chronic stressors, on the other hand, are not as intense but their duration is unbearably long. Examples might include the following: being stuck for a whole semester with "the roommate from hell," a credit card bill that only seems to grow despite monthly payments, a boss who makes your job seem worse than that of a galley slave, living in a city you cannot tolerate, or maintaining a relationship with a girlfriend, boyfriend, husband, or wife that seems bad to stay in but worse to leave. For this reason, chronic stressors are thought to be the real villains. According to the American Institute of Stress (AIS), it is this type of stress that is associated with disease because the body is perpetually aroused for danger.

A concept called the **Yerkes-Dodson principle**, which is applied to athletic performance, lends itself quite nicely to explaining the relationship among eustress, distress, and health. As can be seen in **Fig. 1.1**, when stress increases, moving from eustress to distress, performance or health decreases and there is greater risk of disease and illness. The optimal stress level is the midpoint, prior to where eustress turns into distress. Studies indicate that stress-related hormones in optimal doses actually improve physical performance and mental-processing skills like concentration, making you more alert. Beyond that optimal level, though, all aspects of performance begin to decrease in efficiency. Physiologically speaking, your health is at serious risk. It would be simple if this optimal level was the same for all people, but it's not. Hence, the focus of any effective stress-management program is twofold: (1) to find out where this optimal level of stress is for you so that it can be used to your advantage rather than becoming a detriment to your health status, and (2) to reduce physical arousal levels using both coping skills and relaxation techniques so that you can stay out of the danger zone created by too much stress.

Types of Stressors

Any situation, circumstance, or stimulus that is perceived to be a threat is referred to as a **stressor**, or that which causes or promotes stress. As you might imagine, the list of stressors is not only endless but varies considerably from person to person. Acute stress



FIGURE 1.1

The Yerkes-Dodson curve illustrates that, to a point, stress or arousal can actually increase

performance. Stress to the left of the midpoint is considered to be eustress. Stress beyond the midpoint, however, is believed to detract from performance and/ or health status and is therefore labeled distress.

Chapter 1

is often the result of rapid-onset stressors—those that pop up unexpectedly—like a phone call in the middle of the night or the discovery that you have lost your car keys. Usually the body begins to react before a full analysis of the situation is made, but a return to a state of calm is also imminent. Chronic stressors—those that may give some advance warning yet manage to cause physical arousal anyway, often merit more attention because their prolonged influence on the body appears to be more significant. Much research has been conducted to determine the nature of stressors, and they are currently divided into three categories: bioecological, psychointrapersonal, and social (Girdano, Everly, and Dusek, 2012).

Bioecological Influences

Chemtrails, global warming, and genetically modified organisms (GMOs) not withstanding, there are several biological and ecological factors that may trigger the stress response in varying degrees, some of which are outside our awareness. These are external influences, including sunlight, gravitational pull, solar flares, and electromagnetic fields, that affect our biological rhythms. From the field of chronobiology we learn that these factors affect three categories of biological rhythms: (1) circadian rhythms, fluctuations in physiological functions over the course of a 24-hour period (e.g., body temperature); (2) ultradian rhythms, fluctuations that occur over less than a 24-hour period (such as stomach contractions and cell divisions); and (3) infradian rhythms, changes that occur in periods longer than 24 hours (e.g., the menses). These biological changes are influenced by such natural phenomena as the earth's orbit and axis rotation, which give us periods of light and darkness as well as seasonal differences. A prime example of a bioecological influence is seasonal affective disorder (SAD), a condition affecting many people who live at or near the Arctic Circle. Many of these people become depressed when they are deprived of sunlight for prolonged periods of time. But technological changes are also included in this category, an example being jet lag as a result of airplane travel through several time zones. Electrical pollution, environmental toxins, solar radiation, and noise pollution are other potential bioecological influences. Genetically modified organisms (GMOs), petrochemicals, synthetic chemicals, and some types of nanotechnology are considered new bioecological threats. In addition, some synthetic food additives may trigger the release of various stress hormones throughout the body. Note that there is a growing opinion among some health practitioners that increased stress levels in the 21st century may be a direct result of our being out of touch with the *natural* elements that so strongly influence our body's physiological systems. In any case, some of these bioecological factors can be positively influenced by lifestyle changes, including dietary habits, exercise, and the regular practice of relaxation techniques, which bring a sense of balance back into our lives.

Psychointrapersonal Influences

Our current understanding is that psychointrapersonal influences make up the greatest percentage of stressors. These are the perceptions of stimuli that we create through our own mental processes. Psychointrapersonal stressors involve those thoughts, values, beliefs, attitudes, opinions, and perceptions that we use to defend our identity or ego. When any of these is challenged, violated, or even changed, the ego is often threatened and the stress response is the outcome. Psychointrapersonal stressors reflect the unique constructs of our personality, and in the words of stress researcher Kenneth Pelletier, represent "the chasm between the perceived self and the ideal self-image." These influences are the most likely to cause stress. For this reason it becomes imperative to intercept the stress response in the mind before it cascades down as a rush of stress hormones into the body to cause potential damage.

Social Influences

Social influences have long been the subject of research to explain the plight of individuals who are unable to cope with their given environment. Most notable is the issue of overcrowding and urban sprawl. Studies conducted on several species have shown that when their numbers exceed the territorial boundary of each animal, despite an abundance of food and water, several seemingly healthy animals die off (Allen, 1983). This need for personal space appears to be universal in the animal kingdom. This includes humans, who likewise begin to show signs of frustration in crowded urban areas, traffic jams, long lines at checkout stands, or whenever their personal space is "invaded." The origin of this particular social influence may be instinctual in nature. Additional social causes of stress include financial insecurity, the effects of relocation, some technological advances, violation of human rights, and low

socioeconomic status, to name but a few. New to the list of social influences are global warming concerns and water resource issues as the global population increases, taxing our very lifestyles with regard to scarcity issues.

Social Stress in America: A Twenty-First-Century Look

Social influences linked to stress have been studied for decades, most notably by Holmes and Rahe with the **Social Readjustment Rating Scale (SRRS)** and the concept of **life change units (LCUs)**. It was their work that highlighted the list of top life stressors, including death of a spouse, loss of a job, death of a child, divorce, and high mortgage payments. While these stressors haven't changed, the pace of society has moved into warp speed. With this rapid change more stressors have been added to the list, and the impact of stress on one's health has been confirmed.

For the past 10 years, the American Psychological Association has conducted a yearly survey titled "Stress in America: Paying with Our Health." From interviews with over 3,000 people in various demographic populations (gender, income levels, generational groups, etc.), the results are not promising. The key findings, published in the spring of 2015, revealed that although reported stress levels have decreased slightly over the past few years, over half of people between the ages of 18 and 40 report their stress level above 5 on a scale of 1 to 10. Seniors appeared to have the least stress; millennials have the most. The top reasons for stress included (1) financial pressures, (2) work, (3) economy, (4) family issues, and (5) health issues. Overall, women report more stress than men (and the gap is widening), and children appear to model their stress behavior on their parents'. Effective coping skills appear to be in short supply, according to this survey. The conclusions drawn from this study underscore the relationship between stress and disease/illness and show that people need to harness better stress management skills.

Similar to the APA "Stress in America" study, in 2014 National Public Radio and The Kaiser Health Foundation conducted a series titled "The Burden of Stress in America." Here are some of their findings:

- Half of those questioned (over 2,000 people) cited a major stressful experience in the past year.
- Health-related issues are stressful experiences most frequently mentioned.

- Feelings of being overwhelmed with responsibilities and financial struggles top the list of those who experience the greatest stress.
- Additional stressors included work problems, health problems, family issues, and being unhappy with physical appearances.

This study also looked at common daily stressors and hassles. Topping the list were juggling family schedules, disillusion with government politics, watching/ reading/listening to the news, household chores, running errands, car problems, commuting to work, losing cell phones, and using social media.

Whether it be daily hassles or bigger issues, both sleep patterns and eating behaviors were greatly (negatively) impacted by stress. Not all people reported having stress, and among those who appear to cope well, many credit their resilient personality traits, family and friends, spending time outdoors, hobbies, physical exercise, meditation, and time with pets.

Although major life events like getting married or relocating for a new job may be chronic stressors to some, renowned stress researcher Richard Lazarus hypothesized in 1984 that the accumulation of acute stressors or daily life hassles, such as locking your keys in your car, playing telephone tag, or driving to work every day in traffic, is just as likely to adversely affect one's health as the death of a spouse. These hassles are often based on unmet expectations that trigger an anger response of some type, whereas stressors of a chronic nature more often than not appear to have a greater association with fear and anxiety. Lazarus defined hassles as "daily interactions with the environment that were essentially negative." He also hypothesized that a balance of emotional experiences-positive emotions as well as negative ones-is necessary, and that people who have no exposure to life's "highs" or emotional uplifts are also susceptible to disease and illness. Further research by Lazarus (1984), Ornstein and Sobel (1990), and others has proved that his hypothesis has significant merit regarding stress and disease. As might be expected, the issue of lifestyle habits, changes, and hassles as social influences has come under attack by those who argue that perception or cognition plays an important role in the impact of stressors. Suffice it to say that all stressors, regardless of classification, are connected to human well-being in a very profound way.

Chapter 1

The General Adaptation Syndrome

Following Cannon's lead early in the 20th century, Hans Selye, a young endocrinologist who created a name for himself as a leading researcher in this field, studied the fight-or-flight response, specifically the physiological effects of chronic stress, using rats as subjects. In experiments designed to stress the rats, Selye noted that several physiological adaptations occurred as a result of repeated exposures to stress, adaptations that had pathological repercussions. Examples of these stress-induced changes included the following:

- **1.** Enlargement of the adrenal cortex (a gland that produces stress hormones)
- **2.** Constant release of stress hormones; corticosteroids released from the adrenal cortex
- **3.** Atrophy or shrinkage of lymphatic glands (thymus gland, spleen, and lymph nodes)
- 4. Significant decrease in the white blood cell count
- 5. Bleeding ulcerations of the stomach and colon
- 6. Death of the organism

Many of these changes were very subtle and often went unnoticed until permanent damage had occurred. Selye referred to these collective changes as the **general adaptation syndrome (GAS)**, a process in which the body tries to accommodate stress by adapting to it. From his research, Selye identified three stages of the general adaptation syndrome:

Stage 1: Alarm reaction. The alarm reaction describes Cannon's original fight-or-flight response. In this stage several body systems are activated, primarily the nervous system and the endocrine system, followed by the cardiovascular, pulmonary, and musculoskeletal systems. Like a smoke detector alarm buzzing late at night, all senses are put on alert until the danger is over.

Stage 2: Stage of resistance. In the resistance stage, the body tries to revert back to a state of physiological calmness, or homeostasis, by resisting the alarm. Because the perception of a threat still exists, however, complete homeostasis is never reached. Instead, the body stays activated or aroused, usually at a lesser intensity than during the alarm stage but enough to cause a higher metabolic rate in some organ tissues. One or more organs may, in effect, be working overtime and, as a result, enter the third and final stage. *Stage 3*: **Stage of exhaustion**. Exhaustion occurs when one (or more) of the organs targeted by specific metabolic processes can no longer meet the demands placed upon it and fails to function properly. This can result in death to the organ and, depending on which organ becomes dysfunctional (e.g., the heart), possibly the death of the organism as a whole.

Selye's general adaptation syndrome outlined the parameters of the physiological dangers of stress. His research opened the doors to understanding the strong relationship between stress and disease and the mind-bodyspirit equation. In addition, his work laid the foundation for the utilization of relaxation techniques that have the ability to intercept the stress response, thereby decreasing susceptibility to illness and disease. Congruent with standard medical practice of his day (and even today), initial stress management programs were geared toward reducing or eliminating the *symptoms* of stress. Unfortunately, this approach has not always proved successful.

Bad Stress in a Good Light

More research comes to light about the stress response, and we now know that the hormone dehydroepiandrosterone (DHEA) is produced and released by the adrenal glands, just as cortisol is. Cortistol is considered a catabolic (breaks down) hormone, whereas DHEA is considered an anabolic (builds up) hormone. In a perfect world (in which we only experience shortterm stress) these two tend to balance each other out. During chronic stress, however, much more cortisol is produced than DHEA. This creates an imbalance that can wreak havoc on the body's physiological systems over time. Kelly McGonigal, author of the popular book The Upside of Stress, suggests that if we can take a positive attitude about stress (accept the challenge and rise to the occasion), we can promote a better hormonal balance between cortisol and DHEA. Putting a new spin on the term "fight or flight," McGonigal refers to the stress response as "excite and delight," an expression aimed at placing bad stress in a good light, though not all experts agree with her perspective.

Post-Traumatic Stress Disorder 101

There is stress and then there is STRESS! Although most people claim to live (or even brag about) stressful lives, the truth of the matter is that few people encounter truly horrific events of death and carnage. The repeated horrors of war, however, have notoriously ranked at the top of every list as the most unbearable of all stressors that anyone can endure psychologically and for good reason. To quote Civil War General William T. Sherman, "War is hell." Exposure to these types of events typically include those that threaten one's life, result in serious physical injury, expose one to horrific carnage, or create intense psychological shock, all of which are strongly influenced by the intensity and duration of the devastation either experienced or observed first hand. The result is an emotional wound embedded in the unconscious mind that is very hard to heal.

Every war seems to have its own name for this type of anxiety disorder. Somber Civil War soldiers were described as having "soldier's heart." Affected military personnel returning from World War I were described as being "shell-shocked," whereas soldiers and veterans from World War II exhibiting neurotic anxiety were described as having severe "battle fatigue" or "combat fatigue." The term post-traumatic stress disorder-more commonly known as PTSD-emerged during the treatment of returning soldiers from Vietnam who seemed to lack industrial-strength coping skills to deal with the hellacious memories that haunted them both day and night. This emotional disorder was first registered in the Diagnostic and Statistical Manual of Mental Disorders (DSM) in 1980 and has been the topic of intense investigation ever since. Sadly, the wars in Iraq and Afghanistan have provided countless case studies for this anxiety disorder today.

Although mortal combat ranks at the top of the list of hellacious experiences, one doesn't have to survive a suicide bomber in the streets of Baghdad to suffer from PTSD. Survivors and rescue workers of the World Trade Center and Pentagon catastrophes are known to still be dealing with this trauma, as are several thousands of people displaced from the wrath of Hurricanes Katrina and Rita. Violent crime victims, airplane crash survivors, sexual/physical assault victims, and occasionally first responders (e.g., police officers, fire fighters, emergency medical technicians) are also prone to this condition. Given the nature of global warming and climate change and terrorism, it is suggested that PTSD may become a common diagnosis among world citizens, with the ripple effect affecting legions of friends, colleagues, and family members alike. Secondary

PTSD is a term given to family members, friends, and colleagues who are negatively affected by the ripples of strife from loved ones (even patients) who have had direct exposure to severe trauma.

The symptoms of PTSD include the following: chronic anxiety, nightmares, flashbacks, insomnia, loss of appetite, memory loss, hypervigilance, emotional detachment, clinical depression, helplessness, restlessness, suicidal tendencies, and substance addictions (MayoClinic.com). Typically a person suffering from PTSD has several of these symptoms at one time. Whereas the symptoms for some individuals may last months, for others PTSD becomes a lifelong ordeal, particularly if treatment is avoided, neglected, or shunned. The key to working with PTSD patients is to access the power of the unconscious mind by identifying deep-seated memories so that they may be acknowledged and released in a healthy manner rather than repressed and pushed deeper in the personal unconscious mind.

Specialists who treat patients with PTSD recommend that treatment begin as soon as possible to prevent a worsening effect. Initial treatment (intervention) is referred to as critical incidence stress management (CISM). The purpose of CISM is to (1) significantly reduce the traumatic effects of the incident and (2) prevent further deep-seated PTSD occurrences. Specific treatment modalities include eye movement desensitization and reprocessing (EMDR), counseling, and group therapy as a means to promote emotional catharsis. The Trauma Recovery Institute also cites art therapy, journal writing, and hypnosis as complementary coping skills for emotional catharsis. Many patients are also prescribed medications. Although medications may help reduce anxiety, it should be noted they do not heal emotional wounds.

Stress and Insomnia

Muscle tension may be the number one symptom of stress, but in our ever-present, demanding 24/7 society, insomnia runs a close second. **Insomnia** is best defined as poor-quality sleep, abnormal wakefulness, or the inability to sleep, and it can affect anyone. Overall, Americans get 20 percent less sleep than their 19thcentury counterparts. According to a recent survey by the National Sleep Foundation, more than 60 percent of Americans suffer from poor sleep quality, resulting in everything from falling asleep on the job and marital problems to car accidents and lost work productivity. Does your stress level affect your sleep quality? Even if you sleep well, it is hard these days not to notice the proliferation of advertisements for sleep prescriptions, suggesting a serious public health concern.

Numerous studies have concluded that a regular good night's sleep is essential for optimal health, whereas chronic insomnia is often associated with several kinds of psychiatric problems (Maas, 2001). Emotional stress (the preoccupation with daily stressors) is thought to be a primary cause of insomnia. The result: an anxious state of mind where thoughts race around, ricocheting from brain cell to brain cell, never allowing a pause in the thought processes, let alone allowing the person to nod off.

Many other factors (sleep stealers) detract from one's **sleep hygiene** and can affect the quality of sleep, including hormonal changes (e.g., premenstrual syndrome, menopause), excessive caffeine intake, little or no exercise, frequent urination, circadian rhythm disturbances (e.g., jet lag), shift work, medication side effects, and a host of lifestyle behaviors (e.g., prolonged television watching, alcohol consumption, smartphone use) that infringe on a good night's sleep.

How much sleep is enough to feel recharged? Generally speaking, 8 hours of sleep is the norm, although some people can get as few as 6 hours of sleep and feel fully rested. Others may need as many as 10 hours. New findings suggest that adolescents, including all people up to age 22, need more than 8 hours of sleep (Dawson, 2008).

Not only can stress (mental, emotional, physical, or spiritual) affect the quality and quantity of sleep, but the rebound effect of poor sleep can, in turn, affect stress levels, making the poor sleeper become more irritable, apathetic, or cynical. Left unresolved, it can become an unbroken cycle (negative feedback loop). Although many people seek medical help for insomnia and are often given a prescription, drugs should be considered as a last resort. Many (if not all) techniques for stress management have proven to be effective in promoting a good night's sleep, ranging from cardiovascular exercise to meditation.

The field of sleep research began in earnest more than 60 years ago. Yet, despite numerous studies, the reason why we spend approximately one-third of our lives in slumber still baffles scientists. From all appearances, sleep promotes physical restoration. However, when researchers observe sleep-deprived subjects, it's the mind—not the body—that is most affected, with symptoms of poor concentration, poor retention, and poor problem-solving skills.

Insomnia is categorized in three ways: transient (short term with 1 or 2 weeks affected), intermittent (occurs on and off over a prolonged period), and chronic (the inability to achieve a restful night of sleep over many, many months). Although each of these categories is problematic, chronic insomnia is considered the worst.

All-nighters, exam crams, late-night parties, and midnight movies are common in the lives of college undergraduates, but the cost of these behaviors often proves unproductive. Unfortunately, the population of people who seem to need the most sleep, but often get the least amount, are adolescents younger than age 20.

Although sleep may be relaxing, it is important to remember that sleeping is not a relaxation technique. Studies show that heart rate, blood pressure, and muscle tension can rise significantly during the dream state of sleep. What we do know is that effective coping and relaxation techniques greatly enhance one's quality of sleep.

Here are a few suggestions to improve your sleep quality:

- **1.** Avoid drinking any beverages with caffeine after 6:00 P.M., as the effects of caffeine on the nervous system promote a stress response rather than a relaxation effect.
- **2.** Physical exertion (cardiovascular exercise) is regarded as a great way to ensure a good night's sleep.
- **3.** Keep a regular sleep cycle. Make a habit of going to bed at the same time every night (within 15 minutes) and waking up at about the same time each morning (even weekends).
- **4.** Enhance your sleep hygiene. Create a sleepfriendly environment where bright light and noise are minimized or completely eliminated.
- **5.** Avoid watching television right before you go to bed. Instead, try reading.
- **6.** Make your bedroom a tech-free zone. Avoid using your smartphone or tablet in the bedroom, even as an alarm clock, and turn off your WiFi router before you turn in.

The Nature of Stress

College Stress

What makes the college experience a significant departure from the first 18 years of life is the realization that with the freedom of lifestyle choices come the responsibilities that go with it. Unless you live at home while attending school, the college experience is one in which you transition from a period of dependence (on your parents) to independence. As you move from the known into the unknown, the list of stressors a college student experiences is rather startling. Here is a sample of some of the more common stressors that college students encounter:

- Roommate dynamics: Finding someone who is compatible is not always easy, especially if you had your own room in your parents' house. As we all know or will quickly learn, best friends do not make the best roommates, yet roommates can become good friends over time. Through it all, roommate dynamics involve the skills of compromise and diplomacy under the best and worst conditions. And should you find yourself in an untenable situation, remember, campus housing does its best to accommodate students and resolve problems. However, their time schedule and yours may not always be the same. For those college students who don't leave home, living as an adult in a home in which your parents and siblings are now roommates can become its own form of stress.
- Professional pursuits: What major should I choose? Perhaps one of the most common soul-searching questions to be asked in the college years is, What do I want to do the rest of my life? It is a wellknown fact that college students can change majors several times in their college careers, and many do. The problem is compounded when there is parental pressure to move toward a specific career path (e.g., law or medicine) or the desire to please your parents by picking a major that they like but you don't.
- Academic deadlines (exams, papers, and projects): Academics means taking midterms and finals, writing research papers, and completing projects. This is, after all, the hallmark of measuring what you have learned. With a typical semester load of fifteen to twenty credits, many course deadlines can fall on the same day, and there is the everpresent danger that not meeting expectations can result in poor grades or academic probation.

- *Financial aid and school loans*: If you have ever stood in the financial aid office during the first week of school, you could write a book on the topic of stress. The cost of a college education is skyrocketing, and the pressure to pay off school loans after graduation can make you feel like an indentured servant. Assuming you qualify for financial aid, you should know that receiving the money in time to pay your bills is rare. Problems are compounded when your course schedule gets expunged from computer records because your financial aid check was 2 weeks late. These are just some of the problems associated with financial aid.
- Budgeting your money: It's one thing to ask your parents to buy you some new clothes or have them pick up the check at a restaurant. It's quite another when you start paying all your own bills. Learning to budget your money is a skill that takes practice. And learning not to overextend yourself is not only a skill, but also an art in these tough economic times. At some time or other, everyone bounces a check. The trick to avoid doing it is not to spend money you do not have and to live within your means.
- *Lifestyle behaviors*: The freedom to stay up until 2:00 a.m. on a weekday, skip a class, eat nothing but junk food, or take an impromptu road trip carries with it the responsibilities of these actions. Independence from parental control means balancing freedom with responsibility. Stress enters your life with a vengeance when freedom and responsibility are not balanced.
- Peer groups and peer pressure (drugs and alcohol): There is a great need to feel accepted by new acquaintances in college, and this need often leads to succumbing to peer pressure—and in new environments with new acquaintances, peer pressure can be very strong. Stress arises when the actions of the group are incongruent with your own philosophies and values. The desire to conform to the group is often stronger than your willpower to hold your own ground.
- *Exploring sexuality*: Although high school is the time when some people explore their sexuality, this behavior occurs with greater frequency during the college years, when you are away from the confines of parental control and more assertive

with your self-expression. With the issue of sexual exploration come questions of values, contraception, pregnancy, homosexuality, bisexuality, AIDS, abortion, acceptance, and impotence, all of which can be very stressful.

- Friendships: The friendships made in college take on a special quality. As you grow, mature, and redefine your values, your friends, like you, will change, and so will the quality of each friendship. Cultivating a quality relationship takes time, meaning you cannot be good friends with everyone you like. In addition, tensions can quickly mount as the dynamics between you and those in your close circle of friends come under pressure from all the other college stressors.
- Intimate relationships: Spending time with one special person with whom you can grow in love is special indeed. But the demands of an intimate relationship are strong, and in the presence of a college environment, intimate relationships are under a lot of pressure. If and when the relationship ends, the aftershock can be traumatic for one or both parties, leaving little desire for one's academic pursuits.
- Starting a professional career path: It's a myth that you can start a job making the same salary that your parents make, but many college students believe this to be true. With this myth comes the pressure to equal the lifestyle of one's parents the day after graduation. (This may explain why so many college graduates return home to live after graduation.) The perceived pressures of the real world can become so overwhelming that seniors procrastinate on drafting a resume or initiating the job search until the week of graduation.

For the nontraditional college student, the problem can be summarized in one word: balance! Trying to balance a job, family, and schoolwork becomes a juggling act extraordinaire. In attempting to satisfy the needs of your supervisor, colleagues, friends, spouse, children, and parents (and perhaps even pets), what usually is squeezed out is time for yourself. In the end everything seems to suffer. Often schoolwork is given a lower priority when addressing survival needs, and typically this leads to feelings of frustration over the inadequacy of time and effort available for assignments or exams. Of course, there are other stressors that cross the boundaries between work, home, and school, all of which tend to throw things off balance as well. Exercises 1.1 to 1.5 invite you to reflect on these issues.

The Sociology of Stress

Today's world is a very different place than when Walter Cannon coined the term "fight-or-flight response" and Hans Selye first uttered the words, "general adaptation syndrome." Little did they know just how much stress would become a part of the social fabric of everyday life in the 21st century. Some experts argue that our collective stress is a result of our inability to keep up with all the changes that influence the many aspects of our lives. Simply stated, our physiology has not evolved at a comparable rate as the social changes of the last half-century.

Holmes and Rahe, the creators of the Social Readjustment Rating Scale, were dead-on about various social aspects that can destabilize one's personal equilibrium, even with the best coping skills employed. Yet no matter what corner of the global village you live in, the stresses of moving to a new city or losing a job are now compounded by significant 21st-century issues. We are a product of our society, and societal stress is dramatically on the rise.

Experts who keep a finger on the pulse of humanity suggest that as rapid as these changes are now, the rate and number of changes are only going to increase. It's not just the changes we encounter that affect our stress levels, it's how we engage in these new changes. Increasingly, this engagement is online. Unfortunately, the stress that is provoked is real, not virtual. The majority of interactive Web sites are littered with negative comments, frustrations, expletives, and rants, all of which suggest a malaise in the general public combined with the unparalleled freedom to honestly express oneself anonymously. Being overwhelmed with choices in communication technology for staying in touch with friends, colleagues, and employees leads to a whole new meaning of burnout.

Physiology, psychology, anthropology, theology the topic of stress is so colossal that it is studied by researchers in a great many disciplines, not the least of which is sociology. Sociology is often described as the study of human social behavior within family, organizations, and institutions: the study of the individual in relationship to society as a whole. Because everybody is born into a family and most people work for a living, no one is exempt from the sociology of stress. Whether we like it or not, we are all connected to each other. Are you a product of your culture? To get a better idea, please complete the survey found in Exercise 1.6.

Perhaps the sociology of stress can best be acknowledged through the newest buzzword, "social networking," with the likes of Facebook, Twitter, Skype, YouTube, Pinterest, Instagram, and new social media and networking outlets taking shape on the cyberhorizon. Technology has even changed how people converse at dinner parties (e.g., one person asks a question and five people pull out their smartphones and Google the answer). Technology, the economy, and the environment have become significant threads of the social fabric.

Techno-Stress

The tsunami of cyber-information has been building for years, yet the first devastating wave seems to have hit the shores of the human mind in earnest about the same time Facebook hit a billion users in 2010, the same year that the Swiss Army Knife included a USB drive for "survival." Although information overload, privacy, ethics, and bandwith are issues for many, deeper problems are coming to the surface in the age of iPads and smartphones. The cyber-alchemy of tweets, Facebook updates, Skype messages, text messages, and the deluge of emails has hit a critical mass of annoyance for some and addiction for a great many people who are fed up with giving their lives over to technology. The growing dependence on technology has even inspired a term: screen addiction. If it's not computer screens and smartphones, it's iPads and Bluetooth technology, none of which are bad, but can become problematic if your life is completely centered around being plugged in all the time. The perfect storm of stress is the overwhelming amount of information available, the distractive nature of being plugged in 24/7, a sense of alienation, and the poor boundaries people maintain to regulate this information. The concept of poor boundaries is shown by nearly all college students who text during classroom lectures as well as the scores of people who bring all their technology with them on vacation, thus never separating work from leisure, and possibly compromising both. Similarly, fewer than half of employees nationwide leave their desk/workstation during lunch hour, according to a Manpower survey, leading to higher stress levels and fatigue (Marquardt, 2010).

There are many terms for all the problems associated with the tsunami of information and the convenience to access it, but the one term that sums it all up is *technostress*, which is the feeling of being overwhelmed with sensory bombardment from the online technology. Factors contributing to **techno-stress** include, but are not limited to, privacy issues, identity theft, smartphone radiation, Internet scams, bandwidth, Internet gambling and pornography addiction, and child access to adult content. Perhaps the most widespread stress from technology that most people experience is the perpetual distraction of emails and text messages and the replacement of face-toface conversation with digital communications.

Research from the University of California at Irvine reveals that the constant interruption of emails triggers the stress response, with the subsequent release of stress hormones affecting short-term memory. And if you ever wondered if people, perhaps even yourself, seem addicted to checking emails, voice mails, or tweets, consider this fact: research shows that the receipt of emails and tweets is accompanied by a release of dopamine. Dopamine, a "feel-good" neurotransmitter, is associated with chemical addictions. In the absence of dopamine release, boredom ensues, until the next fix. Every abrupt shift in the history of societies has had its associated stressors; for example, the shift from agrarian to industrial society was correlated with a dramatic increase in alcoholism, regarded as a "social disease" of its time. In today's abrupt shift to online technology and social media, the online technology is itself the addiction.

Young people today who never knew life without a smartphone or iPad don't understand why older adults seem so concerned about their addictive tech habits. Meanwhile, adults now notice that children and teens raised with screen technology may be well versed in cyber-communication skills, yet socially immature with face-to-face communication skills, including using eye contact.

Since the advent of smartphones, several new terms have been created to capture the behaviors associated with them. With the phenomenon known as screen addictions, we now have "digital toxicity" (neurological stress or burnout from the constant engagement [neuroplasticity] with smartphones and other devices). In essence, the brain becomes wired for stress through technology. "Digital dementia" is a term used to describe people who rely so much on their smartphones and digital devices that they don't give their brains time to store information from short-term to long-term memory. And finally, "FOMO" (fear of missing out) is the term for anxious behaviors associated with an addiction where the ego needs to be fully engaged with social networking.

The boom in the telecommunications industry and computer industry, pillars of the information age, have led to an overnight lifestyle change in U.S. and global society. In their book Technostress, authors Weil and Rosen (1998) suggest that the rapid pace of technology will only continue with greater speed in the coming years, giving a whole new meaning to the expression "24/7." Their suggestions have proved quite true. They predict, as do others, that the majority of people will not deal well with this change. The result will be more stress, more illness and disease, more addictions, more dysfunction, and a greater imbalance in people's lives. There is general consensus that the rate of change with technology has far outpaced the level of responsibility and moral codes that typically accompany the creative process. Exercise 1.6 invites you to examine your techno-stress level.

The Rise of Incivility

Have you noticed that people today seem quick-tempered, impatient, cynical, self-centered, and perhaps even rude at times? If you have, you are not alone. Civility, as expressed through social etiquette, refers to the practice of good manners and appropriate behavior. Many consider basic rules of civility to be sorely lacking in today's culture. Experts attribute the lack of civility to an alchemy of narcissism and a national lack of values, contributing not only to social unease, but also to the economic mess that created the Great Recession of 2008. Moreover, a revolution in the way people communicate with each other over the past few years has dramatically changed the social fabric of our culture, particularly how we relate, or fail to relate, to each other in face-to-face situations. Instant accessibility has sown the seeds of impatience. Politeness has given way to rudeness. Internet rants and talk-radio phone calls carry over into face-to-face shouting matches at sporting events and political rallies. Social manners (e.g., appropriate behavior and thinking of others first) have become minimal if not obsolete for many people, particularly when bursts of anger perpetuate feelings of victimization. Today's self-centered, narcissistic indulgences have hit an all-time high, many of which are directly related to political incivility. Incivility seems to be a global issue as well. Several star athletes were

Olympics (some missing their events) for inappropriate "tweets" considered not only rude, inappropriate, and racially offensive, but a violation against the ethics of the International Olympic Committee standards to which these athletes take an oath. How did things go so wrong? Some people blame poor parenting skills. Many cite talk radio and various news media outlets that broadcast incivility. Others point their finger at the proliferation of technology and the constant selfpromotion that seems to go along with it (Meyer, 2008). Many say the perfect storm of "uncivil Americans" is a combination of all these factors. Noting the serious issue of American incivility, Rutgers University has initiated a one-credit course called Project Civility for students, with topics ranging from smartphone etiquette and cyber-bullying to civil sportsmanship and social responsibility. It is likely that other colleges will follow this trend.

told to pack up and leave during the 2012 London

According to a study by the New York Times, the average young American now spends every waking minute (with the possible exception of school classes) using a smartphone, computer, television, or other electronic device. Adults appear to be no different. It is not uncommon to see people texting while at movie theaters, talking on smartphones in restaurants (despite signs prohibiting their use), and texting while driving (despite the growing number of state laws banning this behavior). In 2006, researchers at the University of Utah were curious to see if the distraction of smartphone use while driving was similar to driving while under the influence of alcohol. Using driving simulators it was revealed that people on smartphones show a driving impairment rate similar to a blood alcohol level of 0.08 percent, the demarcation of drunk driving in the majority of states in the United States. Although many people may recognize the dangers of talking and driving, few offer to give up this mode of multi-tasking.

Many people use technology to avoid stressful situations, again adding to a general lack of civility in society. Examples include quitting a job with a tweet, breaking up with a girlfriend/boyfriend on Facebook, or sending a derogatory email and blind-copying everyone in one's address book. The modern lack of civility cannot be blamed entirely on technology, yet the dramatic rise in the use of communication devices has played its part. How would you rate your current level of social etiquette?

The Nature of Stress

Americans may be lacking in the social graces, but in the face of global calamities, such as the 2010 earthquake in Haiti or the 2008 tsunami in Indonesia, Americans are renowned the world over for giving generously to the needy in far-away lands. However, texting a donation during the Superbowl for earthquake relief is far different than face-to-face contact and polite social interactions. It's the direct social contact skills that prove to be sorely lacking in American culture today. How good are your social skills in this age of incivility? You can begin to find out by completing Exercises 1.7 and 1.8.

Environmental Disconnect

Even if you don't listen to the news regularly, it's hard to ignore the impact humanity is having on the state of the planet. With a population exceeding 7 billion people, the word sustainable has entered the American lexicon with great regularity, even if the concept is largely ignored by most citizens. Modern society can be said to be suffering from an environmental disconnect, a state in which people have distanced themselves so much from the natural environment that they cannot fathom the magnitude of their impact on it. It was predicted many years ago by a great many experts and luminaries that as humanity distances itself from nature, people will suffer the consequences, primarily in terms of compromised health status. The term nature deficit disorder was coined by award-winning author Richard Louv, in Last Child in the Woods, to describe the growing abyss between people and the outdoor world. Kids, as it turns out, would rather play video games or surf online than play outside-where there are no outlets or WiFi access.

There is an age-old question that states, "How many angels can dance on the head of a pin?" Today that imponderable question has become, "How many humans can sustainably live on planet Earth?" It's interesting to note that some of the earliest studies on stress physiology involved placing an abnormally high number of mice in a cage. As their environment, personal space, food availability, and quality of life decreased with each additional occupant, tension significantly increased. The parallels between the environment and behavior of those mice and humans today are unavoidable.

By now everyone has not only heard of the issues on global warming, but also has experienced the preliminary effects first hand: violent storms, warm winters, hotter summers, more intense droughts, and severe weather patterns. The problems of our oil dependence were especially highlighted by the massive 2010 oil spill in the Gulf of Mexico. What has yet to become clear to the average person, however, are the problems with water shortages, an issue that will greatly affect everyone. United Nations Secretary General Ban Ki-moon has repeatedly stated that wars will most likely be fought over water sources in our lifetime. So significant is this stressor that *National Geographic* dedicated an entire issue in April 2010 to the topic of water and our thirsty world. Here are some facts that will impact you now and in the years to come:

- About 97.5 percent of the earth's water is salty, with only 2.5 percent of earth's water considered fresh.
- Two-thirds of all fresh water is frozen.
- Many Western states (e.g., Texas, Arizona, and California) are draining underground aquifers quicker than they can be naturally restored.
- Many fresh-water streams contain hormones and antibiotics from prescription drugs flushed down toilets and agricultural run-off containing petrochemical fertilizers.
- Americans use approximately 100 gallons of water at home each day, compared to 5 gallons/ day in developing nations.
- It takes 2,500 gallons of water to make 1 pound of hamburger and 1,800 gallons to grow enough cotton for a pair of blue jeans.
- Clean water is a huge issue in China, so much so that it tried (and failed) to license and export fresh water from the Great Lakes region in the United States and Canada.
- The Three Gorges Dam in central China will cause the earth's axis to tilt by nearly an inch.

Perhaps the most subtle warning about this disconnect from our environment is the news that for the first time it has been noted that Americans are not getting enough vitamin D, as explained by nutritionist and *New York Times* reporter, Jane Brody. Vitamin D deficiency is due to a lack of exposure to sunlight and poor dietary habits. Sunlight is often referred to as the sunshine vitamin because, as sunlight reaches the skin, it reacts to help form vitamin D. Today people spend little time outdoors, denying themselves exposure to adequate amounts of sunlight. Vitamin D isn't the only nutritional/environmental problem. People who saw the documentary film Food, Inc. (or who read the book by Karl Weber) are acutely aware that the move away from family farms to industrial farms in the last few decades has greatly compromised the quality of food, primarily chicken and beef, and encouraged the proliferation of products that use high fructose corn syrup. Changes in the food industry, along with inadequate exercise, help explain the recent dramatic increase in national obesity levels. Genetic engineering of food crops is suggested as a primary reason for the decimation of half of the world's bee population, which is creating a problem regarding the pollination of many crops. But bat and frog populations are being decimated as well. The balance of nature is, in no uncertain terms, out of balance.

Some of the world's leading scientists are not optimistic about the future of humanity, given the stresses we have put on our environment and, in turn, ourselves. Physicist Stephen Hawking's current outlook for humanity is grim at best, unless we learn to change our ways, and quickly. In a 2010 interview with the Huffington Post he stated, "We are entering an increasingly dangerous period in our history. There have been a number of times in the past when survival has been a question of touch and go. We are rapidly depleting the finite natural resources that Earth provides, and our genetic code carries selfish and aggressive instincts." Harvard biologist E. O. Wilson and others now refer to the loss of biodiversity in our modern era as the "sixth mass extinction" on Earth, with hunting and fishing, loss of natural habitat, and pollution as the primary causes (Eldridge, 2001). Meanwhile, sociologist Jared Diamond, author of the best selling book, Collapse: How Societies Choose to Fail on Success (2005), has this message: If positive changes are not made with regard to our use of resources and our relationship to our natural environment, we, too, will face extinction.

Not all views of humanity are so dire or fatalistic. Several, in fact, are quite optimistic—with the caveat that we must act now. Consider that of cell biologist and philosopher Bruce Lipton. In his book *Spontaneous Evolution*, he states: "Society is beginning to realize that our current beliefs are detrimental and that our world is in a very precarious position. The new science (the nexus of quantum physics, psychology, and biology) paves a way into a hopeful story of humanity's potential future, one that promotes planetary healing." Lipton uses the model of holism (where all parts are respected and come together for a greater purpose) as the template for his optimism. Lipton is among a growing group of social luminaries, including Barbara Marx-Hubbard, Jean Houston, Christine Page, Edgar Mitchell, Elizabeth Sartoris, and Gregg Braden, who share this optimistic paradigm of humanity's shifting consciousness (Schlitz, 2010). In the words of the rock musician Sting, "Yes we are in an appalling environmental crisis, but I think as a species, we evolve through crises. That's the only glimmer of hope, really" (Richter, 2010). Exercise 1.9 invites you to evaluate your relationship to the planet's health.

Race and Gender Stress

One cannot address the issue of the sociology of stress without acknowledging the issue of race and gender stress. The United States, a nation of immigrants, has often been described as a melting pot, but recently another metaphor has been used to describe the makeup of its citizens: a tossed salad, where assimilation meets head on with cultural diversity. Race and ethnic issues continually make headline news with regard to illegal alien issues nationwide, disenfranchised black voters in Florida, poverty in New Orleans, and Muslim Americans facing episodes of discrimination, to name a few. Race and gender tensions, however, are not new. It could be argued that they are as old as humanity itself. Since time began, people have been threatened by other people of different skin color, ethnicity, gender, or sexual preference. The 2008 election of the first African American president has helped jumpstart a national discussion on race, but it hasn't resolved the issue of intolerance. Like race issues, gender issues (and to this we can add sexual orientation issues) are also threads in the social fabric once dominated by a white patriarchal society, yet this is changing. Despite the demographic shifts, the dated cultural perceptions of superiority/inferiority persist, and with them the biases that go with them.

Stress, you will remember, is defined as a perceived threat, a threat generated by the ego. These threats manifest in a variety of ways including stereotyping, prejudice, discrimination, harassment, and even physical harm. Race and gender stress may begin early in life, too; many children can attest to being bullied in school, or excluded and teased by social cliques. The

The Nature of Stress

emotional stress associated with this type of angst includes low self-esteem, alienation, and anxiety. Everybody wants to be accepted.

How can society help alleviate race and gender stress? Anti-bullying programs are being implemented in many schools nationwide, helping raise awareness among kids and parents to the dangers of bullying. On television, many shows have tried to better reflect the demographics of American society with casts of various ethnicities. Although these are steps in the right direction, school curricula and television shows alone cannot change the world overnight. But they're a start. Remember that when people demonstrate a bias toward race, gender, ethnic background, or anything related to them, they are projecting their fears onto you. A common reaction is to meet stress with stress, but the best answer is to rise above it and take the high road called integrity.

Stress in a Changing World

All you need do is glance at the covers of *Time* or *Newsweek*, or the Internet homepage of MSNBC or Comcast to see and read what we already know: These are stressful times! But the stress we are encountering as a nation is not specific to being a world power. The problem seems to have reached every corner of the planet, permeating the borders of every country, province, and locale. In fact, after conducting several surveys on the topic of stress and illness, the World Health Organization came to the conclusion that stress is hitting a fever pitch in every nation. So alarmed were they by the results of their study that the WHO researchers cited stress as "a global epidemic."

On the home front it appears that stress, like a virus, has infected the American population, and the symptoms are everywhere: Radio talk shows and blogs have become national forums for complaining; political pundits repeatedly describe voter anger; headlines are filled with stories of people who have gone berserk with hostility, most notably road rage, sports rage, movie theater rage, phone rage, and air rage; television talk shows are reduced to airing personal catharses; workplace violence has escalated to several incidences per month in which co-workers are shot and killed; the American dream is out of reach for many; and psychologists describe a spiritual malaise that has swept the country. Yet where there is despair,



© 2003 Ziggy and Friends, Inc. Reprinted with permission of UNIVERSAL PRESS SYNDICATE. All rights reserved.

there is also compassion. The devastating earthquake in Fukashima, Japan, in 2011 and the devastation of Hurricane Katrina in 2005 brought out the best in some, as countless people came to the aid of their fellow human beings across the globe. The darkest times can bring out our finest hour, if we transition from fear to compassion.

The Power of Adaptation

One of the greatest attributes of the human species is the ability to adapt to change. Adaptation is the number one skill with which to cope with the stress of life. Adaptation involves a great many human attributes, from resiliency and creativity to forgiveness, patience, and many, many more. Given the rapid rate of change in the world today, combined with the typical changes one goes through in a lifetime, the ability to adapt is essential. Those who incorporate a strategy to adapt positively not only will be healthier, but also, in the long run, will be much happier. Adaptation to stress means to make small changes in your personal lifestyle so that you can move in the flow with the winds of change taking place in the world and not feel personally violated or victimized. Sometimes, adaptation to change means merely fine-tuning a perception or attitude. In the best stress

Chapter 1

management program reduced to 27 words, the following quote attributed to Reinhold Niebuhr speaks to this process: "God, grant me the serenity to accept the things I cannot change, the courage to change the things I can and the wisdom to know the difference." The skills introduced in this text are designed to help you gracefully adapt to the winds of change.

The Premise of Holistic Stress Management

Honoring the premise of this ageless wisdom, holistic stress management promotes the integration, balance, and harmony of one's mind, body, spirit, and emotions for optimal health and well-being. Stress affects all aspects of the wellness paradigm. To appreciate the dynamics of the whole, sometimes it's best to understand the pieces that make up the whole. What follows is a definition of each of the four aspects that constitute the human entity, and the effect that unresolved stress plays on each.

Emotional well-being: The ability to feel and express the entire range of human emotions, and to control them, not be controlled by them. Unresolved stress tends to perpetuate a preponderance of negative emotions (anger and fear), thus compromising emotional balance and causing the inability to experience and enjoy moments of joy, happiness, and bliss.

Physical well-being: The optimal functioning of the body's physiological systems (e.g., cardiovascular, endocrine, reproductive, immune). Not only does unresolved stress create wear and tear on the body, but the association between stress and disease is approximately 80–85 percent. Ultimately, stress can kill.

Mental well-being: The ability of the mind to gather, process, recall, and communicate information. Stress certainly compromises the ability to gather, process, recall, and communicate information.

Spiritual well-being: The maturation of higher consciousness as represented through the dynamic integration of three facets: relationships, values, and a meaningful purpose in life. Most, if not all, stressors involve some aspect of relationships, values (or value conflicts), and the absence of, search for, or fulfillment of a meaningful purpose in one's life.

The circle is a universal symbol of wholeness, often divided into four parts: north, south, east, and west, as well as spring, summer, winter, and fall. Mind, body, spirit, and emotions are also four quadrants that make up the whole, often depicted in a circle. Exercise 1.10 invites you to reflect on the concept of wholeness via this symbol so prevalent in world culture.

The Nature of Holistic Stress Management

With the appreciation that the whole is always greater than the sum of its parts, here are some insights that collectively shine light on this timeless wisdom of the nature of holistic stress management:

- Holistic stress management conveys the essence of uniting the powers of the conscious and unconscious minds to work in unison (rather than in opposition) for one's highest potential. Additionally, a holistic approach to coping effectively with stress unites the functions of both the right and left hemispheres of the brain.
- Holistic stress management suggests a dynamic approach to one's personal energy where one lives consciously in the present moment, rather than feeling guilty about things done in the past or worrying about things that may occur in the future.
- Holistic stress management underlies the premise of using a combination of effective coping skills to resolve issues that can cause perceptions of stress to linger and sound relaxation techniques to reduce or eliminate the symptoms of stress and return the body to homeostasis. This is different from the standard practice of merely focusing on symptomatic relief.
- Holistic stress management is achieving a balance between the role of the ego to protect and the purpose of the soul to observe and learn life's lessons. More often than not, the ego perpetuates personal stress through control and manipulation.
- Holistic stress management is often described as moving from a motivation of fear to a place of unconditional love.

When all of these aspects are taken into consideration, the process of integrating, balancing, and bringing harmony to mind, body, spirit, and emotions becomes much easier, and arriving at the place of inner peace is easier to achieve.

Chapter Summary

- The advancement of technology, which promised more leisure time, has actually increased the pace of life so that many people feel stressed to keep up with this pace.
- Lifestyles based on new technological conveniences are now thought to be associated with several diseases, including coronary heart disease and cancer.
- Stress is a term from the field of physics, meaning physical force or tension placed on an object. It was adopted after World War II to signify psychological tension.
- There are many definitions of stress from both Eastern and Western philosophies as well as several academic disciplines, including psychology and physiology. The mind-body separation is now giving way to a holistic philosophy involving the mental, physical, emotional, and spiritual components of well-being.
- Cannon coined the term *fight-or-flight response* to describe the immediate effects of physical stress. This response is now considered by many to be inappropriate for nonphysical stressors.
- There are three types of stress: eustress (good), neustress (neutral), and distress (bad). There are two types of distress: acute (short-term) and chronic (long-term), the latter of which is thought to be the more detrimental because the body does not return to a state of complete homeostasis.
- Stressors have been categorized into three groups: (1) bioecological influences, (2) psychointrapersonal influences, and (3) social influences.
- Holmes and Rahe created the Social Readjust-
- ment Rating Scale to identify major life stressors. They found that the incidence of stressors correlated with health status.
- Selye coined the term *general adaptation syndrome* to explain the body's ability to adapt negatively to chronic stress.

- Females are not only wired for fight-or-flight, but also have a survival dynamic called "tend and befriend," a specific nurturing aspect that promotes social support in stressful times.
- The association between stress and insomnia is undeniable. The United States is said to be a sleepdeprived society, but techniques for stress management, including physical exercise, biofeedback, yoga, and diaphragmatic breathing, are proven effective to help promote a good night's sleep.
- Stress can appear at any time in our lives, but the college years offer their own types of stressors because it is at this time that one assumes more (if not complete) responsibility for one's lifestyle behaviors. Stress continues through retirement with a whole new set of stressors in the senior years.
- Sociology is described as the study of human social behavior within family, organizations, and institutions. Societal stress is a force to be reckoned with in today's culture. No one is exempt from the sociology of stress.
- Techno-stress is a term used to describe the overwhelming frustrations of sensory bombardment and poor boundaries with the plethora of technological gadgets. Techno-stress began with personal computers but has since evolved with the advent of and addiction to social networking. The body's physiology wasn't designed to be "on" all the time. The result can be burnout and physical health issues.
- Social stress includes a decline in social etiquette. A lack of civility, demonstrated by rude, impatient behavior, is on a dramatic rise in the United States.
- Experts suggest that one aspect of societal stress is an environmental disconnect: a growing disregard of the environment by humanity, such that dramatic changes, from dwindling supplies of fresh water to declining food quality to environmental pollution, will all have a significant impact on each individual's lifestyle and health.
- Race and gender issues have always been part of the social fabric and continue to contribute largely to stress, especially as people express themselves with reckless abandon in the digital age.

Chapter 1

- Previous approaches to stress management have been based on the mechanistic model, which divided the mind and body into two separate entities. The paradigm on which this model was based is now shifting toward a holistic paradigm, where the whole is greater than the sum of the parts, and the whole person must be treated by working on the causes as well as the symptoms of stress.
- Effective stress-management programming must address issues related to mental (intellectual), physical, emotional, and spiritual well-being.

Additional Resources

Allen, R. *Human Stress: It's Nature and Control*. Edina, MN: Burgess Intl Group; 1983.

American Heart Association. www.heart.org

American Psychological Association. *Stress in America: Paying with Our Health*. 2014. http://www.apa .org/news/press/releases/stress/2014/stress-report.pdf. Accessed July 26, 2015.

Beckford, M. Working nine to five is becoming a thing of the past. *The Daily Telegraph*. May 4, 2007.

- Bernstein, A. *The Myth of Stress*. New York: Simon & Schuster; 2010.
- Brody, J. What Do You Lack? Probably Vitamin D. New York Times, July 26, 2010. www.nytimes .com/2010/07/27/health/27brod.html. Accessed July 18, 2012.
- Brown, L. Plan B: Rescuing a Planet Under Stress and a Civilization in Trouble. New York: Norton; 2006.
- Business Management Daily. U.S. Workers Using Less Vacation Time, Survey Says. May 10, 2009. www .businessmanagementdaily.com/articles/18810/1

/US-workers-using-less-vacation-time-survey-says /Page1.html#. Accessed October 2, 2012.

- Carlson, R. *Don't Sweat the Small Stuff*. New York: Hyperion Books; 1997.
- Carr, N. The Shallows: What the Internet Is Doing to Our Brains. New York: W. Norton; 2011.
- Dawson, P. Sleep and Adolescents. January 2005. http: //www.nasponline.org/resources/principals/sleep%20 disorders%20web.pdf. Accessed August 1, 2012.

Diamond, J. Collapse: How Societies Choose to Fail or Succeed. New York: Penguin Books; 2011.

Dossey, L. Plugged In: At What Price? The Perils and Promise of Electrical Communications. *Explore 5* (5): 257–262, 2009.

- Eisenberg, D., et al. Trends in Alternative Medicine Use in the United States, 1990–1997: Results of a Followup National Survey. *JAMA 280*: 1569–1575, 1998.
- Eisenberg, D., et al. Unconventional Medicine in the United States. *New England Journal of Medicine 328*: 246–252, 1993.
- Eldredge, N. The Sixth Extinction. June 2001. www .actionbioscience.org/evolution/eldredge2.html. Accessed July 18, 2012.
- Expedia.com. 2009 International Vacation Deprevation Study Results. 2009. March 19, 2009. http://media. expedia.com/media/content/expus/graphics/ promos/vacations/Expedia_International_Vacation _Deprivation_Survey_2009.pdf. Accessed August 1, 2012.
- Gallwey, W.I. *The Inner Game of Stress*. New York: Random House; 2009.
- Girdano, D., Everly, G., & Dusek, D. *Controlling Stress and Tension*. Upper Saddle River, NJ: Benjamin Cummings; 2012.
- Hawking, S. Stephen Hawking to Human Race: Move to Outer Space or Face Extinction, August 6, 2010. www.huffingtonpost.com/2010/08/06/stephenhawking-to-human_n_673387.html. Accessed July
- 18, 2012.
- Krugman, M. *The Insomnia Solution*. New York: Grand Central Publishing; 2009.
- Lallas, N. *Renewing Values in America*. Mill Valley, CA: Artis Press; 2009.
- Lazarus, R. Puzzles in the Study of Daily Hassles. Journal of Behavioral Medicine 7:375–389, 1984.
- Levy, S. Facebook Grows Up. Newsweek. August 20, 2007: 41–46.
- Lipton, B. Keynote Address: Get Your Shift Together. Loveland, CO, July 18, 2012.
- Lipton, B., & Bhaerman, S. *Spontaneous Evolution*. Carlsbad, CA: HayHouse; 2010.
- Louv, R. Last Child in the Woods. Chapel Hill, NC: Algonquin; 2008.
- Luskin, F., & Pelletier, K. Stress Free for Good: 10 Scientifically Proven Life Skills for Health and Happiness. New York: HarperOne; 2009.
- Maas, J. *Sleep for Success*. Indianapolis, IN: Author-House; 2011.
- Maas, J., & Davis, H. *Sleep to Win!* Indianapolis, IN: AuthorHouse; 2013.
- Marquardt, K. Take a True Lunch Break. US News and World Report. December 2010.

The Nature of Stress

- McEwen, B. *The End of Stress as We Know It.* Washington, DC: Joseph Henry Press; 2002.
- McGonigal, K. *The Upside of Stress: Why Stress Is Good for You and How You Can Get Good at It.* New York, NY: Avery Books; 2015.
- Meyer, D. Why We Hate Us: American Discontent in the New Millennium. New York: Crown; 2009.
- Mitchum Report on Stress in the 90's. New York: Research and Forecast Inc.; 1990.
- Moyers, B. *Healing and the Mind*. Public Broadcasting System; 1993.
- Moyers, B. *Healing and the Mind*. New York: Doubleday; 1995.
- National Geographic (Special Issue). Water: Our Thirsty World. April 2010.
- National Public Radio. Stressed-Out. 2014. http://www .npr.org/series/327816692/stressed-out. Accessed July 26, 2015.
- NPR/Robert Wood Johnson Foundation/Harvard School of Public Health. The Burden of Stress in America. 2014. http://media.npr.org/documents/2014 /july/npr_rwfj_harvard_stress_poll.pdf.
- Ornstein, R., & Sobel, D. *Healthy Pleasures*. Reading, MA: Addison Wesley; 1990.
- Overworked Americans Can't Use Up Their Vacation. May 13, 2002. www.hrmguide.net/usa /worklife/unusedvacation.htm. Accessed October 2, 2012.
- Quintos, N. Vacation-deficit disorder. *National Geographic Traveler*. November/December 2007: 22–27.
- Richter, A. Sting, the Yogi Behind the Music. *Energy Times*. October 4–8, 2010. http://www.energytimes .com/pages/features/1010/sting.html. Accessed August 1, 2012.
- Rosch, P., president of the American Stress Institute, as quoted in 2003. Reuters Limited. Accessed October 2, 2012.
- Rubinkam, M. During Boring Classes, Texting Is the New Doodling. Associated Press. November 26, 2010. http://www.boston.com/news/nation/articles /2010/11/26/during_boring_classes_texting_is _the_new_doodling/. Accessed August 1, 2012.
- Sapolsky, R. M. *Why Zebras Don't Get Ulcers*. New York: W. H. Freeman; 2004.

- Schlitz, M. Keynote Address. 15th Annual Healing Touch International Conference. St. Louis, MO, September 12, 2010.
- Seaward, B. L. Stressed Is Desserts Spelled Backward. Berkeley, CA: Conari Press; 1999.
- Seigler, K. Tweeting with the Birds: Pitch Tent, Switch to Wi-Fi. August 3, 2010. www.npr.org/templates /story/story.php?storyId=128697566. Accessed July 18, 2012.
- Selye, H. *The Stress of Life*. New York: McGraw-Hill; 1978.
- Simeons, A. W. Man's Presumptuous Brain: An Evolutionary Interpretation of Psychosomatic Disease. New York: Dutton; 1961.
- Simon, S. Using Your BlackBerry Off-Hours Could Be Overtime. NPR, August 14, 2010. www.npr.org /templates/story/story.php?storyId=129184907. Accessed July 18, 2012.
- Smith, R., & Lourie, B. Slow Death by Rubber Duck: The Secret Danger of Everyday Things. Berkeley, CA: Counterpoint; 2011.
- Stepp, L. S. Enough Talk Already. Washington Post. August 21, 2007. http://forum.psychlinks.ca/relationships/8854 -enough-talk-already-talk-vs-action-in-men-and -women.html. Accessed August 1, 2012.
- Swartz, J. Survey Warns of E-mail Stress, July 16, 2010. http://content.usatoday.com/communities/technologylive/ post/2010/07/e-mail-stress-when-is-too-much-e-mail-toomuch/1. Accessed July 18, 2012.
- Taylor, S. *The Tending Instinct*. New York: Owl Books; 2003.
- The American Institute of Stress. www.stress.org.
- Weber, K. (Ed.). *Food, Inc.* New York; Participant Media; 2009.
- Weil, M., & Rosen, L. Technostress: Coping with Technology @ Work, @ Home and @ Play. New York: John Wiley & Sons; 1998.
- Wong, M. Vacationing Americans Have Given New Meaning to the Advertising Slogan, Don't Leave Home Without It. Associated Press. September 1, 2000.
- World Health Organization (WHO). World Health Report, July 31, 2008.

EXERCISE 1.1: Are You Stressed?

Although there is no definitive survey composed of 20 questions to determine if you are stressed or burnt out, or just exactly how stressed you really are, questionnaires do help increase awareness that, indeed, there may be a problem in one or more areas of your life. The following is an example of a simple stress inventory to help you determine the level of stress in your life. Read each statement, and then check the box next to Agree or Disagree. Then count the number of "Agree" points (one per question) and use the Stress Level Key to determine your personal stress level.

Statement	Agree	Disagree
1. I have a hard time falling asleep at night.	□ AGREE	□ DISAGREE
2. I tend to suffer from tension and/or migraine headaches.	□ AGREE	□ DISAGREE
3. I find myself thinking about finances and making ends meet.	□ AGREE	□ DISAGREE
4. I wish I could find more to laugh and smile about each day.	□ AGREE	□ DISAGREE
5. More often than not, I skip breakfast or lunch to get things done.	□ AGREE	□ DISAGREE
6. If I could change my job situation, I would.	□ AGREE	□ DISAGREE
7. I wish I had more personal time for leisure pursuits.	□ AGREE	□ DISAGREE
8. I have lost a good friend or family member recently.	□ AGREE	□ DISAGREE
9. I am unhappy in my relationship or am recently divorced.	□ AGREE	□ DISAGREE
10. I haven't had a quality vacation in a long time.	□ AGREE	□ DISAGREE
11. I wish that my life had a clear meaning and purpose.	□ AGREE	□ DISAGREE
12. I tend to eat more than three meals a week outside the home.	□ AGREE	□ DISAGREE
13. I tend to suffer from chronic pain.	□ AGREE	□ DISAGREE
14. I don't have a strong group of friends to whom I can turn.	□ AGREE	□ DISAGREE
15. I don't exercise regularly (more than three times per week).	□ AGREE	□ DISAGREE
16. I am on prescribed medication for depression.	□ AGREE	□ DISAGREE
17. My sex life is not very satisfying.	□ AGREE	□ DISAGREE
18. My family relationships are less than desirable.	□ AGREE	□ DISAGREE
19. Overall, my self-esteem can be rather low.	□ AGREE	□ DISAGREE
20. I spend no time each day dedicated to meditation or centering.	□ AGREE	□ DISAGREE

Stress Level Key

Less than 5 points	You have a low level of stress and maintain good coping skills.
More than 5 points	You have a moderate level of personal stress.
More than 10 points	You have a high level of personal stress.
More than 15 points	You have an exceptionally high level of stress.

EXERCISE 1.2: Stimulation Overload

In the early years of our lives, we crave sensory stimulation: Loud music, fast-moving video games, movies, food; the list is nearly endless. All of this stimulation increases our threshold for excitement, and we seek more and more to hit this threshold of excitement. All of this sensory stimulation falls under the category of "good stress," that which motivates us and makes us happy. At some point, however, too much of a good thing can become bad. Too much sensory stimulation can become sensory overload, which then leads to burnout. Burnout is another word for bad stress. This exercise invites you to take an honest look at those things that you would consider good stress and how you manage it to maintain an optimal level of health and performance.

- 1. What things do you crave for sensory stimulation? Make a list.
- 2. How do you know when you have had too much sensory stimulation (stimulation overload)? What are the signs/symptoms of personal burnout?
- 3. How has your threshold of excitement changed over the years? (If you are under the age of 20, consider how your threshold differs from that of your parents and grandparents.)
- 4. Do you see an association between too much sensory stimulation and your health status (good or bad)? Please explain.



EXERCISE 1.3: Personal Stress Inventory: Top Ten Stressors

It's time to take a personal inventory of your current stressors—those issues, concerns, situations, or challenges that trigger the fight-or-flight response in your body. The first step to resolving any problem is learning to identify exactly what the problem is. Take a moment to list the top ten issues that you are facing at the present moment. Then place a check mark in the columns to signify whether this stressor directly affects one or more aspects of your health (mind, body, spirit, emotions). Then, next to each stressor, chronicle how long it has been a problem. Finally, record whether this stressor is one that elicits some level of anger, fear, or both.

tressor	Mental	Emotional	Spiritual	Physical	Duration of Problem
1					
2					
3					
4					
5					
6					
7					
8					
9					
0					

28

EXERCISE 1.4: Daily Stressors Survey for College Students

It's a safe bet that you will hear the expression "real world" more than once while attending college—the real world being the noncollege world of long hours, hard work, and umpteen responsibilities. Years ago, the college experience was considered a luxury of the wealthy. For many rich kids, going to college was like taking a four-year vacation during which world responsibility could be postponed with the promise of a great job waiting after graduation. Times have changed dramatically since those Ivy League days of long ago. Going to college may not be the same thing as working on Wall Street or in the emergency room of a local hospital, but college constitutes its own real world nonetheless. Being a college student comes with its own list of stressors, big and small. The following worksheet invites you to rank these typical daily student stressors (from 1 being low stress to 5 being high stress). In doing so, you take the first step in recognizing what issues need to be addressed in your current life situation.

Stressors	1	2	3	4	5
1. Coping with roommates, living conditions					
2. Balancing schoolwork with job hours					
3. Making ends meet financially					
4. Academic load (credits, exams, papers, etc.)					
5. Social needs (friends, family, etc.)					
6. Health status, health issues					
7. Food, body image, and weight issues					
8. Transportation (car, traffic, gas, parking/speeding tickets)					
9. Parental issues, childcare issues, etc.					
10. Girlfriend, boyfriend, partner issues					
11. Technology issues (Facebook updates, text messages, bandwidth, cloud issues)					
12. Purpose in life issues (declaring a major, finding a career position)					

Part I: How	do these	typical colleg	e student stressors	rank in your life?

EXERCISE 1.4: Daily Stressors Survey for College Students cont....

Part II: Please list any and all additional daily or weekly stressors and rank these as well.

Stressors	1	2	3	4	5
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Part III: Please add any additional comments you wish to make here.

EXERCISE 1.5: Self-Assessment: Poor Sleep Habits Questionnaire

Please take a moment to answer these questions based on your typical behavior. If you feel your sleep quality is compromised, consider that one or more of these factors may contribute to patterns of insomnia by affecting your physiology, circadian rhythms, or emotional thought processing. Although there is no key to determine your degree of insomnia, each question is based on specific factors associated with either a good night's sleep or the lack of it. Use each question to help you fine-tune your sleep hygiene.

1.	Do you go to bed at about the same time every night?	□ YES	🗆 NO
2.	Does it take you more than 30 minutes to fall asleep once in bed?	□ YES	🗆 NO
3.	Do you wake up at about the same time every day?	□ YES	🗆 NO
4.	Do you drink coffee, tea, or caffeinated soda after 6 p.m.?	□ YES	□ NO
5.	Do you watch television from your bed?	□ YES	🗆 NO
6.	Do you perform cardiovascular exercise 3–5 times per week?	□ YES	🗆 NO
7.	Do you use your bed as your office (e.g., do homework, balance checkbook, write letters)?	□ YES	□ NO
8.	Do you take a hot shower or bath before you go to sleep?	□ YES	🗆 NO
9.	Do you have one or more drinks of alcohol before bedtime?	□ YES	□ NO
10.	Are you engaged in intense mental activity before bed (e.g., term papers, exams, projects, reports, finances, taxes)?	□ YES	□ NO
11.	Is your bedroom typically warm or even hot before you go to bed?	□ YES	🗆 NO
12.	Does your sleep partner snore, become restless, etc., in the night?	□ YES	🗆 NO
13.	Is the size and comfort level of your bed satisfactory?	□ YES	🗆 NO
14.	Do you suffer from chronic pain while laying down?	□ YES	🗆 NO
15.	Is your sleep environment compromised by noise, light, or pets?	□ YES	🗆 NO
16.	Do you frequently take naps during the course of a day?	□ YES	🗆 NO
17.	Do you take medications (e.g., decongestants, steroids, antihypertensives, asthma medications, for depression)?	□ YES	□ NO
18.	Do you tend to suffer from depression?	□ YES	🗆 NO
19.	Do you eat a large heavy meal right before you go to bed?	□ YES	🗆 NO
20.	Do you use a smartphone regularly, particularly in the evening?	□ YES	🗆 NO

© Paramount Wellness Institute. Reprinted with permission. All rights reserved.

31

EXERCISE 1.6: Are You a Product of Your Culture?

The following questions are based on various behaviors observed from individuals in society. Please answer each question as you really behave, not how you would like to be, by circling Yes or No where appropriate.

1.	I keep my smartphone on throughout the day so I won't miss any calls.	YES	NO
2.	I use my Facebook account more often than my email account.	YES	NO
3.	I tend to leave the water running while brushing my teeth.	YES	NO
4.	I eat more than one meal prepared outside the house each day.	YES	NO
5.	During the day, I constantly check emails and text messages as they come in.	YES	NO
6.	I drive rather than take mass transit to and from work/college regularly.	YES	NO
7.	I typically take my laptop, BlackBerry, etc. on vacation with me.	YES	NO
8.	I have been known to flush unused medications down the toilet.	YES	NO
9.	I get more of my news from Comedy Central (e.g., <i>The Daily Show,</i> <i>The Colbert Report</i>) than newspapers, NPR, TV news, or online news sites.	YES	NO
10	I spend less than one hour outside each day in a natural setting.	YES	NO
	I regularly interact (leave comments) on Web sites I visit.	YES	NO
	I find that I rely more and more on the Internet and electronic devices for information (e.g., Garmin GPS, Google, etc.) and less on memory		
	retention.	YES	NO
13.	More often than not, I Tivo my favorite TV shows and watch them at my preference or watch episodes of my favorite shows on Hulu or other Internet sites.	YES	NO
14	I recycle all cans, bottles, newspapers, etc.	YES	NO
	I start to feel antsy if I cannot check my email, text messages, or Facebook account each hour or more often.	YES	NO
16.	I spend more time playing video games or surfing the Internet inside than outside in nature each day.	YES	NO
17.	I check my emails, tweets, Facebook updates, etc. within 10 minutes of waking up each morning.	YES	NO
18.	I have one or more tattoos as a means of self-expression.	YES	NO
19.	I own more than one smartphone and I use them both at the same time (e.g., phone calls, apps, Google).	YES	NO
20.	I make more than one purchase online each week.	YES	NO
21.	I dread answering the onslaught of emails each day.	YES	NO
22.	I get a bit of a rush or excitement when my smartphone goes off.	YES	NO

EXERCISE 1.6: Are You a Product of Your Culture? cont....

23.	I text message my friends and parents more than I call them by phone.	□ YES	🗆 NO
24.	I watch more movies via the Internet or Netflix than in a movie theater.	□ YES	□ NO
25.	I make an effort to buy organic produce each week.	□ YES	□ NO
26.	I have more than 50 Web sites bookmarked on my computer.	□ YES	🗆 NO
27.	I have more than 250 friends on Facebook.	□ YES	🗆 NO
28.	I purchase plastic water bottles rather than use a stainless steel bottle.	□ YES	□ NO
29.	I have more than 25 apps on my iPhone/Android.	□ YES	🗆 NO
30.	I watch at least one YouTube or Socialcam video per day.	□ YES	🗆 NO
31.	The majority of my purchases are via credit card or debit card, not cash.	□ YES	□ NO
32.	I post an update to Facebook at least once a day.	□ YES	□ NO
33.	I belong to more than one social networking Web site.	□ YES	🗆 NO
34.	I prefer to read books via a Kindle or an iPad than hard cover books.	□ YES	🗆 NO
35.	I post photos and various items on Pinterest and Instagram each week.	□ YES	🗆 NO

Results: The purpose of these questions is to increase your awareness of the influence the current culture has on your behaviors. There is no definitive answer or "score" regarding the impact of cultural influences. We participate in cultural practices primarily as a means of being accepted. Most people are completely unaware of the influence that society has on them, unless they purposely act differently than cultural norms suggest.

EXERCISE 1.7: Living in the Age of Civility

Experts have noticed a dramatic decline in civility, which closely parallels the rise in the use of technology. While it is easy to observe rude and uncivil behavior in other, it's not so easy to see it in ourselves (the ego's ability to rationalize one's behavior is quite powerful). This exercise invites you to take an honest look at your civil behaviors and determine how you stack up with what is culturally expected as good manners in a civil society. Write the number that corresponds with the frequency of each behavior in the frequency column.

5 =Always 4 =Often 3 =Sometimes 2 =Seldom 1 =Rarely 0 =Never

Behavior	Frequency
1. I hold the door open for people when walking into or out of a store or building.	
2. If I use my smartphone in public, I find a quiet place to talk away from people.	
3. I make a habit of smiling at others including store clerks, postal workers, and restaurant servers.	
4. I only use the express checkout lane in the grocery store when I have the limited number of suggested items, even when in a hurry.	
5. When driving, I allow other drivers to cut in front of me.	
6. If I am at the movies with a friend, I will suspend all conversations during the film.	
7. While on the phone, I give my full attention and don't multitask with checking emails, etc.	
8. I let people finish speaking before I say something or comment.	
9. I say the words please and thank you when requesting something.	
10. I don't use my smartphone while driving.	
11. I will pull a dollar out of my wallet or purse for a homeless person.	
12. If I receive a second call while talking, I will ignore the incoming call.	
13. When listening to my iPod while walking, jogging, snowboarding, or downhill skiing, I acknowledge others' presence with a smile, nod, or comment.	
14. When others express political or religious beliefs that are different than mine, I shift the conversation to a different topic.	
15. I tend to censor the use of swear words in public.	
TOTAL SCORE	

Key: There is no set standard for degrees of civility. Either you are or you are not! This survey is an awareness tool to help you examine your own behavior. If you score less than 30 points, you might consider changing because most likely people see you as lacking in civility.

EXERCISE 1.8: It's All About Me: The Age of Narcissism

"Enough about me. What do you think about me?" — Bette Midler

Consider these facts: Today anyone can publish their own book, record their own song, enter a photo contest, post their own blog, make their own movie, and gain worldwide attention if not millions of fans via YouTube. Reality shows are the rage on TV, from *Jersey Shore* to home improvement shows. Anyone can become a celebrity, specifically a "laptop celebrity." Experts who keep their finger on the pulse of humanity grow increasingly concerned. The "me" generation has now expanded over several decades to include several generations. The self-absorbed, all-about-me, narcissistic, 15-minutes-of-fame culture is nothing more than the ego run amuck. The problems with unbridled egos (multiplied by 7 billion people) cannot be understated! If everyone is only looking out for themselves, many people, perhaps cultures, if not the world, will suffer. Recently the American Psychiatric Association decided to delete the Narcissism Disorder from the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition, in 2013, suggesting that this behavior is too common now to be recognized as a disorder. Granted, you have to have some interest in yourself. After all, that's what self-esteem is all about. Balance is the key. At what point is the line crossed? That is the million-dollar question. The opposite of narcissism is altruism—doing something for others without any expectation of reciprocation; in essence, random acts of kindness.

- 1. Have you noticed that, in general, people are self-absorbed, perhaps even clueless about others eclipsed by their own stature and in denial about their inflated egos?
- 2. Have you been accused of being narcissistic, or simply full of yourself? Please explain.
- 3. How would you best describe your "presence" in the world? Do you have a Web site? A blog? Multiple YouTube video postings? Tweets on a Twitter account? Books on Amazon? How many Facebook updates do you post per day? How many minutes have you used up on your 15 minutes of fame allotment (or have you gone over this limit)?
- 4. Why do you suppose people are over the top with being self-righteous or simply fascinated with themselves? Is it a need for approval? Is it a need for acceptance? Is it a question of insecurity? What is your take on this new normal of the "me" generation?
- 5. If indeed altruism is the polar opposite of narcissism, what actions do you take on a regular basis to seek balance? What do you do to domesticate your ego?

EXERCISE 1.9: The Tired, Busy, Lonely Checklist

Technology is great and can make so many aspects of life convenient. Conversely, we can spend untold amounts of time online with some unhealthy consequences. Sociologists have noted that three specific behaviors are common with people who spend gobs of time online. They report being constantly tired, always busy, and, perhaps most surprising, lonely. It's time to do an inventory on how you feel with regard to these specific aspects of your life.

- 1. **Tiredness:** Generally speaking, how would you rate your overall energy levels? Are you tired when you wake up in the morning, or do you feel fully rested? Do you find yourself dragging through the course of the day and cannot wait to get home to unwind? Do you have plenty of energy in the early evening, or do you flop on the sofa and veg out till you fall asleep? Take a few moments to explain your levels of energy, and if you do feel a sense of constant tiredness, describe it here.
- 2. **Busyness:** Do you feel that you barely have time to catch your breath with countless responsibilities to do each day? Do you feel like you are constantly running on a treadmill and there is no way to get off? Do you find that you are always doing something related to your smartphone or tablet? Are you always plugged in? Do you feel that your rate of busyness is proportional to what you actually get done, or do you feel that you are always busy but don't have much to show for it? Take a few moments to explain your perspective on how you actually spend your personal energy and your level of productivity.
- 3. Loneliness: Experts who observe people constantly using their smartphones and tablets have noticed that, generally speaking, people spend a lot of time online because they fear being alone. Spending time posting updates on social networking sites tends to make people feel like they belong, yet when questioned, these same people often describe life off line as feeling alienated and detached. Loneliness isn't the same thing as being alone (there are many people who will tell you that they feel quite lonely with their spouse, their roommate, and even their friends). Here are some questions to contemplate: (1) Do you stay online to feel a sense of connection to people even if it's a virtual rather than actual connection? (2) Do you feel awk-ward or uncomfortable being alone for long periods of time? (3) Do you make it a point to never be alone? (4) Do you constantly fill your social calendar to the brim every day? (5) Describe your typical day and include purposeful alone time.

EXERCISE 1.10: The Environmental Disconnect

How tuned in to the environment are you? Let's find out. Take this quick True/False quiz.

1.	The majority of the ocean's coral reefs are dying due to agricul- tural runoff, poor fishing practices, and formaldehyde used to		
	capture tropical fish.	□ TRUE	□ FALSE
2.	Over 60 percent of food in your local grocery store is genetically modified.	□ TRUE	□ FALSE
3.	About one half of the world's population does not have drinkable water in their house.	□ TRUE	□ FALSE
4.	The acidity of the world's oceans is increasing at an alarming rate.	□ TRUE	□ FALSE
5.	Wild salmon has much less PCBs than that raised in fisheries.	□ TRUE	□ FALSE
6.	Mercury found in coldwater fish comes from coal-burning plants used to make electricity for everyday use.	□ TRUE	□ FALSE
7.	Hormones and antibiotics dumped into toilets are not filtered out in water treatment plants.	□ TRUE	□ FALSE
8.	Experts predict that the ocean's natural fisheries will collapse in your lifetime.	□ TRUE	□ FALSE
9.	It takes 2,500 gallons of water to produce one hamburger.	□ TRUE	□ FALSE
10.	On average, there are over 16 million new cars on the road every year.	□ TRUE	□ FALSE
11.	Ethanol fuel still requires petrochemicals (oil) for fertilizers to grow the corn.	□ TRUE	□ FALSE
12.	Farm-raised salmon must take beta carotine pellets so its flesh is pink/orange.	□ TRUE	□ FALSE
13.	City light pollution is thought to be a contributing factor to the increase in insomnia across the United States.	□ TRUE	□ FALSE
14.	The majority of food in your local grocery story has been trans- ported over 1,500 miles to rest on those store shelves before being purchased.	□ TRUE	□ FALSE
15	Droughts in the Amazon rainforest contribute to global		
17.	warming.	□ TRUE	□ FALSE

The answer for all of these questions is *true*. But don't get too stressed out. Being aware of each problem is half of the solution. Knowledge is power. Environmental disconnect is based largely on ignorance and apathy. Although some people choose to stick their head in the sand, others are taking an active role towards living a sustainable life by changing their behaviors to become in sync with the environment. One person's life may seem insignificant to the big picture, but nothing could be further from the truth. What can you do? Plenty!

Chapter 1

EXERCISE 1.10: The Environmental Disconnect cont....

List ten things that you do (or can start doing) to live a more sustainable lifestyle and reconnect with the biosphere we live on called planet Earth.

1.	
3.	

EXERCISE 1.11: The Circle: The Universal Symbol of Wholeness

The circle is a universal symbol of wholeness, as expressed in the American Indian medicine wheel, the Tibetan mandala, and many other symbols recognized worldwide. Typically these symbols depict four aspects such as spring, summer, winter, and fall; mind, body, spirit, and emotions; or north, south, east, and west. This exercise invites you to increase your awareness of the power of this symbol.

1. List ten objects, found in nature, that symbolize wholeness (e.g., full moon, sun, etc.).

a		
b		
с		
d		
e		
f		
g		
h		
i		
j		

2. List ten objects or designs that are used in American culture (or world culture) to convey a sense of wholeness to the unconscious mind (e.g., Starbucks logo, dinner plates, Christmas wreaths, the peace symbol, etc.).

