

G L E N C O E

UNDERSTANDING

# Psychology

**Readings and Case Studies  
in Psychology**



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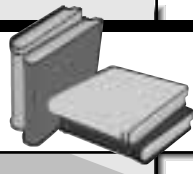
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## READING



## 1

## Ethics in Psychology

**Directions:** Read the following selection, then answer the questions that follow.

Psychology, like most professions, has a code of professional conduct that governs the actions of members of the profession. Would the ethical conduct of a psychologist be an important factor in your decision to seek advice from him or her? It should be. Psychologists who operate unethically may do you more harm than good.

What does it mean to be ethical? People who are ethical use a set of moral values to guide their decision making. Ethical psychologists use the *Ethical Principles of Psychologists and Code of Conduct* developed by the American Psychological Association (APA) as a basis for their professional conduct. Although this document does not address every possible ethical and unethical action, it does provide a framework in which psychologists can make decisions about their conduct. According to Gerald Koocher and Patricia Keith-Spiegel, the main principles that should guide a psychologist's ethical behavior include the following:

1. *Doing no harm* (nonmaleficence). Through commission or omission, psychologists strive to benefit those with whom they work, at the same time taking care to ensure that the potential for damage is eliminated or minimized to the greatest extent possible.
2. *Respecting autonomy*. The rights of individuals to decide how to live their lives as long as their actions do not interfere with the welfare of others is accepted by psychologists as an ultimate goal of clients, students, research participants, and others with whom psychologists work. Members of our profession are often in the business of moving those with whom we work toward greater independence and self-reliance.
3. *Benefiting others*. All decisions that psychologists make should have the potential for a positive effect on others. Often, this principle must be balanced against doing no harm, respect for autonomy, available resources, and utility.
4. *Being just*. Actions should be fair and equitable. Others should be treated as psychologists would want to be treated under similar circumstances.
5. *Being faithful*. Issues of fidelity, loyalty, truthfulness, and respect for those with whom psychologists work converge to form the delicate standards necessary in fiduciary [based on trust] relationships. When psychologists are straightforward, sincere, candid, and without intent to mislead or deceive anyone, ethical action is more likely.
6. *According dignity*. Psychologists view others as worthy of respect. This enhances the probability that decisions will be ethical.
7. *Treating others with caring and compassion*. Psychologists should be considerate and kind to those with whom they work, yet maintain professional boundaries.
8. *Pursuit of excellence*. Maintaining competence, doing one's best, and taking pride in one's work are important in ensuring high-quality professional services, as well as providing hedges against unprofessional and unethical actions.
9. *Accepting accountability*. Psychologists who act with a consideration of possible consequences, who accept responsibility for actions and inactions, and who avoid shifting blame or making excuses are acting with integrity. Putting principles over expediency is sometimes the longer and more arduous [difficult] route, but in the long run it is the one that ensures self-respect.

Source: **Koocher, G., & Keith-Spiegel, P.** (1998). *Ethics in Psychology*. London: Oxford University Press, 4–5.

**Understanding the Reading**

Directions: Answer the following questions in the space provided.

- 1. What do psychologists use to identify ethical and unethical behavior?

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- 2. What is ethical behavior?

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- 3. In what two ways do the principles say psychologists could do harm?

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**Thinking Critically**

Directions: Answer the following questions in the space provided.

- 4. Which of the items on the list could be viewed as general ethical principles that could apply to everyone, not just psychologists?

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- 5. What factors may cause a psychologist to act unethically?

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- 6. Psychologists who disregard moral values in their personal lives can still maintain the ethical standards required by the *Ethical Principles of Psychologists and Code of Conduct*. Do you agree with this statement? Explain.

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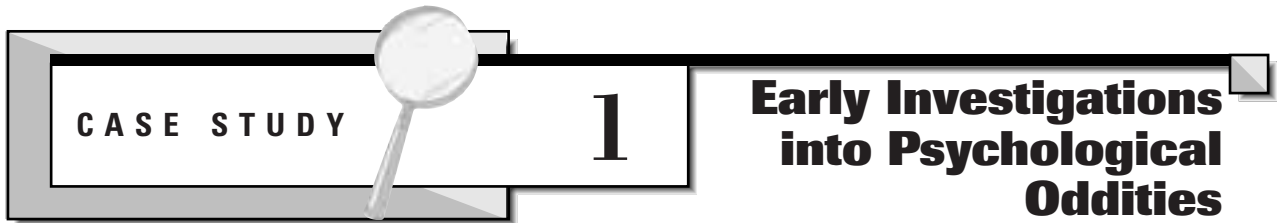
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- 7. According to the nine items on the list, what is an ultimate goal of psychologists regarding clients, students, or experiment participants?

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**CASE STUDY 1**

**Early Investigations into Psychological Oddities**

**Directions:** Read the following case study, then answer the questions that follow.

### Introduction

Early psychologists recognized the need for the scientific study of every facet of human behavior. Although they did not have the research tools and the technology of modern psychology, they did attempt to apply the scientific method rigorously to their research.

In the late 1800s the psychological community became embroiled in a debate about psychic phenomena. The Society of Psychical Research was formed in 1882 for the specific purpose of bringing science and psychic phenomena together. The society had two purposes: “. . . first, to carry on systematic experimentation with hypnotic subjects, mediums, clairvoyants, and others; and, secondly, to collect evidence concerning apparitions, haunted houses, and similar phenomena which are incidentally reported, but which, from their fugitive character, admit of no deliberate control.” The society wanted to either debunk these mystical phenomena or find a scientific explanation for their existence.

### Hypothesis

William James, a leading psychologist at the time, explained the difficulty of the task facing the Society of Psychical Research when he wrote: “In psychology, physiology, and medicine, wherever a debate between the mystics and the scientifics has been once for all decided, it is the mystics who have usually proved to be right about the *facts*, while the scientifics had the better of it in respect to the theories.”

### Method

The society faced a difficult task. First, many people who practiced psychic phenomena had no interest in being subjected to rigorous scientific study; they did not see the need. They were also suspicious of intellectuals whose only goal seemed to be to discredit them. The society, led

by Professor Henry Sidgwick, tried to reassure these people. Sidgwick was widely regarded for his impartiality and his unwillingness to draw hasty conclusions. Other members of the society also had reputations for fairness and for honestly seeking answers to seemingly unexplainable phenomenon.

The society’s second challenge was to find the financial resources to adequately fund its research. James urged the society to continue even with meager resources. He challenged them to continue to gather facts by conducting extensive interviews with the participants and witnesses in every reported case of psychic phenomenon. He believed that by carefully documenting these cases, the society would eventually have enough evidence to form some type of theory. James expressed his concern as follows: “Its [the Society of Psychical Research] sustainers, therefore, should accustom themselves to the idea that its first duty is simply to exist from year to year and perform this recording function well, though no conclusive results of any sort emerge at first.”

For two years, the society focused primarily on thought transference, or telepathy. They studied 30 people who claimed to have the power to identify an object thought of by another person. Although one of the cases, involving two sisters, was found to be a hoax, many other cases could not be explained by random chance or by the deceitful action of the participants.

Another area of research for the society was the phenomenon of hypnotic suggestion. The researchers observed various subjects under hypnotic trances or performing actions as a result of posthypnotic suggestion. Edmund Gurney performed one set of experiments that involved the automatic writing of subjects as a result of posthypnotic suggestion.

“For example, a subject during a trance is told that he will poke the fire in six minutes after waking. On being waked he has no memory of

the order, but while he is engaged in conversation his hand is placed on a planchette, [a device that when lightly touched is believed to produce automatic writing] which immediately writes the sentence, 'P., you will poke the fire in six minutes.' Experiments like this, which were repeated in great variety, seem to prove that below the upper consciousness the hypnotic consciousness persists, engrossed with the suggestion and able to express itself through the involuntarily moving hand."

Gurney became the most tireless worker for the society. He also researched witchcraft, apparitions, and mental telepathy. His study of witchcraft involved reviewing the accounts of hundreds of witch trials. He found that there was "no first-hand evidence recorded in the trials except the confessions of the victims themselves; and these, of course, are presumptively due to either torture or hallucination."

His exploration of apparitions and mental telepathy involved collecting about 700 cases of reported experiences. In these experiences, one person would get a mental image of a person in distress. He found many of these cases to be honest reports and concluded that "the mind of the person undergoing the calamity was at that moment able to impress the mind of the percipient [sic] with an hallucination." Further research into this phenomenon in both England and the United States led the society to find that such experiences happen too frequently to be

explained by mere chance. In fact, they calculated that such occurrences happen 440 times more often than can be attributed to chance.

## Conclusions

The Society of Psychical Research failed to impress many in the scientific community with its findings. Much of their research is considered crude by modern standards. Their efforts, however, do indicate that they did apply the scientific method consistently. James responded to critics of the society by saying "... most of the would-be critics of the Proceedings have been contented to oppose to [sic] the phenomena recorded the simple presumption that in some way or other the reports *must* be fallacious [false], . . ." He criticized scientists who dismiss things that are not easily explained and categorized simply because they do not fit into the way they think things should be.

The Society of Psychical Research produced a great body of evidence, but developed no concrete theories. The exploration into unexplained phenomena continues to the present. Of all the phenomena explored, only hypnosis has been brought into the mainstream of psychological research and practice. The other areas researched by the society remain in the realm of parapsychology.

Source: James, W. (1897/1956). *The Will to Believe and Other Essays in Popular Philosophy*. New York: Dover Publications, Inc., 299-327.

## Understanding the Case Study

**Directions:** Answer the following questions in the space provided.

1. What was the purpose of the Society of Psychical Research?

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2. What two reasons are cited for the difficulty of the society's research task?

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3. What areas of psychic phenomena were studied by the society?

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4. What did William James say about the critics of the society?

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 **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

5. Do you think the Society of Psychical Research accomplished its goals? Why or why not?

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6. Do you think William James supported the work and findings of the society? Why or why not?

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7. As a functionalist, why would William James have been interested in the work of the society?

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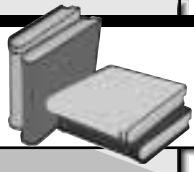
8. Why do you think the society failed to produce any theories to explain psychic phenomena?

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## READING



## 2

## Falsifiability

**Directions:** Read the following selection, then answer the questions that follow.

Psychology, like other sciences, is advanced when psychologists propose new theories. The theories are tested by various research methods. The results of the tests may support or refute the theory. A theory that is supported by one study will be examined and tested by other researchers. These additional studies may provide additional confirmation of the theory or may find flaws in the original theory. Testable theories, then, are stated in such a way that they can be proved false.

In 1793 a severe epidemic of yellow fever struck Philadelphia. One of the leading doctors in the city at the time was Benjamin Rush, a signer of the Declaration of Independence. During the outbreak Rush was one of the few physicians who were available to treat literally thousands of yellow fever cases. Rush adhered to a theory of medicine that dictated that illnesses accompanied by fever should be treated by vigorous bloodletting. He administered this treatment to many patients, including himself when he came down with the illness. Critics charged that his treatments were more dangerous than the disease. However, following the epidemic, Rush became even more confident of the effectiveness of his treatment, even though several of his patients had died. Why? . . .

### Theories and the Falsifiability Criterion

Benjamin Rush fell into a fatal trap when assessing the outcome of his treatment. His method of evaluating the evidence made it impossible to conclude that his treatment did not work. If the recovery of a patient meant confirmation of his treatment (and hence his theory of medicine), then it only seems fair that the death of a patient should have meant disconfirmation. Instead, he rationalized away these disconfirmations. By interpreting the evidence as he did, Rush violated one of the most important rules regarding the construction and testing of theories in science: he made it impossible to falsify his theory.

Scientific theories must always be stated in such a way that the predictions derived from them can potentially be shown to be false. Thus the methods of evaluating new evidence relevant to a particular theory must always include the possibility that the data will falsify the theory. This principle is often termed the *falsifiability criterion*. . . .

The falsifiability criterion states that, for a theory to be useful, the predictions drawn from it must be

specific. The theory must go out on a limb, so to speak, because in telling us what should happen, the theory must also imply that certain things will not happen. If these latter things do happen, then we have a clear signal that something is wrong with the theory: it may need to be modified, or we may need to look for an entirely new theory. Either way, we shall end up with a theory that is nearer to the truth. In contrast, if a theory does not rule out any possible observations, then the theory can never be changed, and we are frozen into our current way of thinking, with no possibility of progress. Thus a successful theory is not one that accounts for every possible happening because such a theory robs itself of any predictive power.

### The Theory of Knocking Rhythms

A hypothetical example will show how the falsifiability criterion works. A student knocks at my door. A colleague in my office with me has a theory that makes predictions about the rhythms that different types of people use to knock. Before I open the door, my colleague predicts that the person behind it is a female. I open the door and, indeed, the student is a female. Later I tell my colleague that I am impressed, but only mildly so because he had a 50 percent chance of being correct even without his "theory of knocking rhythms." He says he can do better. Another knock comes. My colleague tells me it is a male under 22 years old. I open the door to find a male student whom I know to be just out of high school. I comment that I am somewhat impressed since our university has a considerable number of students over the age of 22. Yet I still maintain that, of course, young males are quite common on campus. Thinking me hard to please, my colleague proposes one last test. After the next knock, my colleague predicts, "Female, 30 years old, 5 feet 2 inches tall, carrying a book and a purse in the left hand and knocking with the right." After opening the door and confirming the prediction completely, I have quite a different response. I say that, assuming my colleague

(continued)

did not play a trick and arrange for these people to appear at my door, I am now in fact extremely impressed.

Why the difference in my reactions? Why do my friend's three predictions yield three different responses, ranging from "So what?" to "Wow"? The answer has to do with the specificity and precision of the predictions. The more specific predictions made a greater impact when they were confirmed. Notice, however, that the specificity varied directly with the falsifiability. The more specific and precise the prediction was, the more potential observations there were that could have falsified it. For example, there are a lot of people who are not 30-year-old females who are 5 feet 2 inches tall.

Good theories, then, make predictions that expose themselves to falsification. Bad theories do not put themselves in jeopardy in this way. They make predictions that are so general that they are almost bound to be true (for example, the next person to knock on my door will be less than 100 years old) or are phrased in such a way that they are completely protected from falsification. . . .

**Not All Confirmations Are Equal**

The principle of falsifiability has important implications for the way we view the confirmation of a theory. Many people think that a good scientific theory is one that has been repeatedly confirmed. They assume that

the amount of confirming evidence is critical in the evaluation of a theory. But falsifiability implies that the number of times a theory has been confirmed is not the critical element. The reason is that, as our example of the "theory of knocking rhythms" illustrated, not all confirmations are equal. Confirmations are more or less impressive depending on the extent to which the prediction exposes itself to potential disconfirmation. One confirmation of a highly specific, potentially falsifiable prediction (for instance, a female, 30 years old, 5 feet 2 inches tall, carrying a book and a purse in the left hand knocking with the right) has a greater impact than the confirmation of 20 different predictions that are all virtually unfalsifiable (for instance, a person less than 100 years old).

Thus we must look not only at the quantity of the confirming evidence, but also at the quality of the confirming instances. Using the falsifiability criterion as a tool to evaluate evidence will help the research consumer resist the allure of the nonscientific, all-explaining theory that inevitably hinders the search for a deeper understanding of the nature of the world and the people who inhabit it. Indeed, such theoretical dead ends are often tempting precisely because they can never be falsified. They are islands of stability in the shifting ocean of the modern world.

Source: **Stanovich, K.E.** (1996). *How to Think Straight About Psychology*. New York: HarperCollins, 21–8.

 **Understanding the Reading**

**Directions:** Answer the following questions in the space provided.

- 1. Why did Benjamin Rush believe his treatment worked?

\_\_\_\_\_

\_\_\_\_\_

- 2. What is the falsifiability criterion?

\_\_\_\_\_

\_\_\_\_\_

- 3. What types of predictions can be made using good theories?

\_\_\_\_\_

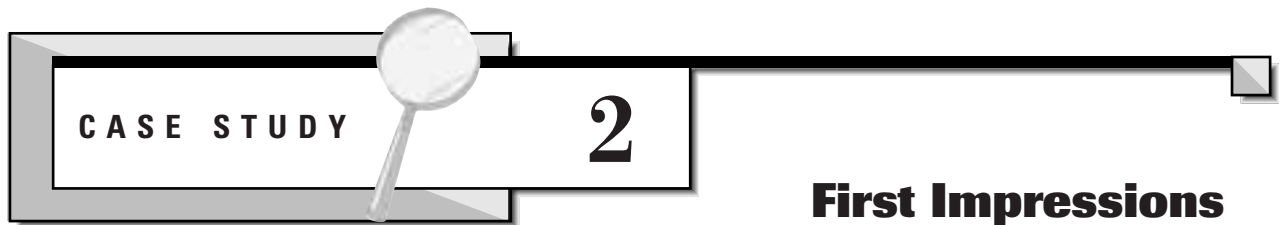
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- 4. What is the most important characteristic of confirming evidence?

\_\_\_\_\_

\_\_\_\_\_





**Directions:** Read the following case study, then answer the questions that follow.

### Hypothesis

Does your gender, race, or physical appearance affect the service you receive in stores? The hypothesis assumes that all three factors may affect the speed of service customers receive.

### Method

To test the hypothesis, six assistants of diverse racial and ethnic origin were recruited. They consisted of:

- one Caucasian male
- one Caucasian female
- one African American male
- one African American female
- one Hispanic male
- one Hispanic female

The researchers chose two outfits for each sex: one casual and one business. The casual outfit for both the men and women consisted of faded jeans, an old sweatshirt, soiled athletic shoes, and a well-worn blue jean jacket. The business attire for the men consisted of a two-piece suit, a white button-down shirt, a tie, and leather dress shoes. The women's business attire included a skirted, two-piece business suit, a white blouse, leather pumps, and gold jewelry.

The researchers conducted the experiment in two nearby malls. Both malls were located in upper middle-class, predominantly white suburbs. The researchers obtained permission from the managers of various one-entrance stores to conduct the research. None of the stores' salesclerks were informed of the research study. The researchers classified the stores as male, female, or gender-neutral depending on the merchandise sold.

The six assistants entered the stores in one of the outfits described above. Each assistant wore both types of clothing. However, no assistant entered the same store in both types of clothing. The assistants carried a small stopwatch in the palms of their hands. When the assistants made eye contact with a salesclerk,

they started the stopwatch. The stopwatch ran until a salesclerk made an obvious attempt to provide service. For example, if the salesclerk approached and said "May I help you?", the watch was stopped.

### Results

The analysis examined gender, race, type of store, and type of clothing as potential factors for delayed service. The results indicated the following significant factors and interactions of factors:

1. race
2. type of attire
3. gender and attire
4. gender and race and attire

The mean data for the interaction of gender, race, and attire is shown at the top of the next page. What do the charts show?

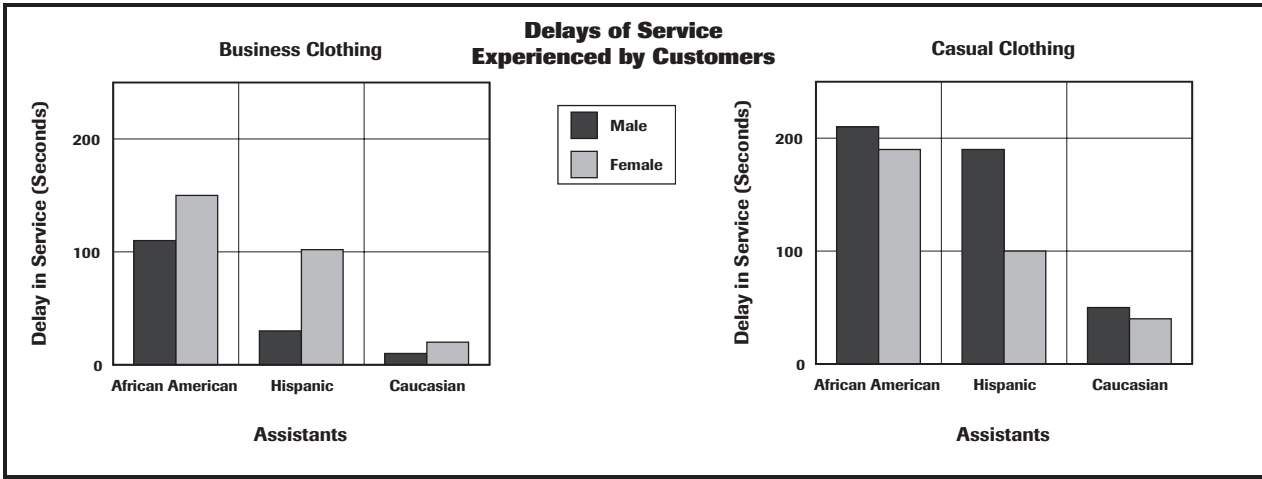
1. Men in business clothing were served more quickly than women.
2. Females in casual clothing were served more quickly than the men.
3. African Americans and Hispanics, regardless of dress, were served more slowly than Caucasians.
4. No matter the race, service was given more quickly to the assistants in business attire.

### Conclusions

Salesclerks' first impressions do affect the speed of service. Upon examination, the researchers found that the majority of salesclerks were Caucasian. Apparent discrimination exists in the behavior of the salesclerks. The racial discrimination appears to be clear-cut. More subtle is the discrimination based on dress and gender. It is important to note, however, that this study only examined the delay in service, not the specific reasons for it.

Source: **Kraus, M. et al.** (1998). Latency to serve in stores: Effects of sex, race, and clothing, As cited in Horvat, J., & Davis, S. *Doing Psychological Research*. New Jersey: Prentice Hall, 14-9.

*(continued)*



**Understanding the Case Study**

Directions: Answer the following questions in the space provided.

1. What were researchers attempting to determine?

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2. What types of stores were used for this study?

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3. What was being measured in this study?

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4. Who received the fastest service? The slowest?

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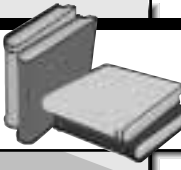


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**Thinking Critically**

Directions: Answer the following questions on a separate sheet of paper.

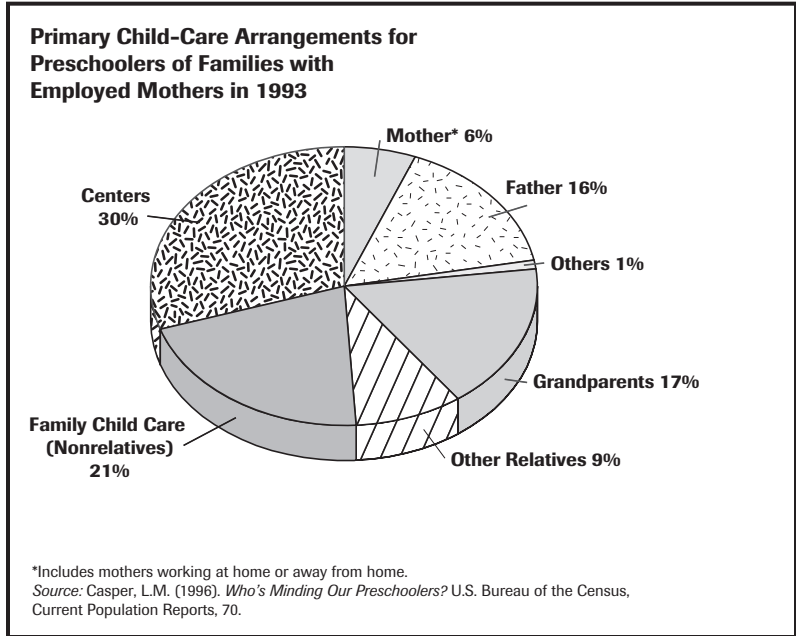
5. What are the independent variables in this study?
6. If you were managing one of these stores and were given the results of the study, what recommendations would you make to your salesclerks?
7. One study of this type cannot be generalized to assume that all salesclerks in all stores will react in the same ways. What factors should be changed in future studies to verify or dispute the study's conclusions?

**READING**  **3**

# American Child Care Today

**Directions:** Read the following selection, then answer the questions that follow.

Debate rages about how children are raised in modern American society. All parties in this debate claim to be concerned with the quality of child development that results from the various alternatives. What is the historic view of caring for children? Is child development affected by care in child-care centers?



Exclusive maternal care of infants and young children is a cultural myth of an idealized 1950s, not a reality anywhere in the world either now or in earlier times. Child care has always been shared, usually among female relatives. Until recently, most American children of working parents were cared for by other female relatives, but high rates of female employment have reduced that source of babysitters. What has changed over time and varies cross-nationally is the degree to which child care is bought in the marketplace rather than shared among female relatives.

Today, more American children are cared for by paid providers than by relatives. Relatives have, presumably, some emotional commitment to the health and safety of relatives' offspring, therefore, quality of care was seldom raised as an issue of concern. The predominance of non-relative care in the last decade has alerted consumers, governments, and the research community to the possibly damaging effect of poor quality care on children's development; . . .

In agricultural societies, infants are typically left in the care of siblings, grandmothers, or female neighbors, who are also caring for their own children. In industrialized societies, mothers' employment outside the home has necessitated nonmaternal care of vari-

ous types. . . Tracing historical changes in maternal employment provides a guide to the demand for and use of nonmaternal child care.

Prior to the Industrial Revolution, and in nonindustrial parts of the world today, women are both economically productive workers and primary child caregivers. When employment moved outside the home and into the factory and office, men followed work into new settings, and women generally remained at home, without a direct economic role.

In a correlated development, mothers' roles as knowledgeable caregivers began to be stressed. In the late 19th and early 20th centuries, child rearing was no longer a natural species response but a role that required extensive education and knowledge. Children began to have tender psyches that required maternal attention to develop well. Mothers were given an important emotional role in the home that complemented the fathers' economic productivity (Kagan, 1980; Scarr, 1984).

Prior to World War II, few women remained in the workforce after childbearing. The need for industrial workers during the war brought many mothers into factories and offices to replace men away at war. Mothers' employment was culturally sanctioned and

supported by the government provision of child-care centers attached to war factories. Mothers, as Rosie the Riveter, took on the many paid work roles that had previously been denied them.

After the war, government and cultural supports for mothers' employment were withdrawn, child-care centers were closed, and mothers were told to go home to make way in the workplace for returning veterans. The birthrate soared and new suburbs were built as federally sponsored highway programs fueled a boom in housing outside of cities. All of this was a direct result of government policy that held as ideal a two-parent family with a working father and a non-working mother, ensconced in single-family dwelling.

Erroneous predictions about an economic recession after the war, which became instead an economic boom fueled by unfulfilled consumer demand for cars, refrigerators, and housing, left many jobs open to women. Many mothers did not follow official advice to go home, and female employment has grown steadily since. Goods and services that used to be homemade (e.g., clothing, canned goods, and cleaning) came to be increasingly purchased, requiring additional family income. As the divorce rate and single motherhood soared, more mothers needed jobs to support their families. Today most mothers are employed.

In 1995, 62% of mothers with children under six years were employed. This rate was up more than 2% from 1994 and nearly 5% from 1993. Among mothers with children under two years, 58% were working in March 1995, up 4% from 1993 (1996 Green Book, as cited in Hofferth, 1996). The ideal of a nonemployed mother remained strong, however. One legacy for working mothers of the baby-boom generation and beyond is guilt about their employment. . . .

In surveys by *Working Mother* magazine in 1995 and 1996, readers expressed strong preferences for center-based care over home care, whether by relatives or not. Child safety and parental control over the arrangements were prominent reasons for the preference. Home care is unsupervised and usually unlicensed. Television exposés of abuse and neglect in day-care homes have appeared regularly over the last decade. Relatives do not always abide by parents' child-rearing preferences, such as toilet-training techniques and feeding routines. Paid help is more dependable and controllable. Child-care centers are open even if one caregiver is ill or on vacation (Mason & Kuhlthau, as cited in Mason & Duberstein, 1992).

There is an extraordinary international consensus among child-care researchers and practitioners about what quality child care is: It is warm, supportive inter-

actions with adults in a safe, healthy, and stimulating environment, where early education and trusting relationships combine to support individual children's physical, emotional, social, and intellectual development (Bredekamp, 1989). . . .

Researchers have explored the possible long-term effects of day-care experiences in different qualities of care for children from different kinds of backgrounds. Children from low-income families are definitely benefited by quality child care, which has been used as an intervention strategy (Field, 1991; Ramey et al., 1985, Ramey & Ramey, 1992). Poor children who experience high-quality infant and preschool care show better school achievement and socialized behaviors in later years than similar children without child-care experience or with experience in lower quality care. For poor children, quality child care offers learning opportunities and social and emotional supports that many would not experience at home.

For children from middle- and upper-income families, the long-term picture is far less clear. With a few exceptions that can be explained by the confounding of family with child-care characteristics in the United States, research results show that the impact on development from poorer versus better care within a broad range of safe environments is small and temporary. Given the learning opportunities and social and emotional supports that their homes generally offer, child care is not a unique or lasting experience for these children.

## References

- Bredekamp, S.** (1989, November). Measuring quality through a national accreditation system for early childhood programs. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Field, T.** (1991). Quality infant day-care and grade school behavior and performance. *Child Development, 62*, 863–70.
- Hofferth, S.** (1996). Child care in the United States today. *The Future of Children, 6* (2), 41–61.
- Kagan, J.** (1980). Perspectives on continuity. In O.G. Brim & J. Kagan (eds.), *Constancy and Change in Human Development*. Cambridge, MA: Harvard University Press, 1–15.
- Mason, K., & Duberstein, L.** (1992). Consequences of child care for parents' well-being. In A. Booth (ed.), *Child Care in the 1990s: Trends and consequences*. Hillsdale, NJ: Erlbaum, 127–158.
- Ramey, C., Bryant, D., Sparling, J., & Wasik, B.** (1985). Project CARE: A comparison of two early intervention strategies to prevent retarded development. *Topics in Early Childhood Special Education, 5* (2), 12–25.
- Ramey, C., & Ramey, S.** (1992). Early educational intervention with disadvantaged children—to what effect? *Applied and Preventive Psychology, 1*, 131–140.
- Scarr, S.** (1984). *Mother Care/Other Care*. New York: Basic Books.

Source: **Scarr, S.** (1998). American child care today. *American Psychologist, 53*, 95–106.



 **Understanding the Reading**

**Directions:** Answer the following questions in the space provided.

1. In 1993, what percentage of preschool children with working mothers were cared for by a relative?

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2. Prior to the Industrial Revolution, what two primary roles did mothers have?

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3. What event caused large numbers of mothers to enter the workforce in the 20th century?

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4. Which children benefit most from quality child care: poor, middle-income, or upper-income children? Why?

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 **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

5. Compare and contrast the role of mothers with young children in an agricultural society and in an industrial society.

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6. How does society affect the decision of mothers of young children to enter the workforce?

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## CASE STUDY

## 3

## Body Image and Dieting in Children

**Directions:** Read the following case study, then answer the questions that follow.

### Introduction

Traditionally, dieting and similar behaviors that show concern for physical appearance have been reserved for teenagers and adults. This study examines dysfunctional eating behaviors in children as young as seven. This study builds on early research that indicated that children as young as third grade were concerned about being overweight and their appearance.

Preadolescent children are at a great risk of doing permanent physical and cognitive harm to themselves by dieting. Children have less body fat than adults and are growing and developing at a rapid rate. Risks of dieting for children include kidney failure, dental decay, heart beat irregularities, stunted physical growth, and reduced cognitive development.

### Hypothesis

Body image and dieting behaviors are understood by children as young as seven. Children at that age envision an ideal body shape, know that restrictive eating behaviors influence body shape, and express dissatisfaction with their current body size and shape.

### Method

A sample of 431 children in the second, third, and fourth grades in Melbourne, Australia, participated in a survey. The survey was designed to assess knowledge of what dieting is and determine how many children had engaged in some type of restrictive eating behavior. Part of the survey also examined the children's ideas about ideal body shape and weight. Parents consented to their children's participation in the survey. Participants were assured that all their responses would be kept confidential.

To begin the study, the children's current body weights and heights were recorded. Results were as follows:

	Boys	Girls
Overweight	19.3%	23.7%
Normal weight	59.9%	48.6%
Underweight	20.8%	27.7%

The first part of the survey was a behavior inventory that asked questioned like "I diet ..." with answer choices that included always, sometimes, and never. Then, more open-ended questions were asked that allowed children to explain what dieting means. One concern in designing a questionnaire to be used with children is the tendency for young children to give expected answers to leading questions. To avoid errors created by leading questions, children were given the option to answer "I don't know," "I never diet," or similar responses to the open-ended questions.

Children were next shown a series of seven gender-appropriate figures that ranged from very thin to obese. Children responded to the following questions:

1. Which figure looks most like the way you currently look?
2. Which figure looks most like the way you would like to look?
3. Which figure looks most like the way you feel?

Finally, children took a modified version of the Eating Attitudes Test designed by researchers to measure dieting behaviors, food occupation, and weight concerns. This 26-item survey asks questions like "I am scared about being overweight." Children select from a range of responses from always to never.

### Results

The researchers examined the results of the surveys by age group, body mass (underweight,

(continued)

normal weight, overweight), and gender. About 28 percent indicated that they did not know what dieting was. Of the remainder, their ideas about dieting showed a clear understanding of society's beliefs and attitudes toward dieting. Dieting has become a national pastime. About one in five Americans will go on a diet this year and many more will talk about going on a diet. Popular culture idealizes thin as beautiful. People see dieting as an acceptable way to achieve a beautiful body.

About 23 percent of the participants indicated that they have dieted. More girls than boys indicated that they had dieted. The three most popular forms of dieting among participants were:

1. actively reducing their intake of specific foods
2. reducing their overall intake of food
3. eating healthy foods

The study clearly showed that children as young as seven have a clear understanding of their body image and are frequently dissatisfied with it. Both boys and girls displayed a significant difference between their perceived body size and the ideal body size. In addition, the difference between the ideal and how they felt was significantly different. The findings are shown in the following table:

	Boys	Girls
Feeling smaller than the ideal	18%	13%
Feeling larger than the ideal	30%	34%

The study did not show a strong correlation between body-image dissatisfaction and dieting. This finding indicates that children do not yet have the abstract reasoning skills to relate these concepts. Studies with adolescents have shown a strong correlation between body-image dissatisfaction and dieting.

### Conclusions

Children from all age groups sampled understand the concept and behaviors associated with dieting. A significant number of the participants expressed dissatisfaction with their body shape and size. Researchers believe that society is communicating messages about ideal body shape and size to these young children. Interestingly, the girls in the study tended to choose the tall, lean figure as their ideal. Boys chose a more muscular and solid representation for their ideal.

Further study is needed to help understand why children at such a young age have such a clear understanding of behaviors that are potentially harmful to them. Possible explanations include society's emphasis on physical appearance, better education about nutrition, and the influence of role models such as parents.

Source: **Kostanski, M., & Gullone, E.** (1999). Dieting and body image in the child's world: Conceptualization and behavior. *Journal of Genetic Psychology, 160* (4), 488-98.

### Understanding the Case Study

**Directions:** Answer the following questions in the space provided.

1. What was the purpose of this study? Who participated in the study?  
\_\_\_\_\_
2. What percentage of boys and girls were overweight? Of normal weight?  
\_\_\_\_\_
3. What three assessments were children asked to make about the gender-appropriate figures shown to them?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. What dieting practices did children say they had tried?

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 **Thinking Critically**

Directions: Answer the following questions in the space provided.

5. What part of the hypothesis was not supported by the findings of this study? What does this suggest about children's cognitive skills?

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6. Why do you think some children are dissatisfied with their body sizes?

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7. What recommendations would you make to parents who are concerned about the findings of this study?

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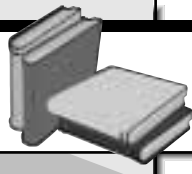
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## READING



## 4

## Teenagers in Crisis

**Directions:** Read the following selection, then answer the questions that follow.

Many adults believe that it is more difficult to be a teenager today than when they were growing up. Although not all researchers agree, there is some evidence to suggest that American society is changing so rapidly that it is forcing its adolescents toward adulthood without the necessary time and training for a smooth transition from childhood to adulthood. The consequences to the adolescent and to society may be felt for several decades.

There is no place for teenagers in American society today—not in our homes, not in our schools, and not in society at large. This was not always the case: barely a decade ago, teenagers had a clearly defined position in the social structure. They were the “next generation,” the “future leaders” of America. Their intellectual, social, and moral development was considered important and therefore it was protected and nurtured. The teenager’s occasional foibles [minor flaws] and excesses were excused as an expression of youthful spirit, a necessary Mardi Gras before assuming adult responsibility and decorum. Teenagers thus received the time needed to adapt to the remarkable transformations their bodies, minds, and emotions were undergoing. Society recognized that the transition from childhood to adulthood was difficult and that young people needed time, support, and guidance in this endeavor.

In today’s rapidly changing society, teenagers have lost their once privileged position. Instead, they have had a premature adulthood thrust upon them. Teenagers now are expected to confront life and its challenges with the maturity once expected only of the middle-aged, without any time for preparation. Many adults are too busy retooling and retraining their own job skills to devote any time to preparing the next generation of workers. And some parents are so involved in reordering their own lives, managing a career, marriage, parenting, and leisure, that they have no time to give their teenagers; other parents simply cannot train a teenager for an adulthood they themselves have yet to attain fully. The media and merchandisers, too, no longer abide by the unwritten rule that teenagers are a privileged group who require special protection and nurturing. They now see teenagers as fair game for all the arts of persuasion and sexual innuendo once directed only to adult audiences and consumers. High schools, which were once the setting for a unique teenage culture and language, have become miniatures of the adult community. Theft, violence, sex, and

substance abuse are now as common in the high schools as they are in the streets.

The imposition of premature adulthood upon today’s teenagers affects them in two different but closely related ways. First, because teenagers need a protected period of time within which to construct a personal identity, the absence of that period impairs the formation of that all-important self-definition. Having a personal identity amounts to having an abiding sense of self that brings together, and gives meaning to, the teenager’s past while at the same time giving him or her guidance and direction for the future. A secure sense of self, of personal identity, allows the young person to deal with both inner and outer demands with consistency and efficiency. This sense of self is thus one of the teenager’s most important defenses against stress. By impairing his or her ability to construct a secure personal identity, today’s society leaves the teenager more vulnerable and less competent to meet the challenges that are inevitable in life.

The second effect of premature adulthood is inordinate stress: teenagers today are subject to more stress than were teenagers in previous generations. This stress is of three types. First, teenagers are confronted with many more freedoms today than were available to past generations. Second, they are experiencing losses, to their basic sense of security and expectations for the future, that earlier generations did not encounter. And third, they must cope with the frustration of trying to prepare for their life’s work in school settings that hinder rather than facilitate this goal. Any one of these new stresses would put a heavy burden on a young person; taken together, they make a formidable demand on the teenager’s ability to adapt to new demands and new situations.

Contemporary American society has thus struck teenagers a double blow. It has rendered them more vulnerable to stress while at the same time exposing them to new and more powerful stresses than were ever faced by previous generations of adolescents. It

is not surprising, then, to find the number of stress-related problems among teenagers has more than tripled in the last decade and a half.

Source: **Elkind, D.** (1984). *All grown up and no place to go: Teenagers in Crisis*. Reading, MA: Addison-Wesley. pp. 3–6.

### **Understanding the Reading**

**Directions:** Answer the following questions in the space provided.

1. When teenagers were considered future leaders, how did society treat them?

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2. What changes does the author believe have occurred in society to make teens lose their place?

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3. According to the author, how have high schools changed?

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4. What two effects on teens does the author cite as a result of society's push toward premature adulthood?

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### **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

5. Do you agree with the author's point of view about society's treatment of teens? Explain your reasoning.

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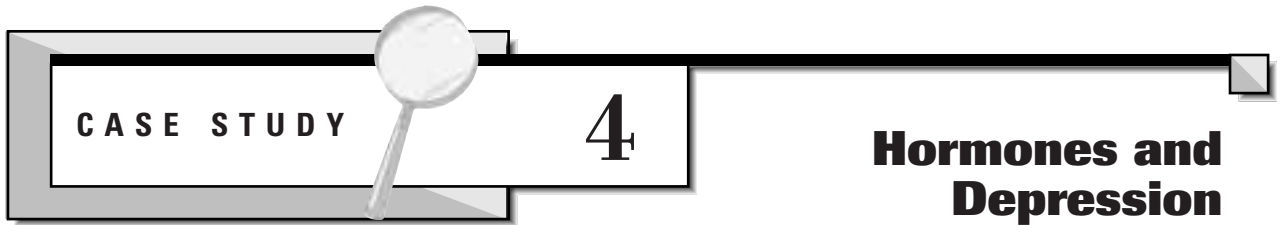
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6. Compose a letter to your congressional representative expressing your views on allowing advertisers to use sex or violence to sell products to teens.

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## CASE STUDY 4

# Hormones and Depression

**Directions:** Read the following case study, then answer the questions that follow.

### Introduction

Jeanne Brooks-Gunn, Ph.D., from Columbia University, has researched how emotional problems arise in females during adolescent development. At the onset of puberty, a female's estradiol level increases rapidly. This increase continues until adult levels of estrogen are reached during late adolescence or early adulthood. Researchers have noted that many young women seem to have little control over their emotions. Brooks-Gunn labels this emotional *dysregulation*. Her research centers on transitions in and out of adolescence. In this particular study, she investigates whether depression in adolescence or adulthood is affected by the emotional dysregulation experienced by large numbers of adolescent females.

### Hypothesis

Hormonal changes in females during puberty and stress at home and school result in emotional dysregulation and affect the likelihood of developing problems with depression either during adolescence or later in life.

### Method

Brooks-Gunn conducted a longitudinal study involving 120 girls who were 14 at the beginning of the study. Physical, emotional, and psychological evaluations were made when the girls were 14, 16, and 22. Based on the evaluations, Brooks-Gunn categorized the girls at each stage as those with and those without depressive problems.

Based on the evaluations made when the participants were 14 and 16, Brooks-Gunn divided them into four categories:

1. **Positive** These participants showed no signs of depressive problems at either evaluation. About 65 percent of the participants fell into this category.
2. **Early transient** These participants showed depressive problems at 14 but not at 16. About 10 percent of the participants fell into this category.
3. **Late transient** These participants showed depressive problems at 16 but not at 14. About 10 percent of the participants fell into this category.
4. **Recurrent** These participants showed signs of depression at both ages. About 10 percent of the participants fell into this category.

### Results

For the majority of participants, emotional dysregulation as a result of hormonal changes does not lead to depression later in life. The study showed that participants who were categorized as early transient had poorer body images. It also indicated that participants categorized as late transient experienced more family conflicts and problems during early adolescence. Participants who were categorized as recurrent had higher body fat and slightly earlier ages of menarche. They tended to have poor body images and did not relate as well to peers. Conflicts with parents were also more numerous. Recurrent participants showed only a slightly higher rate of depressive problems in early adulthood.

During the evaluations made when the participants were 22, the researchers encountered some females who had not experienced depression during adolescence, but were now struggling with it. The study indicated that these participants had experienced more negative school and family events during middle adolescence.

### Conclusions

The hormonal changes that occur during puberty for females do not seem to cause psychological problems later in life. The study does

suggest, however, that the combination of emotional dysregulation, family and school stress, and other emotional factors such as poor body image do increase the incidence of recurrent or chronic psychological problems.

Source: Azar, B. (1995). Paths that lead to teen depression. *The APA Monitor*, 26 (10), 26.

 **Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

- 1. What changes occur in a female's estrogen level during puberty?

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- 2. What is emotional dysregulation?

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- 3. What was the purpose of the longitudinal study? Did the study results support the hypothesis? Explain.

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- 4. What categories did Brooks-Gunn use to classify participants after the first two evaluations?

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- 5. What do the results suggest about the adolescent experience of participants who were categorized as recurrent?

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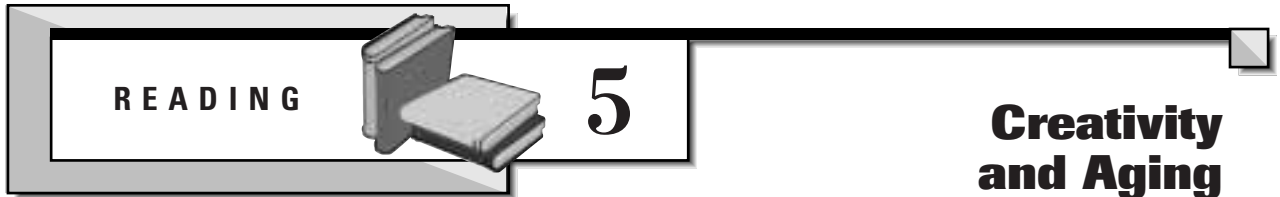
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 **Thinking Critically**

**Directions:** Answer the following questions on a separate sheet of paper.

- 6. What does the study suggest about the importance of physical appearance to adolescent females?
- 7. Do you think the emphasis on appearance is innate or learned? Provide evidence to support your position.





**Directions:** Read the following selection, then answer the questions that follow.

Would you describe yourself as creative? Recent research indicates that creative people tend to remain creative throughout their lives. Creativity is not reserved for the young. Composers, artists, and musicians often remain productive and creative throughout their lives. Their creativity brings meaning and purpose that enhances the quality of their lives.

Despite a severe intestinal disorder, painter Henri Matisse created some of his greatest work near the end of his life. So did Auguste Renoir, Claude Monet and Pablo Picasso. And some creative people, like Grandma Moses, don't start their creative careers until they're past 70.

Psychologists have been studying the creative lives of older people and how creativity can enhance the aging process. In a range of studies, they've found that being creative can add richness to the aging process; that those who followed their creative passions are happier old people; and that many creative people develop new creative styles in old age.

For the past 20 years, Dean Keith Simonton, Ph.D., professor of psychology at the University of California-Davis, has studied the career trajectories of composers, writers and artists.

Simonton has found, in part, that creativity does not decline with age, though it may change in form.

### 'Swan-song' creativity

Creative people often change strategies in old age, Simonton has found.

Composer Igor Stravinsky, for example, began in later life to compose pieces much differently than he had earlier, changing from writing traditional polytonal music to more radical 'twelve-tone' music that used the musical scale in a different way.

Relatedly, Simonton has found a 'swan-song' phenomenon: a time in which people's work becomes more meaningful and aesthetically concise as they face death.

Different kinds of artists have different creative peaks, Simonton added: For instance, lyric poets may peak earlier than novelists. In addition, some people—like Grandma Moses—begin creative careers later in life, thus peaking late in life, he noted.

A recent study at University of Nebraska-Lincoln found that thinking and acting creatively can help peo-

ple adapt to the aging process and find meaning in life. Participants in the study—who were a mix of nonartists and artists ages 60 and older—said that being creative enhanced their life satisfaction. In addition, creativity can encourage greater cognitive flexibility, the study found.

Sixty percent of the study participants said they'd become even more creative as they've gotten older. Of the remaining 40 percent, half said they'd remained consistently creative throughout their lives.

### Follow your passion

Those who follow their creative passions throughout life are happier people in old age, Stephanie Dudek, Ph.D., has found. . . .

In 1991, Dudek followed up a University of California-Berkeley study by Donald Mackinnon, Ph.D., and colleagues of 124 male architects, engineers and artists between 1958 and 1960. Participants in 1958 were 53-years-old on average.

Dudek interviewed 70 of the original architects in the study, all of those who were still alive in 1991. She divided the architects into three groups: famous; very successful; and 'nice guys,' men who had never strived to be famous, but who had fulfilling careers. All the men in the studies had followed their creative passions in their careers, Dudek said. With few exceptions, they reported that they were happy with their lives and wouldn't do things differently, and that creativity had enhanced their lives and made their old age more successful and enjoyable.

If people exercise creativity throughout their lives, their old age should be no different, Simonton said. 'People with lots of creative potential keep on creating even in old age,' he said.

Source: **Margoshes, P.** (1995, May). Creative spark lives on, can increase with age. *The APA Monitor*, 26 (5), 37.

**Understanding the Reading**

Directions: Answer the following questions in the space provided.

- 1. What does Simonton's study of creativity and aging indicate?

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- 2. What is 'swan-song' creativity?

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- 3. Can creativity increase with age?

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- 4. Into what three groups did Dudek divide the participants in her 1991 study? What were her conclusions?

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**Thinking Critically**

Directions: Answer the following questions in the space provided.

- 5. Does a creative person need to achieve fame to find satisfaction with his or her talents? Why or why not?

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- 6. List one or more areas in which you are creative. Projecting into the future, develop a life plan that would allow you to use your creativity throughout your life. Consider how you can develop your talents and how you can use them even if physical limitations slow you down.

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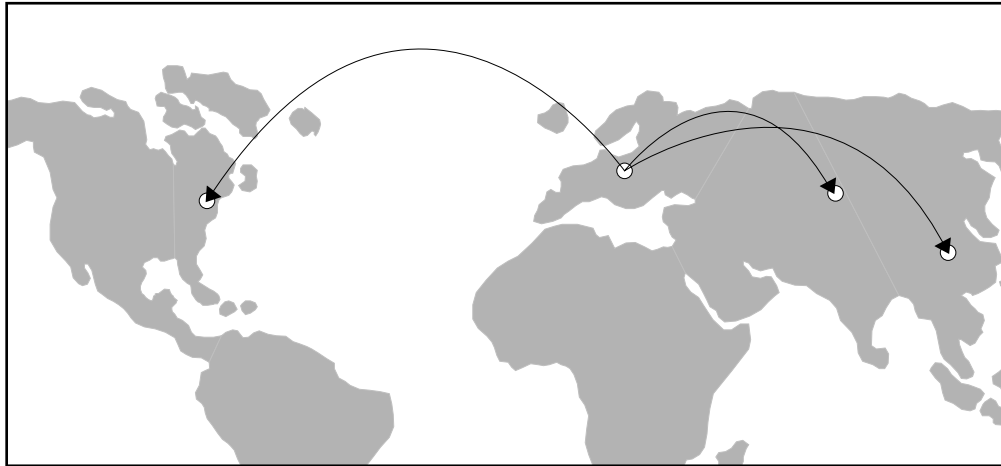
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**CASE STUDY**

5

## **Generativity Among Refugees and Survivors**

**Directions:** Read the following case study, then answer the questions that follow.



In 1939, eight million Jews lived in Europe. By the end of World War II in 1945, six million of these Jews had been killed. We know this systematic genocide as the Holocaust. Those who remained at the end of the war could be divided into two groups: refugees and survivors. Refugees fled their homelands for safe havens like the United States, China, and the Soviet Union. Refugee families remained together and suffered relatively few casualties during the war. Survivors were those who lived through the terror of the concentration camps. Many survivors left the camps totally alone in the world, the only surviving member of their families. All had experienced severe deprivation and a multitude of horrors.

Recent studies have compared generativity among refugees and survivors. Four specific generativity behaviors were examined:

1. Biological generativity, which ensures survival through bearing children.
2. Parental generativity, which creates a stable family unit to nurture children.
3. Technical generativity, which passes on skills from one generation to the next.
4. Cultural generativity, which introduces the next generation to the celebrations,

rites, and cultural achievements of past generations.

The participants in the study ranged in age from 63 to 75. They had been adolescents or young adults at the time of the war. The study participants completed two surveys used to assess generativity. Each was also interviewed at length to gather additional data.

### **Biological Generativity**

Although both refugee and survivor groups exhibited strong biological generativity, the survivor group's desire was stronger. The entire survivor group viewed the need for children as a way to continue the family line. Especially strong among the survivor group was the need to have biological children. Adoption was not seen as an option. Refugees also desired children, but were much more open to adoption if reproduction was not possible.

### **Parental Generativity**

Significant differences in parental generativity were apparent between the two groups. The refugee group expressed both material and emo-

tional components to raising children. Typical nurturing behaviors found in the population at large characterize the refugee group. The survivor group focused primarily on providing materially for their children. Since all had experienced extreme loss and deprivation, they desired to provide materially for their children so that they would never have to suffer. The emotional distance noted in the survivors also appears to result from their experiences in the camps. With such a tragic and painful past, emotional connections, even with their own children, proved difficult. Typical nurturing behaviors were often a missing component in the homes of survivors. Should they speak of the past to their children? All expressed reluctance, but most eventually shared at least a portion of their stories with their children.

### **Technical Generativity**

Technical generativity was not prevalent in either group. Few participants had completed high school or had any formal professional training. Therefore, they had no technical skills to pass on to their children. Although most participants were economically secure, their achievements resulted from hard work rather than a good education. Both groups valued education highly and made provisions for their children to receive good quality educations. Both groups especially valued higher education, even though they had been denied the right to it.

### **Cultural Generativity**

The war and the Holocaust virtually destroyed the culture into which the refugees and survivors had been born. During the two decades after the war, both groups showed limited interest in their cultural heritage. As the survivors aged, however, they expressed more interest in passing on Jewish heritage and traditions. For many, the holidays and celebrations of Jewish life gained significance.

One strong component of cultural generativity that appeared in the survivor group was Zionism. Zionism is an ancient concept, but in

the twentieth century it has focused primarily on the establishment and protection of a Jewish homeland. Largely as a result of the Holocaust, the state of Israel was created in 1948 to give the Jews a homeland. Both refugees and survivors have been strong supporters of Zionism. Survivors speak with pride of the one positive effect of the Holocaust. They have contributed generously to the state, although none of the study participants lived in Israel.

For survivors, another consistent cultural theme was that the Holocaust be remembered so that it is never repeated. As the survivors have aged, they have recognized the need to have the events of the Holocaust and their suffering remembered, not only by their families, but also by humanity. This larger cultural context has become a rallying point as the survivors approach the end of their lives.

### **Conclusions**

Disruptions early in life affect one's future drive toward generativity. Refugees lived through the upheaval, but did not experience the terror of the concentration camps. For many of them, guilt was a significant element of their existence. Although their culture was destroyed by the war, they still felt guilty for not having suffered like the concentration camp survivors. They seemed less able than the survivors to make new cultural connections and find significant purpose in life beyond raising their families.

Survivors could not escape their past. It colored every part of their future. They showed stronger generative behaviors largely as a means of defining their past. Except for nurturing skills needed for strong parental generativity, they showed more generative behaviors than the refugees. The interviews with survivors demonstrate that they have used generative behaviors to build a future out of the horrors of the past. Their cry of "Never Again" has become a reminder to all societies of the horrors of the Holocaust.

Source: **McAdams, D. & de St. Aubin, E.** (1998). *Generativity and Adult Development*. Washington, DC: American Psychological Association.

 **Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

1. What two groups were used for the study?

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2. Which generative behavior was least evident among both groups?

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3. What was the primary difference between the two groups in parental generativity?

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4. What was the strongest part of cultural generativity for the survivor group?

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 **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

5. Would you expect veterans of World War II to share any of the same generative characteristics with the survivors? Why or why not?

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6. Although survivors felt strongly that the Holocaust be remembered so that it would not be repeated, they were reluctant to share their experiences with their children. In fact, several of the adult children of study participants asked the researchers for a copy of their parents' interview so that they could learn more about their parents' Holocaust experience. Explain this apparent contradiction.

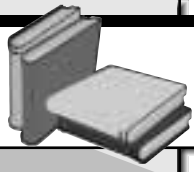
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## READING



## 6

## Reversing Stroke and Spinal Cord Damage

**Directions:** Read the following selection, then answer the questions that follow.

Brain injuries, including strokes and severe head trauma, disable tens of thousands of Americans yearly. In addition, spinal cord injuries that result in paralysis occur daily. The disabilities that result can be devastating to the victims. Regenerating brain tissue and repairing spinal cord damage are not yet possible, but strides are being made toward reducing the severity of many disorders and injuries. Eventually, researchers hope to use a combination of methods to repair the damage.

Scientists are on the brink of doing the unthinkable—replenishing the brains of people who have suffered strokes or head injuries to make them whole again. And as if that is not astonishing enough, they think they may be about to reverse paralysis.

The door is at last open to lifting the terrifying sentence these disorders still decree—loss of physical function, cognitive skills, memory, and personality—which costs the nation \$65 billion annually.

Until recently there was virtually nothing doctors could do for the 500,000 Americans who have strokes each year, the 500,000 to 750,000 who experience severe head injury, or the 10,000 people who are paralyzed after spinal cord damage.

But that is about to change. Researchers now think it may be possible to replace destroyed brain cells with new ones to give victims of stroke and brain injury a chance to relearn how to control their body, form new thinking processes, and regain emotions.

And after demolishing the long-standing myth that brain cells can't regenerate or proliferate, scientists are developing ways to stimulate cells to do just that.

Although stroke, head injury, and paralysis are three of the most devastating things that can happen to anyone, scientists have recently learned that the damage they cause is not preordained: it takes place over minutes, hours, and days, giving them a precious opportunity to develop treatments to halt much of the damage.

Most of the new remedies are not yet available, but an explosion of research in the last five to ten years has convinced scientists that some of them will work. . . .

Scientists are finding that treatments that work in one type of injury—stroke, head trauma, or spinal damage—are likely to work in the others. All of these disorders share many of the same mechanisms of cell destruction, which come in two phases, primary and secondary injury.

In the primary, or initial, injury, blood flow to a part of the brain is blocked by a clot that plugs an artery or

by a physical blow. Brain cells, or neurons, are either damaged or die right away because they are deprived of nourishing blood.

This initial destruction then triggers a chemical attack against tissue that was not damaged in the primary injury. The second phase of injury invokes a process called excitotoxicity and it affects nearby healthy cells, often killing more brain tissue than the initial injury.

Like someone yelling “fire” in a crowded theater, damaged and dying cells scream out a slew of chemicals. These chemicals, which normally help brain cells talk to each other, become dangerously toxic in excessive amounts. They literally cause healthy cells to become overexcited to the point of death, when they too spew out their death-throe chemicals.

Interestingly, scientists believe that excitotoxicity is a genetically programmed suicide mechanism devised by nature to kill unneeded or unhealthy cells. Such cell death occurs during fetal development, for instance, to get rid of billions of overproduced brain cells and the webbing between fingers.

It is this same excitotoxic response that is rapidly triggered in stroke, head trauma, or spinal injury to produce the destructive secondary injury. Evidence also indicates that the excitotoxic reaction can occur over a longer period of time, causing a slow form of suicide that may be the final pathway for cellular death in Alzheimer's, Parkinson's, and other degenerative neurological disorders.

The suicide reaction—its scientific name is apoptosis—begins when a damaged or dying neuron releases massive amounts of a neurotransmitter called glutamate. Glutamate is normally one of the most important chemical messengers in the brain.

But when too much glutamate is present, the NMDA receptors (“doors” on cell surfaces) are jammed open. Sodium floods in, causing the cell to swell. Calcium rushes in and smashes at the cell's genetic controls, producing enzymes that eat away the cell's internal support structure and destructive

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molecules, called free radicals, that chew away its membrane wall.

"It would be like going into the cabin of a 747 jet-liner with a sledgehammer and starting to hit left and right," Washington University's Dennis Choi said. "Everything just starts going haywire."

The discovery of the key steps in the suicide cascade of secondary injury is leading to the development

of drugs to block them. Experiments in animals show that by blocking the secondary injury, much of the damage that normally occurs from a stroke, head trauma, or spinal injury can be prevented.

Source: **Kotulak, R.** (1997). *Inside the Brain: Revolutionary Discoveries of How the Mind Works*. Kansas City, MO: Andrews McMeel Publishing, 173-7.

### **Understanding the Reading**

**Directions:** Answer the following questions in the space provided.

1. What are the common consequences of strokes, head traumas, and spinal cord injuries?

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2. What are the two phases of cell destruction common to strokes, head traumas, and spinal cord injuries?

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3. What is the biological purpose of excitotoxicity?

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4. What happens when too much glutamate is present in the brain?

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### **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

5. What common psychological effects occur in victims of strokes, head traumas, and spinal cord injuries?

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6. Although experiments have been successful in animals, the drugs used are not yet widely available for humans. If someone you cared for experienced a severe head trauma, would you want him or her to participate in a study of these drugs? Why or why not?

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## CASE STUDY

## 6

## Dual-Brain Psychology

**Directions:** Read the following case study, then answer the questions that follow.

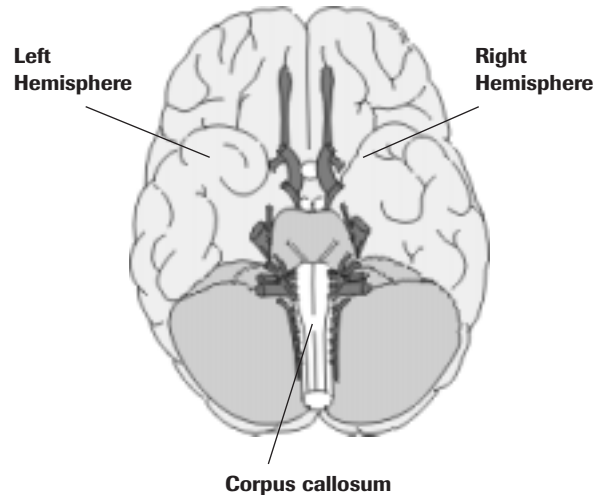
Neurologists, psychiatrists, and psychologists have demonstrated that different areas of the brain are responsible for different behaviors and control different sensory inputs. For example, studies have shown that the left hemisphere controls the right side of the body, and the right hemisphere controls the left side of the body. Scientists also attribute different abilities to the right and left hemispheres. The left hemisphere controls language and verbal reasoning, while the right hemisphere manages spatial understanding. Recent studies have sought to identify if emotions are processed differently by the two hemispheres. This area of study has been labeled “dual-brain psychology.”

### Existing Research

Psychiatrist Fredric Schiffer began his studies in dual-brain psychology by reviewing the research done with patients who had undergone commissurotomies, a surgical procedure that separates the brain’s two hemispheres by severing the corpus callosum. This radical surgery has proven successful in relieving severe epileptic seizures. Dr. Eran Zaidel researched how the brain functions after this radical surgery. He used simple visual and motor tests to understand how the two halves of the brain work. He had a patient sit in front of a screen. Pictures were flashed to either the right or left side of the screen. Pictures that were flashed to the right side of the screen were processed by the left hemisphere and vice versa. Zaidel asked the patient to name the objects shown in the pictures. The patient could name the objects that were flashed on the right side of the screen, but could not name the objects flashed on the left side of the screen. This seemed to confirm that language is a left brain function and that the right brain is mute.

Zaidel took the study one step further. Even though the right hemisphere is mute, he wondered how the right brain processed the picture.

### The Human Brain



He hypothesized that the right brain did recognize the object, but simply had no way to name it. He repeated the experiment. When an image was flashed on the left side of the screen, the patient was asked to use his right hand to select the object from a group of objects. Although the patient could not name the object, he always made the correct selection. Zaidel concluded that although the right brain is mute, it does process visual information correctly.

Other studies with commissurotomy patients have shown that, when divided, the two halves of the brain function independently enough to say that the patient has two minds.

### Dual-Brain Psychology Research

Schiffer wondered what applications Zaidel’s findings had on those whose brains were intact. Since information is processed differently by the two hemispheres, he hypothesized that emotions are also processed differently. To test his hypothesis, he modified two pairs of safety goggles. On one pair, he used white tape to completely cover the left lens and the left half of the right lens. This allowed vision through the right visual field only. Therefore, the information would be processed by the brain’s left hemi-

(continued)



sphere. On the other pair, he completely covered the right lens and the right half of the left lens. This allowed vision through the left visual field, which would be processed by the brain's right hemisphere.

During psychotherapy sessions, he asked patients to select one pair of the goggles to wear. One of the first patients to test the goggles was an agoraphobic woman who feared all unfamiliar places. She needed to travel to a different city and was working with Dr. Schiffer to overcome her phobia. Schiffer had her select a pair of the goggles to wear as the session began. She chose the pair that had the left side completely covered, allowing her to see only from her right visual field. Schiffer asked her to imagine herself in the different city. What was her level of anxiety? Could she deal with it? Her response was that she would feel lost and very anxious. She did not believe that she could go through with the visit.

Schiffer had her put on the other pair of glasses that gave her vision only to the left visual field. After a 15-second period of adjustment, he asked her how she would feel in the different city. This time her responses were much more positive. She thought she could manage the visit and not be overcome with anxiety. She was much calmer when contemplating the trip than when she had been seeing through her right visual field. Subsequent trials indicated differences in about half the patients. Some sensed minor differences in emotions, while some indicated strong differences.

To further test the hypothesis that different hemispheres process emotions differently,

Schiffer used the taped glasses with 70 participants. They were randomly assigned to one pair of glasses. After a 45-second period of adjustment, they were asked to rate their level of anxiety using a 5-point scale (0 for no anxiety to 4 for extreme anxiety). After participants gave their ratings, they were asked to switch to the other pair of glasses. Participants also rated their level of anxiety with the second pair.

### Results

Of the 70 participants, 60 percent reported a one-point difference in anxiety level between the two pairs of glasses and 23 percent reported a two point or greater difference. Of the 70 participants, four had a four-point difference in their rating. These four participants exhibited high levels of anxiety. In fact, the only variable that showed significance was level of anxiety. Other possible variables, including gender, handedness, and age, did not significantly affect the results.

### Conclusions

The brain's left and right hemispheres do process emotions differently. Treatments can be developed that allow patients to reduce their levels of anxiety by teaching them to use different hemispheres. In addition, the two hemispheres can learn to work together to create a healthy, whole person.

Source: **Schiffer, F.** (1998). *Of Two Minds: The Revolutionary Science of Dual-Brain Psychology*. New York: The Free Press.

### Understanding the Case Study

**Directions:** Answer the following questions in the space provided.

1. What does the left hemisphere of the brain control?

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2. What does the right hemisphere of the brain control?

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3. Describe the results of Zaidel's study on commissurotomy patients.

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4. What was Schiffer's hypothesis about emotions?

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 **Thinking Critically**

Directions: Answer the following questions in the space provided.

5. Why would patients with high levels of anxiety show a greater difference in level of anxiety between the brain's two hemispheres?

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6. Anxiety has many causes, including depression, phobias, bipolar disorder, and post-traumatic stress disorder. Describe further research that could be conducted to determine if different causes of anxiety are processed differently by the brain and, therefore, require different types of dual-brain therapy.

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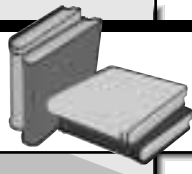
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## READING



## 7

## Cross-Cultural Studies of Sleep

**Directions:** Read the following selection, then answer the questions that follow.

What is your pattern of sleep? Do people in all cultures and throughout history share similar sleep patterns? Anthropological research indicates that sleep patterns in today's culture may be strikingly different from the patterns of our ancestors. New research may change the way we view sleep.

Ah, the sweet simplicity of sleep. You tramp into your bedroom with sagging eyelids and stifle a yawn. After disrobing, you douse the lights and climb into bed. Maybe a little reading or television massages the nerves, loosening them up for slumber.

There's a surprising twist, however, at the heart of this familiar ritual. It simply doesn't apply to people currently living outside of the modern Western world—or even to inhabitants of Western Europe as recently as 200 years ago.

In such contexts, and probably throughout human evolution, solitary shut-eye organized around a regular bedtime and a single bout of sleep proves about as common as stock car racing or teleconferencing. Surprisingly, anthropologists have rarely scrutinized the sleep patterns and practices of different cultures. . .

An initial attempt to draw back the veils of sleep in hunter-gatherer groups and other traditional societies has uncovered a wide variety of sleep customs, reports anthropologist Carol M. Worthman of Emory University in Atlanta. None of these snooze styles, however, looks anything like what modern Western folk take for granted.

This finding raises profound questions for the burgeoning discipline of sleep research, Worthman says. Over the past 50 years, scientists have avidly delved into slumber's biology. Early research identified periods of rapid-eye-movement (REM) sleep, during which intense dreams often occur. . . . Researchers have also taken strides toward treating insomnia and other sleep disturbances.

While investigators readily concede that they don't yet know why people sleep and dream, they assume that they at least know how people should sleep: alone or with a partner for a solid chunk of the night. Sleep studies therefore take place in laboratories where individuals catch winks while hooked up to a bevy of brain and body monitors.

However, the distinctive sleep styles of non-Western groups may mold sleep's biology in ways undreamed of in sleep labs, Worthman suggests. They may influence factors ranging from sleep-related

genes to the brain's electrical output during various sleep phases. . . .

A seemingly innocent question awakened Worthman to her discipline's ignorance of how people sleep. In 1994, she had a conversation with pediatrician Ronald E. Dahl of the University of Pittsburgh School of Medicine, who studies the effects of mood disorders on sleep. He asked the Emory scientist to tell him what anthropologists know about the history and prehistory of sleep. "[My] bald, if somewhat overstated, answer was 'zero,'" she says. . . .

So, Worthman contacted seven researchers whom she knew had intimate knowledge of one or more traditional societies, including nomadic foragers, herders, and village-based farmers. Among these far-flung populations, none of the investigators, by their own admission, had systematically studied how people sleep. After plumbing what the researchers had absorbed about nighttime activities, Worthman has assembled a preliminary picture of sleep practices in 10 non-Western populations.

Worthman's findings rip the covers off any lingering suspicions that people everywhere sleep pretty much alike. Far from the wallpapered confines of middle-class bedrooms, sleep typically unfolds in shared spaces that feature constant background noise emanating from other sleepers, various domestic animals, fires maintained for warmth and protection from predators, and other people's nearby nighttime activities.

Groups in Worthman's analysis include Ache foragers in Paraguay, Kung hunter-gatherers in Africa, Swat Pathan herders in Pakistan, and Balinese farmers in Indonesia. For all these groups and six others, communal sleep equals safe sleep, because sleepers can count on there being someone else up or easily awakened at all hours of the night to warn others of a threat or emergency. . . .

Many rituals occur at night and exploit the need to sleep. For instance, initiation rites often force participants to cope with sleep deprivation. In other ceremonies, individuals enter somnolent, or near-sleep,

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states in order to magnify an occasion's psychological impact and to induce spiritual visions.

Consider the communal sleep of the Gebusi, New Guinea, rainforest dwellers, who grow fruit in small gardens and occasionally hunt wild pigs. Women, girls, and babies crowd into a narrow section of a community longhouse to sleep on mats. Men and boys retreat to an adjacent, more spacious longhouse area, where they sleep on wooden platforms.

Gebusi females retire at dark for about 10 hours of rest and sleep. In contrast, the men stay up later and frequently conduct rituals. About once a month, everyone attends an all-night dance and feast, catching up on sleep the next day.

Each week or two, Gebusi men go to seances led by a "spirit medium," at which they try to keep spirits awake throughout the night. Participants attempt to slip in and out of a near-sleep state as the medium, who's usually adept at operating in this half-conscious condition, sings about the spirit world and other matters.

As in most of the other studied societies, the Gebusi express concerns about exposure to ghosts, evil spirits, and witchcraft during sleep. They consider deep sleep risky, since a sleeper's spirit may wander off too far and fail to return. The Gebusi view group slumber as a way to lessen the danger of spirit loss, which they view as especially likely while a person dreams.

Whether or not one believes that sleeping puts a person's spirit at risk, slumber appears to have crucial effects on body and mind. A culture's sleeping style serves as a growing child's training ground for managing biologically based systems of attention and alertness, Worthman contends. Balinese farmers provide a striking example of this sleep-related tutoring.

Balinese infants are carried and held continuously by caregivers so that they learn to fall asleep even in hectic and noisy situations. This grooms them to exhibit what the Balinese call "fear sleep" later in life, Worthman says. Children and adults enter fear sleep by suddenly slumping over in a deep slumber when they or family members confront intense anxiety or an unexpected fright. They are literally scared into sleep.

Infants in middle-class American homes, who usually sleep alone, may not learn to ground their sleeping and waking cycles in a flow of sensations that include bodily contact, smells, and background noises, Worthman proposes. In fact, babies forced to bounce back and forth between the sensory overload of the waking world and the sensory barrenness of dark, quiet bedrooms may often find it difficult to relax, fall asleep, wake up, or concentrate, she theorizes. . . .

If sleeping patterns in traditional societies remain little known, those of prehistoric humans are a total

mystery. Still, in settings that roughly mimic ancient nighttime conditions, sleep undergoes an intriguing shift, says psychiatrist Thomas A. Wehr of the National Institute of Mental Health (NIMH) in Bethesda, MD.

When prohibited from using artificial light from dusk until dawn, people who formerly slumbered in solid blocks of time begin to sleep in two periods separated by an hour or two of quiet rest and reflection.

Wehr and his coworkers asked 15 healthy adults to rest and sleep in darkness for 14 hours (6 P.M. to 8 A.M.) each night for several weeks. Volunteers slept for 11 hours each of the first few nights, apparently to catch up on their sleep. They then settled into a pattern of lying awake for a couple of hours before falling asleep for 3 to 5 hours in the evening. An hour or so of quiet wakefulness ensued, followed by about 4 more hours of sleep in the early morning. . . .

Participants in Wehr's study usually awoke out of REM sleep to end their first slumber session. During REM sleep, the brain becomes about as active as it is when wide awake. One function of this sleep phase may be to set the stage for waking up, Wehr holds.

If prehistoric people slept in two nightly periods, then regularly awakening out of REM sleep may have allowed them to reflect on and remember their dreams in a semiconscious state that's generally unavailable to modern sleepers. Sleep compressed into a single stint may thus encourage modern humans to lose touch with dreams, myths, and fantasies, Wehr argues.

These results, first reported in 1993, also raise the possibility that people who wake up once or twice each night don't necessarily suffer from insomnia. "A natural human sleep pattern may reassert itself in an unwelcome world and get labeled as a disorder," Wehr says.

The two-phase sleep pattern observed by Wehr corresponds remarkably closely to the way in which most Western Europeans slept between 500 and 200 years ago, according to historian A. Roger Ekirch of Virginia Polytechnic Institute and State University in Blacksburg. While doing research for a book on nighttime behaviors during that era, Ekirch came across several hundred references to what he identifies as "segmented sleep."

From country farms and villages to city apartments, early modern Europeans usually sank each evening into what they called a "first sleep," which lasted for several hours. Shortly after midnight, they awoke and spent 1 or 2 hours in a "watching period." A "second," or "morning," sleep followed.

The watching period presented many opportunities, Ekirch notes. People coming out of their first sleep often stayed in bed to pray, converse with a bedfellow, contemplate the day's events or the meaning of a

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dream, or simply let their minds wander in a semiconscious state of contentment that was prized at the time.

A 16th-century physician wrote that many laborers dozed off exhausted at the start of each night. Sexual intercourse with their wives typically occurred in the watching period, after a recuperative first sleep.

These days, Western societies treat sleep more as an unavoidable stretch of downtime than as a prelude to sex or a time for inner reflection. Only intensive

investigations across cultures and classes will illuminate the lushness of sleep's landscape, Worthman predicts.

Adds Wehr, "We're going to have to reconceptualize what it means to sleep normally."

Source: **Bower, B.** (1999, September 25). Slumber's unexplored landscape. *Science News*, 156 (13), 205–207.

### **Understanding the Reading**

**Directions:** Answer the following questions in the space provided.

1. What is the primary difference between the current sleep practices in the United States and historic sleep patterns?

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2. Why do people in some cultures sleep in communal groups?

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3. What is "fear sleep" as experienced by the Balinese?

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4. What did Thomas Wehr discover in his sleep study?

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### **Thinking Critically**

**Directions:** Answer the following questions on a separate sheet of paper.

5. You have a friend who reports that he falls asleep easily around 11 P.M., but then awakens for about an hour most nights around 2 or 3 A.M. He seems near exhaustion. What would be the traditional explanation for his problem? How might the information contributed by anthropologists change this view? Given the anthropological view, what recommendations would you make to your friend?
6. Why do sleep patterns in America differ so greatly from those of our ancestors and those in more traditional cultures?

## CASE STUDY

## 7

**Self-Hypnosis**

**Directions:** Read the following case study, then answer the questions that follow.

**Background**

What happens when traditional medicine fails to provide relief from chronic pain? Chronic pain is long-term pain from a known or unknown source that cannot be relieved through surgery or physical therapy. Millions of Americans suffer from chronic pain at some period in their lives. Traditional medicine has treated such pain with medications and selected exercises. Statistics show that 40 percent of the people who are prescribed medication for chronic pain will abuse their medication. Society, including those in the medical profession, is exploring alternative treatments that may prove as effective, and perhaps more effective, than traditional medical treatments.

**Case Report**

A woman in her late 40s was injured in a car accident. Her most serious injury was a compression fracture of her spine. The fracture and accompanying muscle spasms resulted in severe and continuous pain. No type of surgery could relieve her pain, so doctors gave her a series of pain medications, nerve blocks, and anesthetics. These procedures managed the pain, but had unpleasant side effects.

Two years later, the woman was in another car accident. This time, in addition to cuts and bruises, she fractured her breastbone, one rib, and a foot. After this accident, her pain worsened and she had difficulty completing simple tasks such as combing her hair and dressing herself. She was unable to work. She also experienced additional health problems in the next several months.

The pain, frustration over her limitations, and uncertainty about the future left her depressed. Over the next six months, she visited several doctors at several clinics seeking help. Doctors prescribed 13 different medications at various times to either manage her pain or affect her mood. The drugs included Darvocet, a pow-

erful pain reliever, and Valium, a drug commonly prescribed to treat anxiety. None of these drugs proved helpful; the many side effects actually made the problems worse.

When she entered the Behavioral Medicine Clinic, she walked with a cane, had limited movement in her head and neck, and continued to be depressed. Since she had received little relief from traditional medical treatments, she had begun to study the principles of self-hypnosis from library books. She slowly learned how to manage her pain through a self-induced state of hypnosis. While seated, she would close her eyes and visualize her pain as a lake. She became progressively more relaxed by continuing to use mental imagery to reduce the size of the lake. She used these techniques to make the pain more manageable and to deal with her anxiety over the exercises physical therapists asked her to do. The doctors at the Behavioral Medicine Clinic encouraged her to continue with the self-hypnosis on a daily basis, to be as physically active as possible, and to try to live without pain medications.

Within seven months, she:

- was nearly free of all pain
- was not taking any pain medications
- had increased her physical activity and was walking without the cane
- had returned to work part-time
- was no longer suffering from depression

**Conclusions**

Cases such as the one described here are helping to shift the focus of the medical community toward a biopsychosocial approach to the treatment of pain. This approach combines traditional medical treatments with psychological and social approaches to treatment. The most common alternative treatments are group therapy, relaxation therapy, biofeedback, guided imagery, and hypnosis.

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The National Institutes of Health support these alternative treatments, especially relaxation therapy and hypnosis, for chronic pain sufferers. Several studies over the past 30 years indicate that hypnosis is especially effective at controlling both acute and chronic pain and at relieving the accompanying depression.

Self-hypnosis is the technique preferred by many physicians and psychologists. It allows the

patient more control and responsibility. It also lessens the chance that the physician or psychologist will be seen as a manipulator.

Source: **Mickelson, C., Brende, J., & Gonzalez, J.** (1999). What if your patient prefers an alternative pain control method: Self-hypnosis in the control of pain. *Southern Medical Journal*, 92 (5), 521-23.

 **Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

1. What is chronic pain?

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2. Why did the woman in the case study learn self-hypnosis?

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3. What imagery did she use for her pain?

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4. How did she use this image to reduce her pain level?

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5. What types of treatment are combined in the biopsychosocial approach to pain management?

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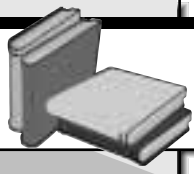
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 **Thinking Critically**

**Directions:** Answer the following questions on a separate sheet of paper.

6. Why do you think self-hypnosis relieved pain when all the other treatments failed in this instance?  
7. If given the option of hypnosis or self-hypnosis to manage pain, which would you prefer? Why?

## READING



## 8

## Weightlessness and Perception

**Directions:** Read the following selection, then answer the questions that follow.

In the second half of the 20th century space travel became a reality. Until the first space travelers braved the unknown, scientists and doctors could only speculate on how the human body would react to weightlessness. Some of their speculations proved true, such as space motion sickness that is commonly experienced by space travelers at the beginning of a flight. Others proved false. One thing has become quite clear—the body can adapt to weightlessness and then readjust to gravity. Researchers are attempting to use what has been learned in space to treat people on Earth with problems such as balance disorders.

... As most doctors can attest, it is difficult to predict what will happen when a brand-new challenge is presented to the human body. Time and again, space travel has revealed its marvelous and sometimes subtle adaptive ability. But only in the past few years have scientists begun to understand the body's responses to weightlessness, as the data—the cumulative experience of nearly 700 people spending a total of 58 person-years in space—have grown in quantity and quality. Pursuit of this knowledge is improving health care not only for those who journey into space but also for those of us stuck on the ground. The unexpected outcome of space medicine has been an enhanced understanding of how the human body works right here on Earth.

### Feeling Gravity's Pull

Although many factors affect human health during spaceflight, weightlessness is the dominant and single most important one. The direct and indirect effects of weightlessness precipitate a cascade of interrelated responses that begin in three different types of tissue: gravity receptors, fluids and weight-bearing structures. Ultimately, the whole body, from bones to brain, reacts.

When space travelers grasp the wall of their spacecraft and pull and push their bodies back and forth, they say it feels as though they are stationary and the spacecraft is moving. The reason is embedded in our dependence on gravity for perceptual information.

The continuous and pervasive nature of gravity removes it from our daily consciousness. But even though we are only reminded of gravity's invisible hand from time to time by, say, varicose veins or an occasional lightheadedness on standing up, our bodies never forget. Whether we realize it or not, we have evolved a large number of silent, automatic reactions to cope with the constant stress of living in a downward-pulling world. Only when we decrease or increase the

effective force of gravity on our bodies do we consciously perceive it. Otherwise our perception is indirect.

Our senses provide accurate information about the location of our center of mass and the relative positions of our body parts. This capability integrates signals from our eyes and ears with other information from the vestibular organs in our inner ear, from our muscles and joints, and from our senses of touch and pressure. Many of these signals are dependent on the size and direction of the constant terrestrial gravitational force.

The vestibular apparatus in the inner ear has two distinct components: the semicircular canals (three mutually perpendicular, fluid-filled tubes that contain hair cells connected to nerve fibers), which are sensitive to angular acceleration of the head; and the otolith organs (two sacs filled with calcium carbonate crystals embedded in a gel), which respond to linear acceleration. Because movement of the crystals in the otoliths generates the signal of acceleration to the brain and because the laws of physics relate that acceleration to a net force, gravity is always implicit in the signal. Thus, the otoliths have been referred to as gravity receptors. They are not the only ones. Mechanical receptors in the muscles, tendons and joints—as well as pressure receptors in the skin, particularly on the bottom of the feet—respond to the weight of limb segments and other body parts.

Removing gravity transforms these signals. The otoliths no longer perceive a downward bias to head movements. The limbs no longer have weight, so muscles are no longer required to contract and relax in the usual way to maintain posture and bring about movement. Touch and pressure receptors in the feet and ankles no longer signal the direction of down. These and other changes contribute to visual-orientation illusions and feelings of self-inversion, such as the feeling that the body or the spacecraft spontaneously reori-

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ents. In 1961 cosmonaut Gherman Titov reported vivid sensations of being upside down early in a space-flight of only one day. Last year shuttle payload specialist Byron K. Lichtenberg, commenting on his earlier flight experiences, said, "When the main engines cut off, I immediately felt as though we had flipped 180 degrees." Such illusions can recur even after some time in space.

The lack of other critical sensory cues also confuses the brain. Although orbital flight is a perpetual free fall—the only difference from skydiving is that the spacecraft's forward velocity carries it around the curve of the planet—space travelers say they do not feel as if they are falling. The perception of falling probably depends on visual and airflow cues along with information from the direct gravity receptors. . . .

The aggregate of signal changes produces, in half or more of space travelers, a motion sickness that features many of the symptoms of terrestrial motion sickness: headache, impaired concentration, loss of appetite, stomach awareness, vomiting. Space motion sickness usually does not last beyond the first three days or so of weightlessness, but something similar has been reported by cosmonauts at the end of long flights.

At one time, scientists attributed space motion sickness to the unusual pattern of vestibular activity, which conflicts with the brain's expectations. Now it is clear that this explanation was simplistic. The sickness results from the convergence of a variety of factors, including the alteration of the patterns and levels of motor activity necessary to control the head itself. A similar motion sickness can also be elicited by computer systems designed to create virtual environments, through which one can navigate without the forces and sensory patterns present during real motion [Gibbs, W. W. (1994, December). Virtual reality check, *Scientific American*.]

Over time, the brain adapts to the new signals, and for some space travelers, "down" becomes simply where the feet are. The adaptation probably involves physiological changes in both receptors and nerve-cell patterns. Similar changes occur on the ground during our growth and maturation and during periods of major body-weight changes. The way we control our balance and avoid falls is an important and poorly understood part of physiology. Because otherwise healthy people returning from space initially have difficulty maintaining their balance but recover this sense rapidly, post-flight studies may allow doctors to help those non-space travelers who suffer a loss of balance on Earth.

Bernard Cohen of the Mount Sinai School of Medicine and Gilles Clement of the National Center for Scientific Research in Paris undertook just such a study after the Neurolab shuttle mission, which ended on May 3, [1998]. To connect this work with patients

suffering from balance disorders, Barry W. Peterson of Northwestern University and a team of researchers, supported by the National Aeronautics and Space Administration and the National Institutes of Health, are creating the first whole-body computer model of human posture and balance control. . . .

## Down to Earth

When space travelers return to the world of weight, complementary changes occur. If the effects of weightlessness are completely reversible, everything should return to its normal condition at some time after the flight. We now know that most systems in the body do work reversibly, at least over the intervals for which we have data. We do not yet know whether this is a general rule.

Space travelers certainly feel gravitationally challenged during and just after their descent. As one person said after nine days in space: "It's quite a shock. The first time I pushed myself up, I felt like I was lifting three times my weight." Returning space travelers report experiencing a variety of illusions—for example, during head motion it is their surroundings that seem to be moving—and they wobble while trying to stand straight, whether their eyes are open or closed.

Most of the body's systems return to normal within a few days or weeks of landing, with the possible exception of the musculoskeletal system. So far nothing indicates that humans cannot live and work in space for long periods and return to Earth to lead normal lives. This is clearly good news for denizens of the upcoming International Space Station and for any future interplanetary missions. In fact, the station, assembly of which should begin late this year or early next year, will provide researchers with a new opportunity to investigate the effects of space travel on humans. On its completion in five years, the station will have 46,000 cubic feet of work space (nearly five times more than the Mir or Skylab stations) and will include sophisticated laboratory equipment for the next generation of medical studies. Recognizing the need for a comprehensive attack on all the potential human risks of long-duration space travel, NASA has selected and funded a special research body, the National Space Biomedical Research Institute, to assist in defining and responding to those risks.

Many of the "normal" changes that take place in healthy people during or just after spaceflight are outwardly similar to "abnormal" events occurring in ill people on Earth. For example, most space travelers cannot stand quietly for 10 minutes just after landing without feeling faint. This so-called orthostatic intolerance is also experienced by patients who have stayed in bed for a long time and by some elderly people.

Source: **White, R.J.** (1998). Weightlessness and the human body. *Scientific American*, 279 (3), 58–63.

(continued)

**Understanding the Reading**

Directions: Answer the following questions in the space provided.

1. What is the primary effect on the human body during spaceflight?

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2. What structures of the inner ear are sensitive to side to side movement of the head?

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3. What structures of the inner ear are sensitive to forward motion of the head?

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4. What is the difference in perception between skydiving and spaceflight?

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5. What Earth-based activity may create motion sickness similar to that experienced during spaceflight?

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6. What immediate effect of gravity do space travelers experience when they return to Earth?

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**Thinking Critically**

Directions: Answer the following questions on a separate sheet of paper.

- 7. Imagine that a recent editorial published in the leading newspaper in your community stated “We have only limited funds. Research dollars should be spent helping people here on Earth, not sending people into outer space.” Write a rebuttal of this statement.
- 8. What would a typical day be like if you could not distinguish which way was up and which was down?

**CASE STUDY****8****Perfect Pitch**

**Directions:** Read the following case study, then answer the questions that follow.

**Background**

About 1 in 2,000 people have perfect pitch. People with perfect pitch can hear a single note and name it or can sing the exact tone of a note each time without hearing any other tone for a reference. People with perfect pitch know that fluorescent lights hum in B-flat and toilets flush in E-flat. Although more musicians have perfect pitch than the general population, it is still a relatively rare talent. Musicians who do not have perfect pitch develop a keen sense of relative pitch. That is, they can sing a note if given another note as a reference.

**Hypothesis**

Perfect pitch is an inherited trait that must be nurtured and developed in order to survive.

**Method and Results**

Researchers have developed two theories about the influence of heredity. First, researchers at the University of Southern California at San Diego theorized that all infants are born with perfect pitch. They reached this conclusion by studying a sample of native Vietnamese and Chinese speakers. Both of these languages are tonal languages; that is, the same word may have several meanings depending on the tone used when the word is spoken. (Note: Tonal languages are not based on the sounds of an alphabet. There is no relationship between the way a word is written and the way the word is spoken. For example, all Chinese writing uses the same characters, but the two Chinese dialects, Mandarin and Cantonese, are so different that speakers of each language cannot understand one another.) Researchers found that all the people in their sample had perfect pitch. They concluded that perfect pitch is innate, and when nurtured will survive.

The second theory proposed that perfect pitch is an inherited trait; that is some, people inherit perfect pitch while others do not. Although the trait may be inherited, it must be

nurtured in order to develop. Researchers at the University of California at San Francisco have proposed this theory. They sampled people from all walks of life using 40 pure tones. The participants wrote down the note that corresponded to the tone. In order to be classified as having perfect pitch, participants had to get 38 or more notes correct. Once researchers identified people with perfect pitch, they asked for a blood sample and asked if other family members share this trait.

Using neurobiology, researchers hoped to identify the specific gene and DNA sequence responsible for perfect pitch. To date, most genetic research has been targeted at identifying hereditary factors for certain diseases. Researchers believe that it is time to use the knowledge gained to identify other traits, such as perfect pitch.

Researchers have already identified that perfect pitch does seem to run in families. About 48 percent of the participants with perfect pitch reported that they had one or more family members with the same talent. One of the scientists involved in the research, Shai Shaham, has perfect pitch. This is an ability he shares with his father, sister, and younger brother.

The researchers are particularly interested in one ethnic group that has a high incidence of

*(continued)*

perfect pitch—the Ashkenazi Jews of Eastern Europe. For several centuries this relatively small group married primarily within their ethnic group. As a result their gene pool is considered homogeneous. Ashkenazi Jews who have or had perfect pitch are the late pianist Vladimir Horowitz, Metropolitan Opera’s artistic director James Levine, and the San Francisco Symphony’s music director, Michael Tilson Thomas. By concentrating on one ethnic group, researchers hoped to quickly narrow the search for the tell-tale DNA.

Researchers also asked participants a second question: Did you study music as a young child? The findings indicated that early music training is essential to maintaining one’s perfect pitch ability. Most participants who have perfect pitch began music lessons by the age of 6. Researchers found that only 2 percent of those with perfect pitch began music training after the age of 12. These findings led researchers to conclude that the ability to perceive pitch perfectly is inherit-

ed, but the ability must be nurtured through exposure to music and music education.

## Conclusions

Researchers still do not fully understand how we perceive the world. As science and technology develop, they hope to be able to clearly identify which perceptual traits and abilities are inherited and which are learned. The most conclusive research to date indicates that perfect pitch does have an inherited component. The sample of tonal language speakers was too small to conclude that perfect pitch is an innate ability.

Even if perfect pitch is inherited, it seems apparent that the ability must be nurtured and developed. Most educators would not recommend forcing children to take music lessons at a very young age, but they do recommend exposing children to music, especially classical music.

Sources: **Dickinson, A.** (1999). Little musicians. *Time*, 154 (24), 114; **Krieger, L.** (1997). Perfect pitch: Nature or nurture. *San Francisco Examiner*, A15.

## Understanding the Case Study

**Directions:** Answer the following questions on a separate sheet of paper.

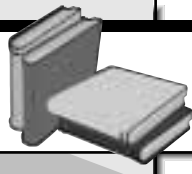
1. What is perfect pitch?
2. What was the researchers’ hypothesis?
3. Who did the researchers in San Diego use as participants? Why were these participants used?
4. What did the researchers find with the sample of people who spoke a tonal language?
5. What did the researchers at the University of San Francisco use to test for perfect pitch?
6. What did the San Francisco researchers conclude about nature versus nurture as it relates to perfect pitch?

## Thinking Critically

**Directions:** Answer the following questions on a separate sheet of paper.

7. Do you think that all speakers of tonal languages have perfect pitch? How would you test your hypothesis?
8. What other perceptual abilities may have an inherited and a learned component?

## READING



## 9

## Different Outlooks

**Directions:** Read the following selection, then answer the questions that follow.

Cognitive learning theorists have identified that optimists and pessimists process information differently. Many studies have shown that optimists are healthier, get better jobs, advance more quickly in their careers, are better athletes, and may live longer. Optimists are less likely to succumb to helplessness, even when encountering numerous bad events beyond their control.

*Learned helplessness* is the giving-up reaction, the quitting response that follows from the belief that whatever you do doesn't matter. *Explanatory style* is the manner in which you habitually explain to yourself why events happen. It is the great modulator of learned helplessness. An optimistic explanatory style stops helplessness, whereas a pessimistic explanatory style spreads helplessness. Your way of explaining events to yourself determines how helpless you can become, or how energized, when you encounter the everyday setbacks as well as momentous defeats. . . .

How do *you* think about the causes of the misfortunes, small and large, that befall you? Some people, the ones who give up easily, habitually say of their misfortune: "It's me, it's going to last forever, it's going to undermine everything I do." Others, those who resist giving in to misfortune, say: "It was just circumstances, it's going away quickly anyway, and, besides, there's much more in life."

Your habitual way of explaining bad events, your explanatory style, is more than just the words you mouth when you fail. It is a habit of thought, learned in childhood and adolescence. Your explanatory style stems directly from your view of your place in the world—whether you think you are valuable and deserving, or worthless and hopeless. It is the hallmark of whether you are an optimist or a pessimist.

There are three crucial dimensions to your explanatory style: permanence, pervasiveness, and personalization.

### Permanence

People who give up easily believe the causes of bad events that happen to them are permanent: the bad events will persist, will always be there to affect their lives. People who resist helplessness believe the causes of bad events are temporary.

#### PERMANENT (*Pessimistic*)

"I'm all washed up."  
"Diets never work."  
"You will always nag."

#### TEMPORARY (*Optimistic*)

"I'm exhausted."  
"Diets don't work when you eat out."  
"You nag when I don't clean my room."

. . . If you think about bad things in *always's* and *never's* and abiding traits, you have a permanent, pessimistic style. If you think in *sometimes's* and *lately's*, if you use qualifiers and blame bad events on transient conditions, you have an optimistic style. . . .

The *optimistic style of explaining good events is just the opposite of the optimistic style of explaining bad events*. People who believe good events have permanent causes are more optimistic than people who believe they have temporary causes.

#### TEMPORARY (*Pessimistic*)

"It's my lucky day."  
"I try hard."  
"My rival got tired."

#### PERMANENT (*Optimistic*)

"I'm always lucky."  
"I'm talented."  
"My rival is no good."

Optimistic people explain good events to themselves in terms of permanent causes: traits, abilities, *always's*. Pessimists name transient causes: moods, effort, *sometimes's*. . . .

People who believe good events have permanent causes try even harder after they succeed. People who see temporary reasons for good events may give up even when they succeed, believing success was a fluke.

**Pervasiveness: Specific vs. Universal**

Permanence is about time. Pervasiveness is about space. . . .

It comes down to this: people who make universal explanations for their failures give up on everything when a failure strikes in one area. People who make specific explanations may become hopeless in that one part of their lives yet march stalwartly on in the others.

Here are some universal and some specific explanations of bad events:

**UNIVERSAL (*Pessimistic*)**

"All teachers are unfair."

"I'm repulsive."

"Books are useless."

**SPECIFIC (*Optimistic*)**

"Professor Seligman is unfair."

"I'm repulsive to him."

"This book is useless."

. . . Now for the converse. The *optimistic explanatory style for good events is opposite that for bad events*. The optimist believes that events have specific causes, while good events will enhance everything he does; the pessimist believes that bad events have universal causes and that good events are caused by specific factors. . . .

**SPECIFIC (*Pessimistic*)**

"I'm smart at math."

"My broker knows oil stocks."

"I was charming to her."

**UNIVERSAL (*Optimistic*)**

"I'm smart."

"My broker knows Wall Street."

"I was charming."

**Personalization: Internal vs. External**

When bad things happen, we can blame ourselves (internalize) or we can blame other people or circumstances (externalize). People who blame themselves when they fail have no self-esteem as a consequence. They think they are worthless, talentless, and unlovable. People who blame external events do not lose self-esteem when bad events strike. On the whole, they like

themselves better than people who blame themselves do.

Low self-esteem usually comes from internal style for bad events.

**INTERNAL (*Low self-esteem*)**

"I'm stupid."

"I have no talent at poker."

"I'm insecure."

**EXTERNAL (*High self-esteem*)**

"You're stupid."

"I have no luck at poker."

"I grew up in poverty."

. . . Of the three dimensions of explanatory style, personalization is the easiest to understand. After all, one of the first things a child learns to say is "He did it, not me!" Personalization is also the easiest dimension to overrate. It controls only how you *feel* about yourself, but pervasiveness and permanence—the more important dimensions—control what you *do*: how long you are helpless and across how many situations.

Personalization is the only dimension simple to fake. If I tell you to talk about your troubles in an external way now, you will be able to do it—even if you are a chronic internalizer. You can chatter along, pretending to blame your troubles on others. However, if you are a pessimist and I tell you to talk about your troubles as having temporary and specific causes, you will not be able to do it. . . .

The *optimistic style of explaining good events is the opposite of that used for bad events. It's internal rather than external*. People who believe they cause good things tend to like themselves better than people who believe good things come from other people or circumstances.

**EXTERNAL (*Low self-esteem*)**

"A stroke of luck. . ."

"My teammates' skill. . ."

**INTERNAL (*High self-esteem*)**

"I can take advantage of luck."

"My skill. . ."

Source: **Seligman, M.E.P.** (1991). *Learned Optimism*. New York: Alfred A. Knopf, 15–16, 43–50.

 **Understanding the Reading**

**Directions:** Answer the following questions in the space provided.

1. What are the two explanatory styles?

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2. When do you develop your explanatory style?

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3. What are the three dimensions of the explanatory style?

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4. Which of the dimensions controls what you do?

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 **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

5. List three good events and three bad events that have occurred in your life in the past month. Describe your reactions to the events. Classify each description using the three dimensions listed in the reading. From these results, do you tend to be an optimist or a pessimist?

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6. Does being an optimist mean that you always blame others for your troubles? Explain your reasoning.

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**CASE STUDY**

9

**Conditioning  
Aggression**

**Directions:** Read the following case study, then answer the questions that follow.

Male blue gourami fish establish territories that contain good nesting sites. Once established, males defend their sites by biting and tail beating rivals who enter their territory. The loser of the fight displays recognizable submission. The submissive posture includes folded fins, faded color, and a more horizontal body angle.

Karen Hollis and a group of researchers set out to answer the question: Are conditioned fish more likely to continue winning even when the conditioned stimulus is not present?

Thirty-six adult male blue gouramis were used. The researchers divided the aquariums into three sections (left, right, and center) using two acrylic panels, one opaque and one transparent, that could be raised and lowered (see diagram below). Researchers placed 36 fish in the left and right compartments. Throughout the study, they remained either on the left or the right, even when moved to other aquariums.

The center compartments contained stimulus fish during the training phase. The stimulus

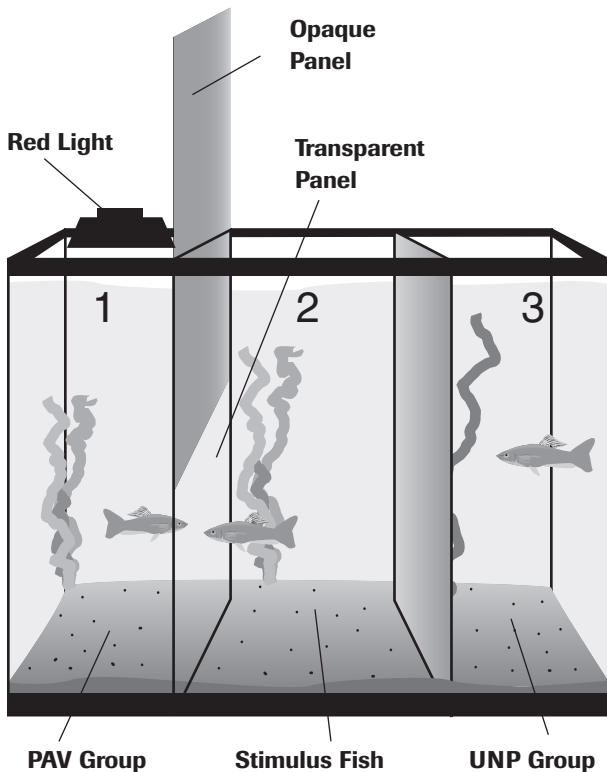
fish served as the unconditioned stimulus since the sight of another male fish causes the blue gourami to defend his territory. Training occurred over 24 days. The researchers divided the 36 fish into two groups. Each fish in the Pavlovian-conditioned group (PAV) was conditioned using a red light (conditioned stimulus) paired with the presentation of a stimulus fish (unconditioned stimulus).

Although the fish in the unconditioned group (UNP) saw both the red light and the stimulus fish during training, the light and stimulus fish were never presented together. Therefore, no conditioning occurred.

After training, researchers conducted a two-part contest. In the first part of the contest, researchers paired some of the PAV with UNP. The PAV were presented with the red light immediately before the contest. They won 80 percent of the contests against their UNP counterparts. In the second part of the contest, Pavlovian-conditioned fish encountered each other; however, researchers presented some with the red light (PAV-L) immediately before the contest and others with no light (PAV-NL). PAV-L won all of the contests against the PAV-NL.

After two days of rest, the winners and losers faced another contest, this time with a different male fish. All of the Pavlovian-conditioned fish that won their first encounter also won their second contest.

The findings indicate that conditioned males were better able to vigorously defend their territories. While the exact physiological mechanism is unknown, it appears that Pavlovian-conditioned males had a competitive advantage. The long-term consequences of conditioning seem also to be positive since it appears that winning previous contests sets the stage for winning future contests. The results seem to indicate that the winners continue to win.



Source: **Hollis, Karen, et al.** (1995). Pavlovian conditioning of aggressive behavior in blue gourami fish (*Trichogaster trichopterus*): Winners become winners and losers stay losers. *Journal of Comparative Psychology*, 109 (2), 123–33.



 **Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

1. For what purpose do male blue gourami fish establish territories?

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2. What was the unconditioned stimulus and conditioned stimulus in this study?

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3. In the first contest, how were the contest pairings set up?

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4. In the second contest, what percentage of losers from Contest 1 defeated a winner from Contest 1?

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 **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

5. Why do you think that Pavlovian-conditioned fish that were not shown the light (PAV-NL) performed more poorly than the unconditioned fish (UNP) when facing PAV-L fish?

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6. Would conditioning aggressiveness in other types of animals or humans show similar results? Explain your answer.

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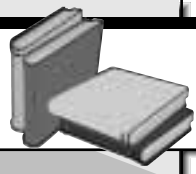
7. In addition to conditioning, what other explanations are possible for the finding that winners keep winning?

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## READING



## 10

## Remembering Details

**Directions:** Read the following selection, then answer the questions that follow.

Have you ever been surprised to find that you have completely forgotten an event that someone else remembers vividly? Some theories of memory assume that our brain keeps a record of everything that we have encountered. Other theories propose that the brain does not keep a permanent record of everything. Some things are completely erased, while others are stored in such a way that some effort is required to retrieve them.

“What do you mean, you don’t remember?  
That was the party where John made such a fool  
of himself; he actually tried to eat the artificial ivy.”

“Was that the same party where he tried to  
put the poodle in the punch bowl?”

“No, No. Not that one. That was years ago.  
You mean you really don’t remember?”

A fascinating article on remembering by a University of Utah psychologist, Marigold Litton, begins with these “memories.” Litton had always been interested in studying people’s ability to remember events that had occurred in their lives. When she began this work, her first question was “Where can I find some people who will be available for long periods of time, who are reliable, who won’t move away, who won’t get bored with the study, and whom I could conveniently follow on a regular basis?” The only person she could find who satisfied all of these criteria was herself. She would be the sole subject.

Every day for the six-year period from 1972 until 1977, she wrote down what happened to her. Each memory was recorded on a separate card in the form of a brief description, such as “I have dinner at the Canton Kitchen; delicious lobster dish,” or “I land at Orly Airport in Paris.” On the back of each card she wrote the date for each event, and then gave it a rating in terms of how important, emotional, or surprising the event was. By 1977 she had written down descriptions of more than five thousand items.

Every month she tested her memory. She picked about 15 cards at random from the file and read the descriptions. Each item could be anywhere from one day to six years old, and for each she tried to remember as quickly as possible when the event had occurred. Linton reasoned that the more information she had about an event and its context, the more accurately it could be dated. Each month she spent from eight to twelve hours testing her memory in this way.

Linton learned some interesting things about her own memory. After about six months of studying herself, she found she would typically be quite depressed after each test session. The reason was that her general procedure was to “warm up” before each test by simply thinking over the highlights of her life over the previous year. During these warm-up exercises, she usually thought of happy times—friends, successes, a good life. But when she started pulling the individual events from her file box, she discovered that the cards contained not only happy memories but also numerous irritations: Her car breaks down and she can’t find anyone to help; she fights with a lover; she gets a paper rejected by a scientific journal. Once she realized the source of stress, it seemed to help reduce it.

After six years of studying her memory, she transferred all the information to special computer cards and fed them to a computer. The computer analyses revealed that by the end of any one year, she had forgotten 1 percent of the items written during that year. By the time those items were about two years old, she had forgotten about 5 percent more. Forgetting continued so that by the time the study ended, she had forgotten over 400 items of the 1,350 she wrote down for 1972, or about 30 percent. In general she seemed to forget things at a low, fairly steady rate, with the numbers of forgotten items usually increasing slightly from year to year.

What kinds of things did she remember? Most of the memories were fairly unique, nonrepeated events, like a traffic accident, or surprising events, like a tennis game in which one of the players was injured. It was pretty easy to supply a date for “the tennis game in which Ed got hit in the eye.” However, she could not remember the names of the other players in the game. Assuming that Linton’s memory processes are like most of ours, this suggests that people remember general information for some time, but that many details drop out.

(continued)

Overall, Linton’s results suggest that specific memories are regularly dropping out. They are not locked in memory for all time, unless they are repeated or relived or unless they are unusually significant. Despite these apparent losses, all is not gloomy. After several phone calls from the same person, it may not be possible to remember any one conversation or even when it took place. But it becomes easier and easier to

identify and remember the person’s voice. This means that even though specific events are forgotten, considerable knowledge is retained. The mind, Linton thought, undergoes a spring cleaning.

Source: **Loftus, E.** (1980). *Memory*. Reading, MA: Addison-Wesley, 121–123.

### **Understanding the Reading**

**Directions:** Answer the following questions in the space provided.

1. Initially what happened to Marigold Litton after each test session?

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2. Why did the memory tests have this effect?

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3. At the end of the test in 1977, how much of 1972’s memories had she forgotten?

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4. What types of memories tended to be long-lasting?

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5. Why do routine events tend to fade from memory over time?

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### **Thinking Critically**

**Directions:** Answer the following questions on a separate sheet of paper.

6. Complete the sentence below with a routine response and with a surprising response. If each event occurred, which would you be more likely to remember two years from now?

“I was riding the bus with a friend who suddenly...”

7. If you were to conduct a study of your own memory, would you use Litton’s method? Why or why not?
8. What potential problem could mar the accuracy of Litton’s study?

## CASE STUDY

## 10

Eyewitness  
Testimony

**Directions:** Read the following case study, then answer the questions that follow.



### Background

Hypnosis has been used with traumatized crime victims to help them reconstruct crime scenes. Defense attorneys, however, have questioned both the techniques used and the results of the hypnosis. Some studies suggest that hypnosis can be used, either inadvertently or deliberately, to alter memory. Other studies have concluded that little memory enhancement occurs through hypnosis. As a result of these studies and defense attorney objections, some states limit the admissibility of evidence discovered through hypnosis. Psychologists, therefore, have researched other ways to enhance the memory of eyewitnesses without using hypnosis. Funded by a grant from the National Institute of Justice, two researchers, Ronald Fisher and R. Edward Geiselman, developed a nonhypnotic interview process that helps the eyewitnesses reconstruct the events.

Using crime scene training tapes designed to train police officers, the researchers developed the Cognitive Interview. The interview is based on four principles:

1. **Event-Interview Similarity** Based on the theory that we remember things better when placed in a similar situation, the Cognitive Interview seeks to reconstruct as accurately

as possible the external, emotional, and cognitive conditions that existed at the time of the event. Even small details, such as weather, are not ignored.

2. **Focused Retrieval** Every effort is made during the interview process to keep the witness focused on the events. The interviewer prevents outside distractions and interruptions.
3. **Extensive Retrieval** Although the process seems tedious to many eyewitnesses, the Cognitive Interview encourages the witness to repeatedly attempt to retrieve the event's details. Research has shown that the more attempts someone makes to remember particular details, the more likely he or she is to successfully retrieve the details from memory.
4. **Witness-Compatible Questioning** Individuals organize and store memories differently. The Cognitive Interview, therefore, is not a set series of questions. The interviewer must determine the general way in which an individual witness stores memories and tailor the questions to help the witness reconstruct the event in as much detail as possible.

The interview itself is divided into several phases. At first the interviewer asks the witness to recount the event in as much detail as possible. Although a record is made of the account, the interviewer uses this phase to plan for the more detailed interview to follow. The interviewer seeks to understand the way in which the witness stores and processes memories. In the second phase, the interviewer guides the witness through a detailed reconstruction of the events using the information learned during the first phase. Finally, the interviewer uses various mental representations to learn more details about the events. For example, if a witness cannot remember a name, he or she will be asked to recall any information about the name, such as number of syllables, first letter, or ethnicity.

*(continued)*

Often these bits of information will help the witness remember additional details.

**Hypothesis**

The Cognitive Interview yields more information from eyewitnesses of real-life crimes than the standard police interview.

**Method**

Sixteen robbery detectives from the Metro-Dade Police Department were included in the study. Initially, the police officers were asked to tape-record selected interviews with eyewitnesses to robberies. The criteria for recording the interviews was as follows:

“(a) Each case was to be serious enough so that ample time and resources were available, if necessary, to conduct a thorough interview; (b) at least one victim or witness had a decent chance to observe the suspect or suspects and the event; and (c) each interviewed victim or witness had to be reasonably fluent in English and cooperative.”

During the initial phase, the 16 detectives conducted 88 interviews. These were used as the pretraining interviews.

Next, the detectives were divided into two groups. One group was trained in the Cognitive Interview technique. The other group was not trained and became the control group. After training, the Cognitive Interview group practiced the technique and received feedback from the trainers.

The post-training phase consisted of 24 interviews using the Cognitive Interview tech-

nique and 23 interviews from the untrained group. These interviews were analyzed for the number of relevant facts discovered. Statements of opinion or unrelated facts were ignored.

**Results**

Two types of results were analyzed:

1. Interviews before and after training from the same detective were assessed.
2. Interviews from the trained group were compared to interviews from the untrained group.

Detectives who were trained in the Cognitive Interview process obtained on average 47 percent more useful information after training compared to their pretraining interviews. In fact, for one detective the amount of useful information obtained increased 115 percent.

When comparison was made between the trained and untrained group, the trained group obtained 63 percent more information than the untrained group.

**Conclusions**

Training in the Cognitive Interview process, which uses psychologists’ knowledge of how memories are stored, can significantly increase the amount of information obtained from eyewitnesses. The Cognitive Interview process can replace hypnosis and other speculative forms of memory enhancement as a means of obtaining accurate, detailed eyewitness accounts.

Source: Fisher, R., Geiselman, R., & Amador, M. (1989). Field test of the cognitive interview: Enhancing the recollection of actual victims and witnesses of crime. *Journal of Applied Psychology, 74* (5), 722–27.

 **Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

1. Why has hypnosis been questioned as a means of helping eyewitnesses remember crime scene events?

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2. What are the four principles of the Cognitive Interview?

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3. What people made up the control group in this study?

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4. Describe the two ways in which the data from the study were analyzed.

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 **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

5. In the Cognitive Interview, the interviewer seeks to reconstruct the external, emotional, and cognitive conditions surrounding the event. Why are each of these important in remembering events?

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6. The Cognitive Interview process yields more facts about events than standard police interview techniques. Further research has examined whether recall using the Cognitive Interview technique results in more incorrect facts. What would you expect the findings to be?

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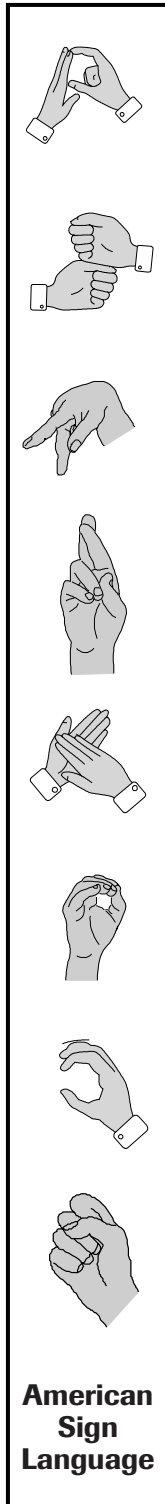
READING



# 11

## Sound Patterns

**Directions:** Read the following selection, then answer the questions that follow.



Why are children able to learn a second language more readily than adults? Recent research suggests that infants first learn sound patterns and then attach meanings to the sound patterns. Researchers theorize that learning a second language incrementally in small pieces is easier. As the brain matures, it loses its ability to process information in these small bits. Instead it responds to whole thoughts, sentences, and ideas. This makes learning a second language more difficult.

At age 15, Alex learned one of the embarrassments of adult life: After a month in the Middle East, his 7-year-old sister was translating for him while he struggled to understand, let alone speak, Arabic. Why did she learn the language so easily while Alex grappled with it?

Psychologists studying language acquisition are beginning to understand Alex's dilemma. They're finding that language learning is incremental, with the first step simply recognizing sound patterns. According to one hypothesis, it's the incremental nature of children's language learning that makes it easy. But by puberty, the brain's maturity makes it harder to learn in such small increments and languages become more difficult.

### Sounding it Out

As evidence of how children learn language incrementally, researchers find that infants first learn to distinguish sound patterns of their native languages. This ability develops faster than any other aspect of language. It's not surprising that sound perception develops first and fastest, says psychologist Peter Jusczyk, PhD, of the State University of New York-Buffalo. When they aren't sleeping, infants spend most of their first year listening to speech sounds detached from meanings. Even when parents try to teach their children a particular word, more times than not, they imbed it in a sentence. 'Babies need to break that sentence down into sound patterns and pick out individual words,' explained Jusczyk.

Once that happens, they can relate individual sound patterns to particular meanings. This idea of putting an unknown object to a

known sound pattern is contrary to the traditional view that babies learn sound patterns, such as words, to name objects they're interested in.

Jusczyk doesn't deny that object-naming occurs, but he contends that babies also store word patterns in memory and eventually attach them to objects in the environment.

To study how babies learn to go from sound patterns to meaning, Jusczyk, graduate student Denise Mandel and David Pisoni, PhD, of Indiana University recently studied 4-and-a-half-month-old infants' responses to their names. Babies hear their own names more than most other words, so it will probably be one of the first recognized. Deciphering the age at which infants recognize their names might provide a first clue to the antecedents of relating sound to meaning, the researchers reasoned.

They based their study on past research, which finds that when babies recognize sounds, they listen to them longer than less recognizable sounds. For example, 6-month-old infants listen longer to someone speaking their native language than to someone speaking a foreign language.

To measure how long babies listened to their names, the researchers played each infant's name through a loud speaker and timed whether and for how long the baby turned its head toward the speaker. The infants also heard recordings of three other names—one with a similar sound pattern to their name and the other two with different sound patterns. For example, Joshua would hear his name, then 'Agatha,' which has the same sound pattern as 'Joshua,' then 'Maria' and 'Eliza.'

The infants listened longer to their own names than to any other name, even the ones with similar sound patterns. 'This finding suggests that 4-and-a-half-month-olds have a rather detailed representation of the sound patterns of their names,' the researchers concluded.

This doesn't mean they understand what their names mean, but it's the first step, said Jusczyk. 'Infants as young as 4-and-a-half months of age are learning to recognize sound patterns that will have a special personal significance for them,' he concluded.

### Younger is Better

These incremental steps to learning language may make children better learners than adults, according to a theory developed by psychologist Elissa Newport, PhD, of the University of Rochester. Because language has many components, learning it in small pieces makes things easier, she reasons.

Her theory issued from work on the 'critical period' theory of language learning: The idea that there's a finite period when children can easily learn language, an idea based on anecdotal evidence that children learn foreign languages faster than adults.

To test the theory, Newport and colleague Jacqueline Johnson, PhD, of the University of Virginia studied Chinese subjects who had learned English as a second language. The 44 subjects in the study differed by the age they arrived in the United States (from 3 years old to 39 years old). None knew English before arriving, all had been living in the United States for no less than five years and an average of 10 years, all had learned English by immersion in the culture and all had attended American schools since their arrival.

The researchers found that the younger people were when they arrived in the United States, the better they scored on a language test designed by the researchers. The correlation between language ability and age of arrival was as strong as that between height and weight—one of the strongest correlations around, said Newport. 'It's clear that there is a superiority of children over adults in language learning,' said Newport.

### Less is More

The critical learning period doesn't end abruptly, Newport said. Instead the ability to learn language gradually declines as the brain matures. By late puberty, everyone learns at about the same rate.

Traditional neurobehavioral theory likens the decline in learning to the winding down of a biological clock: The mechanism for language learning is at its prime in young children and declines as they mature.

Newport's theory examines the decline in learning ability more as a difference in how children and adults approach learning. Research shows that children can only handle small bits of information at a time because they have a more limited perspective than adults.

For example, when given novel information, such as signs from American Sign Language, children do poorly, often remembering only a piece of the sign—the hand shape, but not the hand movement or vice versa. Adults, on the other hand, have a wide perspective; they're quite good at remembering whole signs, for example.

In the case of language learning, Newport believes that 'less is more.' Children's limited perspective forces them to learn language in stages.

They acquire a few pieces at a time and learn slowly how to put them together. This system works for learning language because language is composed of many little parts.

Adults, on the other hand, perceive all the pieces at once and have to find the organization within the big picture. Indeed, adults learn languages fast at first, picking up lots of vocabulary and entire sentences at one time.

But they soon fizzle out, taking a long time to truly understand the organization of a foreign language. Newport likens it to the tortoise and the hare: Children start out slowly, but far surpass adults over time.

Source: Azar, B. (1996). Sound patterns: Learning language keys. *The APA Monitor*, 27 (1), p. 20.

## Understanding the Reading

**Directions:** Answer the following questions in the space provided.

1. What is the first task an infant faces in learning his or her native language?

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(continued)



2. How did Peter Jusczyk test infants' abilities to recognize their own names?

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3. What did Jusczyk find about an infant's attention to his or her own name compared to other sound patterns?

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4. What is the critical period theory of language learning?

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5. What did Elissa Newport and Jacqueline Johnson conclude from their study of Chinese participants in a language study?

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 **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

6. Your school district is considering introducing children to a second language beginning in the first grade. Some people argue that young children have enough to learn already and second language instruction should begin in high school. Which view do you support? Why?

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7. Although children may have a superior ability to learn language, at what types of learning do teens and adults excel?

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## CASE STUDY

## 11

Peacekeeping  
with Words

**Directions:** Read the following case study, then answer the questions that follow.



**The United Nations Flag**

Increasingly, the United States, in conjunction with the United Nations, sends peacekeeping troops around the globe. U.S. troops serve alongside troops from other United Nations countries. Barriers to communication and understanding are great. As a result, the U.S. Army has become keenly interested in foreign language training.

### Hypothesis

Psychologist Alice Healy, Ph.D., along with colleagues at the University of Colorado, is working with the army using psycholinguistics to analyze how people learn a second language. Their hypothesis is that: "People use strategies from their native language to process and understand foreign language...."

### Method for Testing Native Language Strategies

Healy and postgraduate assistant Liang Tao, Ph.D., examined the use of pronouns and noun phrases to identify subjects in sentences. Examples of common English phrasing include:

Noun/noun phrase sequence:

*Bill Clinton* addressed the media. *The*

*president* spoke forcefully for the need for improved educational opportunities.

Noun/pronoun sequence:

*Bill Clinton* addressed the media. *He* spoke forcefully for the need for improved educational opportunities.

Noun/zero anaphora (no noun or pronoun):

*Bill Clinton* addressed the media and spoke forcefully for the need for improved educational opportunities.

Chinese uses the same strategies; however, zero anaphora is much more common in Chinese than in English.

To see how Chinese speakers whose second language was English used their native language in understanding English, Healy and Tao developed a study using standard reading comprehension tests. Some tests were given intact; that is, no modifications were made. Some tests were altered using the zero anaphora strategy. Finally some had changes to noun phrases and pronouns that would be considered inappropriate in both English and Chinese.

The three versions of the tests were administered to both native English and native Chinese speakers.

### Results

Native Chinese speakers scored consistently lower on the intact and inappropriate versions. However, they did significantly better on tests using the zero anaphora strategy. The findings seem to indicate that the Chinese speakers did transfer their native language skills to understanding English.

The army can use these findings as they design foreign language training programs for troops who may be assigned for overseas postings.

Source: Azar, B. (1995). Psycholinguistics helps keep the peace. *The APA Monitor*, 26 (5), p. 36.

 **Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

1. Why is the United States Army interested in foreign language training?

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2. What is Alice Healy's hypothesis about the way people learn a second language?

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3. What three common subject identifier strategies are used in both English and Chinese?

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4. What were the results of the Healy/Tao study?

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 **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

5. Why is it important for peacekeeping troops to be able to communicate clearly with other peace-keeping troops?

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6. What recommendations would you make to the Army as it seeks to address its needs for language skills among its troops?

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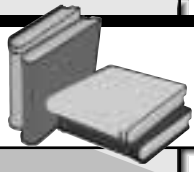
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## READING



## 12

## The Excited Brain

**Directions:** Read the following selection, then answer the questions that follow.

When you do not get enough sleep, what happens to your motivation? Do you lack the energy and drive to care about what is happening around you? Psychologists and other scientists are discovering that our moods are largely regulated by chemical activity in the brain. Sleep deprivation affects the levels of these chemicals and reduces our motivation.

The neuroscience of emotion is still in a fairly early stage of development. For thousands of years, people have been thinking about what sorts of things make us feel happy or unhappy, elated or depressed. While it is not known exactly how sleep and sleep debt help the brain create good feelings and bad, we are learning how the brain puts itself in an “up” mood and how addictive drugs create a “high” by stimulating the brain’s pleasure centers. We also have a simple model of how the brain becomes activated and fully conscious during waking and dreaming activity. What we have found is that the biochemistry of wakefulness and sleep is intimately tied in with the state of the emotional part of the brain. The waking brain naturally excites and primes itself for vital interaction with the external world, while the sleep-deprived brain suppresses that natural buoyancy by damping the brain’s neurochemical activity.

A brain circuit called the reticular activating system plays a major role in arousal. It is highly likely that the biological clock operates on this system to wake up the brain and keep it awake. The reticular activating system is a small collection of nerves that originates deep in the brain stem, the most ancient and primitive part of the brain. A relatively few cells in the brain stem reach out and touch nearly every cell in the brain. These cells carry neurotransmitters, that relay activating signals from the reticular activating system. These neurotransmitters are norepinephrine, dopamine, and acetylcholine. Norepinephrine is one of the key neurotransmitters for arousal, acting as the brain’s form of adrenaline. Dopamine is known to be involved in body movement and pleasure. Acetylcholine also acts as a prime arousal chemical and is known to be important in carrying signals concerning muscle movements. Another neurotransmitter, serotonin, also has a strong effect on mood.

These excitatory neurochemicals prepare the brain’s 100 billion nerve cells to react more quickly. It is also no surprise that they interface closely with

the limbic system, which is sometimes called the emotional brain. This is because we must be wired not only to react quickly to challenge in a purely mechanical way but also to be motivated emotionally to face challenges. The reticular activating system sets the emotional brain on edge, as when runners ready to start a race get down on their hands and the balls of their feet. The activating system doesn’t so much create feelings as set an emotional tone for any stimulus that filters into our brain.

The activity of the limbic system is like the background music in a movie. The screen shows someone creeping down a hallway at night toward a closed door. If the background music is tense, perhaps in a minor key, with a few discordant notes thrown in, we interpret the scene as suspenseful and feel anxious about what might lie behind the door. If the music is bouncy and jovial, like something out of an old Charlie Chaplin movie, we interpret the same scene quite differently. We are prepared for humor and might imagine the doorknob coming off when the person tries to open the door. If a monster does pop from behind the door, we might think “What a silly monster suit.”

Now consider the movie that constantly plays in your head—the images of the world around you that sensory stimulation tells you is “reality.” The nerve cells sprouting out of the base of the brain are creating the mood music inside you by acting directly on all the other brain cells, making them more or less reactive to the scenes that are coming in from the outside world. When we get a good night of sleep, and the reticular activating system is priming the emotional brain properly, our norepinephrine and dopamine infusions create a positive, energetic “background music.” The result is a feeling of mental and physical energy we call vitality and an internal psychological push called motivation. Without them we get depressed. (I should note that clinical depression is very different from feeling low or down. In clinical depression, the brain’s natural biochemistry is seriously altered.)

*(continued)*

One major hypothesis about how sleep affects mood is that sleep somehow replenishes these excitatory neurotransmitters in the brain. Over the course of the day, neurotransmitters are released from nerve cells. Some are recycled back into the cell and others are lost. By keeping brain activity high, sleep deprivation may prevent the brain from replacing lost neurotransmitters. When nerve activity is decreased, alerting is impaired. Your thoughts don't flow as smoothly as they should. You feel down.

To counterbalance the brain's accelerators, other nerve cells and neurotransmitters act as the brain's brakes. The most widely distributed nerve cell receptor in the brain is GABA, the receptor that alcohol and benzodiazepine sleeping pills act on. An activated GABA receptor makes a nerve cell much less reactive to stimuli, slowing the rate of information processing, and uncocking the hammer in the emotional brain.

Another of the brain's primary braking mechanisms is adenosine. Adenosine is one of the molecules that results when the brain breaks down its primary energy source, adenosine triphosphate, or ATP. When the brain is very active and using a lot of energy, more adenosine is present in the brain. This surplus of adenosine acts as a natural governor, reining in brain activity so that it doesn't run too fast. Increasing adenosine concentration in the brain may be part of the reason we feel mental fatigue when we face emotional or mentally challenging situations. The increased

brain activity may create a lot of free adenosine, which then depresses brain activity.

One school of thought holds that the sleep drive actively suppresses brain activity through this braking mechanism, thereby linking sleepiness and mood. The more time we are awake, the more the inhibitory circuits of the brain damp down the stimulation of the reticular activating system, as if the nerve excitatory and dampening systems are fighting for control of the brain. As various areas of the brain are slowed down by this braking action, the effects show up in how we act, think, and feel. The dampening of nerve activity of motor areas makes us less coordinated; the dampening of nerve activity in the cerebral cortex makes us slow in thought; and quenching nerve activity in the emotional brain makes us feel less vital, less motivated. To counteract this we can walk around, concentrate harder, and give ourselves a pep talk, but eventually the brain's sleep drive triumphs. At some point no mental trick will stimulate brain activity in the areas we need to stay awake—it's like trying to light wet sawdust with a match. We have to fall asleep.

After we sleep, the brakes are off again. Dopamine and norepinephrine release in the brain increases. We feel alive again.

Source: **Dement, W.C., & Vaughan, C.** (1999). *The Promise of Sleep*. New York: Delacorte Press, pp. 278–281.

### Understanding the Reading

**Directions:** Answer the following questions in the space provided.

1. What part of the brain plays a major role in motivation?

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2. Which neurotransmitters control motivation?

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3. How do the excitatory neurochemicals affect motivation?

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4. What is the “emotional brain” and what does it do?

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5. What is one hypothesis of how sleep affects our moods?

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6. What are the two primary receptors that slow activity in the brain?

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7. As nerve activity slows in the limbic system, how do we feel?

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 **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

8. You are on the track team at your school. The state championships are being held on Saturday. Your coach insists that the entire team get a good night's sleep on Friday. The coach has even asked the team members' parents to set a 10 P.M. curfew for this Friday night. You and your date had planned to go to the late movie on Friday, but you know that if you are caught breaking curfew, you will not be allowed to compete. Why do you think your coach is insisting on the curfew? What should you do?

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9. Does this biological explanation of motivation contradict the other theories of motivation discussed in your textbook? Why or why not?

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10. Recall the last time you were in a bad mood. How much sleep did you get the night before? Did your mood become worse as you became more tired? Do you think there was a correlation between sleep and your mood in that instance? Explain.

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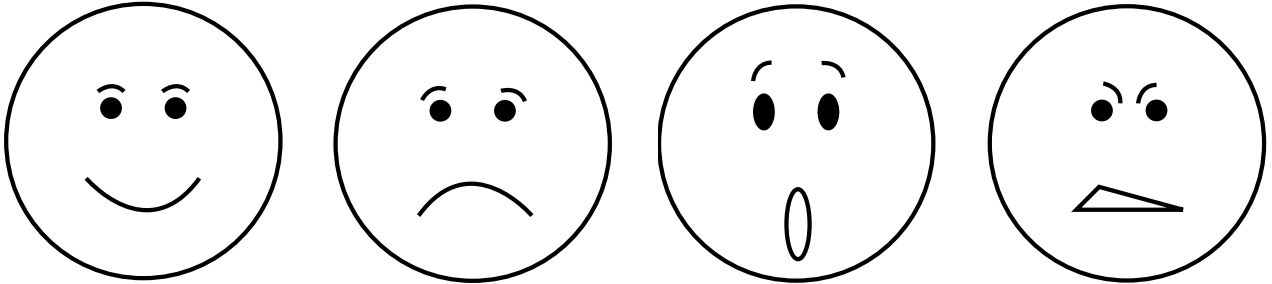
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## CASE STUDY

## 12

**Facial Expressions**

**Directions:** Read the following case study, then answer the questions that follow.



Emotions are expressed in a variety of ways. People from one culture may misunderstand the emotional expressions of people from other cultures. Studies of facial expressions have noted similarities and differences among cultures. For example, many similarities exist between the facial expressions of Americans and Japanese. Along with those similarities, researchers have noted some striking differences.

Research has identified seven universal facial expressions of emotion. People across cultures make the same basic facial expressions in reaction to anger, contempt, disgust, fear, happiness, sadness, and surprise. These facial expressions are theorized to be biologically innate in all people regardless of race, culture, or gender.

**Hypothesis**

Although the same basic facial expressions are used for the seven emotions, display rules within the culture affect how and when these expressions are made. These display rules vary widely among cultures. Specifically, there are marked differences between Japanese and American display rules.

**Differences Between Cultures**

When an emotion is sent to the brain to be processed, the signal is filtered through both the innate signal for the facial expression and the culturally accepted display rules learned during early childhood. The actual expression is a result of the innate signal and the learned display

rules. Cultures may affect the innate signal in five ways:

1. Deamplify the expression, which results in showing less emotion than is felt.
2. Neutralize the expression, which results in no facial expression even when one is felt.
3. Amplify the expression, which results in showing more emotion than what is felt.
4. Mask the expression, which results in showing something different than what you feel.
5. Blend expressions, which mixes two or more of the expressions at the same time.

**Method**

A study conducted by Paul Ekman and Wallace Friesen used American and Japanese participants. In the study, the participants were asked to view extreme stress-inducing films including an amputation and a childbirth with forceps. The participants' facial expressions were videotaped without their knowledge. In the first series, participants viewed the videotapes alone. In the second series, participants viewed the stressful films again, but this time a higher-status experimenter was in the room with each participant.

**Results**

During the first series, both American and Japanese participants exhibited the same facial expressions, which included fear, disgust, sadness, and anger. This finding continues to

*(continued)*

support the findings that there are universal expressions.

During the second series, the presence of the experimenter had no effect on the facial expressions of the American participants. The Japanese participants, however, either displayed no emotion or smiled. These responses not only differed from their American counterparts, they were totally different from their initial responses to the same films.

### Conclusions

The Americans had no culturally based display rule that was affected by the presence of the experimenter. The Japanese participants were reacting to the culturally based display rule that negative emotions are not shown in the presence of someone of higher status. This display rule caused them to mask their facial expressions.

Source: **Matsumoto, D.** (1996). *Unmasking Japan: Myths and Realities About the Emotions of the Japanese*. Stanford, CA: Stanford University Press.

### Understanding the Case Study

**Directions:** Answer the following questions in the space provided.

1. What has research indicated are the seven universal facial expressions of emotion?  
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2. How do researchers believe we acquire these seven universal facial expressions?  
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3. If there are universal facial expressions, what causes differences in the way emotions are expressed?  
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4. Identify two of the five display rules.  
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5. According to this experiment, what difference exists between the way in which Americans and Japanese express emotions?  
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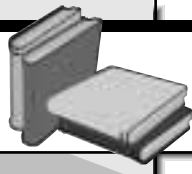
### Thinking Critically

**Directions:** Answer the following questions on a separate sheet of paper.

6. What display rules do Americans have?
7. How are display rules, like the Japanese rule in the study, formed?



## READING



## 13

## Change in Japanese College Admissions Policies

**Directions:** Read the following selection, then answer the questions that follow.

In Japan students have traditionally earned the right to attend specific colleges and universities by their score on rigorous college entrance exams. High schools prepare students for these exams, and many parents send their children to special *juku*, which are after-school programs designed to provide additional preparation for the exams. These *juku* sessions can last up to four hours after the regular school day has ended. The pressure to do well on the entrance exams is immense. A new policy among Japanese colleges and universities, however, may change the way students are admitted to colleges and universities.

Japan's "exam hell" might just be cooling down.

This studying marathon is what high school students nationwide must do to pass the university entrance exams that are a focal point of K-12 education here. Grades from those tests—calculated down to the decimal point—determine what college a student can attend. That, in turn, often shapes job opportunities down the road.

But recently, some Japanese colleges have been reconsidering their practice of measuring a student's worth in terms of exam grades alone. With the Ministry of Education's backing, they are introducing an "office admissions" (OA) system that evaluates students based on extracurricular activities and recommendations, as well as their exam grades, much the way American schools do.

The shift away from entrance exams represents a sea change for the education system and, observers say, for the country. Advocates say diminished emphasis on college-entrance exams will change K-12 education, ending the focus on rote learning. This, they argue, would be a crucial step toward reinvigorating Japan, now burdened by recession and troubled by increasing numbers of reluctant, rebellious students.

Critics charge that the end of entrance exams could threaten Japan's highly valued egalitarianism. But in a sign of the depth of the changes ahead, educators say that the answer to Japan's problems may just be a new emphasis on quality over equality.

"Until now, Japanese education has always been knowledge-oriented," says Hikota Koguchi, dean of academic affairs at Tokyo's prestigious Waseda University, which now admits 10 percent of its students on the OA system.

"You can see it in the bureaucratic quality of Japan today. Society has lost its vitality, we don't have enough creative, original minds," he says. "Having a university full of people who can only study isn't all

that good anymore. Unless we correct the overemphasis on egalitarianism, there's no future for Japan."

Colleges aren't legally required to hold entrance exams. Indeed, since 1967 the Ministry of Education has been sending guidelines to the country's colleges, urging them to use various measures to evaluate potential students, from recommendations to exams.

The schools have always insisted that exams are the only objective way to judge candidates. But Japan's declining birth rate is making education a more competitive industry these days. Fewer consumers mean schools have to make changes to attract business.

In 1990, Tokyo's blue-chip Keio University began admitting some students on the OA system. Seven other private universities have partially adopted the OA system since then. Next year, three well-regarded public universities will follow suit.

While these schools are only using the OA system selectively—in a few faculties or only for a certain percentage of admissions—education ministry officials say the shift will yield benefits.

"A written exam doesn't tell a school what potential students have after they enter," says Akira Noie, head of the ministry's entrance exam department. "[The OA system] is a way to find more motivated, creative students. We're not saying the entrance exam is an evil, we're just saying it's not everything."

The ministry expects the college-level changes to create a domino effect in K-12 education, where rote learning is largely the rule. "This is a way for high schools to change too," says Mr. Noie. "We often hear complaints from high schools that because the universities are focused on exams, they can't adopt a more creative approach to education."

But straying from the tried and true makes some people nervous. Critics argue that the OA system will dumb down education, that the rigorous standards of

Japanese schools will slide if more “creative” teaching is introduced.

“There are many cases where not-very-smart students are being accepted at top-ranking universities these days,” wrote prep school teacher Hiroshi Yamada in an opinion piece in last month’s *Sapio* magazine. “This recommendation system will make things worse.”

An employee at one of Japan’s ubiquitous prep schools, or *juku*, Mr. Yamada teaches kids whose parents send them to prep school after their normal school day is done.

The added hours of nighttime and weekend study are supposed to give them an edge—although *juku* vary widely in quality and wealthier parents can afford better schools. Fewer entrance exams mean fewer *juku*.

Others argue the end of entrance exams will create rents in Japan’s social fabric. “We have to remember that there are some areas that were meant to be equal, and the exam system is one of them,” social critic Tetsuya Miyazaki writes in the February issue of *Shukan Bunshun* magazine.

Mr. Miyazaki argues that some students will suffer if schools start to look for extracurricular activities in

addition to good grades. Students who have to work part time for financial reasons will suffer from “opportunity discrimination,” he says, as they won’t be able to volunteer the way other students will.

Students themselves have none of these misgivings. “Universities should definitely look at students’ abilities, not just their marks,” says Maiko Kitagawa, a high school junior in Tokyo. “I just hate it when I see older friends endlessly cramming for the entrance exams.”

At Tsukuba University, one of the national universities that will begin using the OA system next year, the mood is upbeat. “People are all different,” says Makoto Natori, vice president of academic affairs.

“We can’t apply one fixed measurement to everybody.”

He argues that the OA system will allow students to rediscover the love of learning after years of studying simply to make the grade. “We want students with enthusiasm, students who can think on their own,” he says. “That’s what Japan needs right now.”

Source: **Gaouette, N.** (1999, March 2). Judging kids on more than exams. *Christian Science Monitor*, 91 (65), 16.

## Understanding the Reading

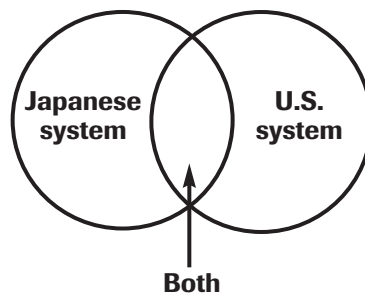
**Directions:** Answer the following questions on a separate sheet of paper.

1. Why is a good score on the college entrance exams so important to Japanese students?
2. What does Hikota Koguchi, dean of academic affairs at Waseda University, claim is the problem with the current entrance exam system?
3. What new system is being used by some colleges and universities?
4. Why are critics nervous about changing the system?
5. How does Tetsuya Miyazaki think the new system will create “opportunity discrimination”?

## Thinking Critically

**Directions:** Answer the following questions on a separate sheet of paper.

6. Why are the Japanese college entrance exams a form of egalitarianism?
7. Compare and contrast the Japanese college entrance exam system and the United States system for college admissions. Use a graphic organizer similar to the one below to organize your information.



## CASE STUDY

## 13

**Who Is Intelligent?**

**Directions:** Read the following case study, then answer the questions that follow.

Most people think they know what intelligence is. Experts use long, expansive definitions to explain the nature of intelligence. Without input from the experts, most people also have a good idea of what intelligence is. Robert Sternberg, who developed the triarchic model of human intelligence, has conducted extensive research into how everyday people recognize and explain intelligence.

**Hypothesis**

Everyday people know what intelligence is. And although they may not express it in the same terms, everyday people recognize and understand intelligence in much the same way as researchers and psychologists.

**Method**

Personal interviews were conducted with 476 men and women. The study included students studying at a library, commuters on their way to work, and homemakers entering supermarkets. One experiment involved giving the participants a blank sheet of paper and asking them to list behaviors that characterized intelligence, academic intelligence, everyday intelligence, or unintelligence.

A list of 250 distinct behaviors was compiled; 170 described intelligence and 80 described unintelligence. To further refine the list, 28 people responding to a newspaper advertisement were selected to rate on a 10-point scale each of the 250 behaviors. Ratings were based on how ideally the behavior described an intelligent or unintelligent person. A statistical technique

known as factor analysis was used to refine the final list into a few primary characteristics.

**Results**

“It turned out that people conceived of intelligence as having three facets, which we labeled (in descending order of perceived importance) practical problem-solving ability, verbal ability, and social competence. Comparable facets for academic intelligence were verbal ability, problem-solving ability, and social competence, and for everyday intelligence were practical problem-solving ability, social competence, character, and interest in learning and culture—again in order of perceived importance. The facets for academic intelligence were almost the same as for intelligence, except that their ordering of importance changed. The facets for everyday intelligence were somewhat less similar to those for intelligence in general but had more of an everyday slant.”

**Conclusions**

“Our study showed that the resemblance between the views of scientists and nonscientists is surprisingly clear. On the whole, what psychologists mean by intelligence seems to correspond generally to what people untrained in psychology mean by intelligence. On the other hand, what psychologists study corresponds to only part of what people mean by intelligence in our society, which includes a lot more than IQ tests measure, such as everyday competence and common sense in the conduct of our lives.”

Source: **Sternberg, Robert J.** (1988). *The triarchic mind: A new theory of human intelligence*. New York: Viking.

**Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

1. Does the author believe that only experts can recognize intelligence? Explain.

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2. How did the author test his hypothesis?

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3. What three facets did the participants attribute to intelligence?

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4. What facets of everyday intelligence were identified?

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5. Did the author find that researchers or everyday people had the broader view of what constitutes intelligence? What is the broader view?

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**Thinking Critically**

**Directions:** Answer the following questions in the space provided.

6. What kind of test could you design to evaluate a person's everyday intelligence?

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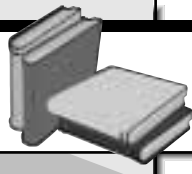
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7. Further studies indicated that students placed more value on academic intelligence as a part of general intelligence than working people did. Why do you think this happened?

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## READING



## 14

## Type T Personalities

**Directions:** Read the following selection, then answer the questions that follow.

Personality theorists explore how people conduct their lives. What makes one person willing to risk his or her life and another person unwilling to leave home? Researchers try to explain such differences between people. Some psychologists also explore whether groups of people share common personality characteristics. Psychologist Frank Farley, for example, has proposed that Americans tend to be risk takers, while the Japanese tend to be risk averse. Do environmental differences or innate personality traits create such differences?

FIVE . . .FOUR . . .THREE . . .TWO . . .ONE . . .SEE YA!" And Chance McGuire, 25, is airborne off a 650-ft. concrete dam in Northern California. In one second he falls 16 ft., in two seconds 63 ft., and after three seconds and 137 ft. he is flying at 65 m.p.h. He prays that his parachute will open facing away from the dam, that his canopy won't collapse, that his toggles will be handy and that no ill wind will slam him back into the cold concrete. The chute snaps open, the sound ricocheting through the gorge like a gunshot, and McGuire is soaring, carving S turns into the air, swooping over a winding creek. When he lands, he is a speck on a path along the creek. He hurriedly packs his chute and then, clearly audible above the rushing water, lets out a war whoop that rises past those mortals still perched on the dam, past the commuters pattering by on the roadway, past even the hawks who circle the ravine. It is a cry of defiance, thanks and victory; he has survived another BASE jump.

McGuire is a practitioner of what he calls the king of all extreme sports. BASE—an acronym for building, antenna, span (bridge) and earth (cliffs)—jumping has one of the sporting world's highest fatality rates: in its 18-year history, 46 participants have been killed. Yet the sport has never been more popular, with more than a thousand jumpers in the U.S. and more seeking to get into it every day.

It is an activity without margin for error. If your chute malfunctions, don't bother reaching for a reserve—there isn't time. There are no second chances.

Still, the sport's stark metaphor—a human leaving safety behind to leap into the void—may be a perfect fit with our times. As extreme a risk taker as McGuire seems, we may all have more in common with him than we know or care to admit. Heading into the millennium, America has embarked on a national orgy of thrill seeking and risk taking. The rise of adventure and extreme sports like BASE jumping, snowboarding, ice climbing, skateboarding and paragliding is merely the most vivid manifestation of this new national behavior. Investors once content to buy stocks and hold them

quit their day jobs to become day traders, making volatile careers of risk taking. . . . In ways many of us take for granted, we engage in risks our parents would have shunned and our grandparents would have dismissed as just plain stupid. . . .

A full 30% of this year's Harvard Business School graduates are joining venture-capital or high-tech firms, up from 12% just four years ago. "The extended period of prosperity has encouraged people to behave in ways they didn't behave in other times—the way people spend money, change jobs, the quit rate, day trading, and people really thinking they know more about the market than anyone else," says Peter Bernstein, an economic consultant and author of the best-selling *Against the Gods: The Remarkable Story of Risk*. "It takes a particular kind of environment for all these things to happen." That environment—unprecedented prosperity and almost a decade without a major ground war—may be what causes Americans to express some inveterate need to take risks.

There is a certain logic to it: at the end of a decade of American triumphalism abroad and prosperity at home, we could be seeking to upsize our personalities, our sense of ourselves. Perhaps we as a people are acting out our success as a nation, in a manner unfelt since the postwar era.

The rising popularity of extreme sports bespeaks an eagerness on the part of millions of Americans to participate in activities closer to the metaphorical edge, where danger, skill and fear combine to give weekend warriors and professional athletes alike a sense of pushing out personal boundaries. According to American Sports Data Inc., a consulting firm, participation in so-called extreme sports is way up. Snowboarding has grown 113% in five years and now boasts nearly 5.5 million participants. Mountain biking, skateboarding, scuba diving, you name the adventure sport—the growth curves reveal a nation that loves to play with danger. Contrast that with activities like baseball, touch football and aerobics, all of which have been in steady decline throughout the 90's.

(continued)

The pursuits that are becoming more popular have one thing in common: the perception that they are somehow more challenging than a game of touch football. "Every human being with two legs, two arms is going to wonder how fast, how strong, how enduring he or she is," says Eric Perlman, a mountaineer and filmmaker specializing in extreme sports. "We are designed to experiment or die."

And to get hurt. More Americans than ever are injuring themselves while pushing their personal limits. In 1997 the U.S. Consumer Products Safety Commission reported that 48,000 Americans were admitted to hospital emergency rooms with skateboarding-related injuries. That's 33% more than the previous year. Snowboarding E.R. visits were up 31%; mountain climbing up 20%. By every statistical measure available, Americans are participating in and injuring themselves through adventure sports at an unprecedented rate.

Consider Mike Carr, an environmental engineer and paraglider pilot from Denver who last year survived a bad landing that smashed 10 ribs and collapsed his lung. Paraglider pilots use feathery nylon wings to take off from mountaintops and float on thermal wind currents—a completely unpredictable ride. Carr also mountain bikes and climbs rock faces. He walked away from a 1,500-ft. fall in Peru in 1988. After his recovery, he returned to paragliding. "This has taken over many of our lives," he explains. "You float like a bird out there. You can go as high as 18,000 ft. and go for 200 miles. That's magic."

America has always been defined by risk; it may be our predominant national characteristic. It's a country founded by risk takers fed up with the English Crown and expanded by pioneers—a word that seems utterly American. Our heritage throws up heroes—Lewis and Clark, Thomas Edison, Frederick Douglass, Teddy Roosevelt, Henry Ford, Amelia Earhart—who bucked the odds, taking perilous chances.

Previous generations didn't need to seek out risk; it showed up uninvited and regularly: global wars, childbirth complications, diseases and pandemics from the flu to polio, dangerous products and even the omnipresent cold war threat of mutually assured destruction. "I just don't think extreme sports would have been popular in a ground-war era," says Dan Cady, professor of popular culture at California State University at Fullerton. "Coming back from a war and getting onto a skateboard would not seem so extreme."

But for recent generations, many of those traditional risks have been reduced by science, government or legions of personal injury lawyers, leaving boomers and Generation X and Y to face less real risk. Life expectancy has increased. Violent crime is down. You are 57% less likely to die of heart disease than

your parents; smallpox, measles and polio have virtually been eradicated.

Combat survivors speak of the terror and the excitement of playing in a death match. Are we somehow incomplete as people if we do not taste that terror and excitement on the brink? "People are [taking risks] because everyday risk is minimized and people want to be challenged," says Joy Marr, 43, an adventure racer who was the only woman member of a five-person team that finished the 1998 Raid Gauloises, the granddaddy of all adventure races. This is a sport that requires several days of nonstop slogging, climbing, rappelling, rafting and surviving through some of the roughest terrain in the world. Says fellow adventure racer and former Army Ranger Jonathon Senk, 35: "Our society is so surgically sterile. It's almost like our socialization just desensitizes us. Every time I'm out doing this I'm searching my soul. It's the Lewis and Clark gene, to venture out, to find what your limitations are." . . .

Psychologist Frank Farley of Temple University believes that taking conscious risk involves overcoming our instincts. He points out that no other animal intentionally puts itself in peril. "The human race is particularly risk taking compared with other species," he says. He describes risk takers as the Type T personality, and the U.S. as a Type T nation, as opposed to what Farley considers more risk-averse nations like Japan. He breaks it down further, into Type T physical (extreme athletes) and Type T intellectual (Albert Einstein, Galileo). He warns there is also Type T negative, that is, those who are drawn to delinquency, crime, experimentation with drugs, unprotected sex and a whole litany of destructive behaviors.

All these Type T's are related, and perhaps even different aspects of the same character trait. There is, says Farley, a direct link between Einstein and base jumper Chance McGuire. They are different manifestations of the thrill-seeking component of our characters: Einstein was thrilled by his mental life, and McGuire—well, Chance jumps off buildings . . .

The question is, How much is enough? Without some expression of risk, we may never know our limits and therefore who we are as individuals. "If you don't assume a certain amount of risk," says paraglider pilot Wade Ellet, 51, "you're missing a certain amount of life." And it is by taking risks that we may flirt with greatness. "We create technologies, we make new discoveries, but in order to do that, we have to push beyond the set of rules that are governing us at that time," says psychologist Farley.

Source: Greenfeld, K.T. (1999, September 6). Life on the edge. *Time*, 29–36.

(continued)

 **Understanding the Reading**

**Directions:** Answer the following questions in the space provided.

1. What does the writer claim is our new national behavior?

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2. Name three ways in which Americans are expressing this national behavior.

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3. What explanations are given for the increased popularity of extreme sports?

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4. How have risks been reduced in our everyday lives?

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5. How does Frank Farley characterize the Type T personality?

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 **Thinking Critically**

**Directions:** Answer the following questions on a separate sheet of paper.

6. Why do humans take intentional risks when other animals do not?
7. Does Frank Farley's hypothesis support or undermine the view that the environment is the primary determinant of personality characteristics? In what ways?
8. Do you agree with Farley's view? Defend your position.

## CASE STUDY

## 14

## Can Personality Traits Predict Adult Career Success?

**Directions:** Read the following case study, then answer the questions that follow.

### Introduction

A longitudinal study conducted over 70 years explored the relationship between personality traits using the five-factor model of personality (“Big Five”) and general mental ability with career success. For the purposes of the study, two aspects of career success were considered: intrinsic success (job satisfaction) and extrinsic success (income and occupational status).

The dimensions of the five-factor model include neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness. Neuroticism involves six facets: anxiety, hostility, depression, self-consciousness, vulnerability, and impulsiveness. Extroversion involves sociability and is related to the experience of positive emotions. Conscientiousness includes three related facets: achievement orientation, dependability, and orderliness. Openness to experience is characterized by intelligence and unconventionality. Agreeableness is being trusting of others and likeable.

### Hypotheses

The study explored several hypotheses in measuring intrinsic and extrinsic career success. The primary hypotheses are as follows:

- Neuroticism will be negatively related to intrinsic and extrinsic career success.
- Extroversion will be positively related to intrinsic and extrinsic career success.
- Conscientiousness will be positively related to extrinsic career success.
- Personality measures collected in adulthood will explain more variance in career success than will childhood measures.
- General mental ability will be positively related to extrinsic career success.
- Personality will explain incremental variance in career success beyond that explained by general mental ability.

### Method

Researchers used the intergenerational studies, a set of three studies that followed participants from early childhood to retirement. The Institute of Human Development at the University of California, Berkeley administered the studies. The sample was drawn from two of the studies. The first enrolled 318 children from Berkeley who were born between January 1928 and July 1929. The second study began in 1931 with 212 children seven to nine years old.

The studies continued to gather information from the sample for more than 60 years. During their childhood, study participants had many measurements taken through medical examinations, strength tests, and extensive interviews by trained psychologists. Many of these measurements were collected several times throughout the person's childhood.

Researchers conducted three major follow-up studies when participants were ages 30–38, 41–50, and 53–62. There was also a follow-up mail survey completed in 1990 when participants were 61–70.

The psychologists conducting the study to compare personality to career success were not the researchers involved in the intergenerational study. As frequently happens with longitudinal studies, researchers make the data available to other psychologists for analysis. Since the intergenerational study collected so much information, the personality researchers could make reliable and valid analyses based on the data.

### Results

Results indicated that neuroticism was significantly negatively correlated with job satisfaction (intrinsic career success), while openness to experience, conscientiousness, and general mental ability were significantly positively correlated with job satisfaction.

Neuroticism is negatively correlated to intrinsic and extrinsic career success. Individuals

*(continued)*



who score high on neuroticism are more likely to experience a variety of problems, including negative moods, anxiety, fear, depression, irritability, and physical symptoms. Neurotic individuals are likely to be especially affected by negative life events and to have bad moods linger. These factors carry over into their work environment and affect both job satisfaction and income/occupational level.

The second hypothesis that extroversion is positively correlated to intrinsic and extrinsic career success was only partially supported. Extroversion was positively correlated to extrinsic career success, but no correlation was found between extroversion and job satisfaction (intrinsic career success).

Researchers found that conscientiousness and income/occupational status were positively correlated. In an unhypothesized effect, researchers found that the correlation between conscientiousness and job satisfaction was the most consistent result.

The results also support the hypothesis that the Big Five traits explained significant incremental variance in career success beyond that explained by general mental ability.

The study did not support the hypothesis that personality measures collected in adulthood will explain more variance in career success than will childhood measures. In fact, the study shows

that most of the Big Five personality factors are relatively stable over time. Of the five factors, conscientiousness was the most stable, while agreeableness was the least stable of the five traits.

**Conclusions**

Results indicate a correlation between particular career paths and particular traits and between personality traits and intrinsic and extrinsic career success. Since the personality traits are relatively stable over time, it is possible to predict career success using childhood personality measures.

In terms of career paths chosen by different personality types, the study showed that extroverts tended to gravitate toward social jobs and jobs high in interpersonal activities. Conscientious individuals tended to be attracted to investigative jobs and those jobs that require thinking, organizing, and understanding. Those who rated high in general mental ability also tended to gravitate toward investigative jobs, but they stayed away from conventional, rule-regulated jobs. Study participants who ranked high on the neuroticism factor were most likely to be employed in jobs involving physical activity.

Source: Judge, T.A., & Higgins, C.A. (1999). The big five personality traits, general mental ability, and career success across the life span. *Personnel Psychology*, 52 (3), 621–52.

 **Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

- 1. How many participants were enrolled in the study?

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- 2. What two areas of career success were studied?

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- 3. What were the researchers' hypotheses?

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4. Which hypotheses were not supported by the findings of the study?

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 **Thinking Critically**

Directions: Answer the following questions in the space provided.

5. Is it important to try to match personality, mental ability, and career path? Why or why not?

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6. Discuss the advantages and disadvantages to job candidates if a company uses personality test results as hiring or promotion criteria.

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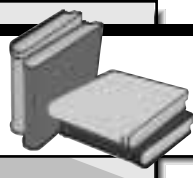
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## READING



## 15

**Stress Out of Place**

**Directions:** Read the following selection, then answer the questions that follow.

Threats create stress in all humans. Our bodies have a variety of reactions to perceived threats. Some reactions are physical, such as tensing the muscles; others are cognitive, such as the focusing of attention on resolving the threat. When our attention is focused on a threat, we are less able to deal with day-to-day events.

Anxiety is the extreme end of the ordinary continuum of arousal. Grappling with a tough mental problem or returning a tennis serve both activate arousal. This increased arousal is fitting and useful; such tasks require extra mental and physical reserves.

But when the arousal does not fit the task at hand—more particularly, when it is too great—then it becomes anxiety. In anxiety, arousal that might be fitting for confronting a given threat intrudes into another situation, or occurs at such a high pitch that it sabotages an appropriate response.

During an anxiety state, attention can cling to the source of threat, narrowing the range of awareness available for other things. The narrowing of attention under stress is amply documented. For example, in a classic study volunteers were put through a simulated deep-sea dive in a pressure chamber (Weltman, Smith and Egstrom, 1971). The dive, done under water, was dramatic, with real changes in pressure and oxygen. Because of the oxygen changes there were some actual, but minor, dangers involved, and the volunteers learned some emergency procedures. During the dive simulation, the volunteers had to perform a central tracking task and at the same time monitor a flashing light. As the dive proceeded and the volunteers got more and more anxious, they could continue with the central task, but lost track of the light.

The notion that anxiety narrows attention is not new. Samuel Johnson said it pithily: “Depend upon it, Sir, when a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully.”

When the stress response drives attention, it focuses on the threat at hand. This is fine when attention and bodily arousal are poised to deal with a threat and dispatch it on the spot. But stress situations in modern life rarely allow for that option. Most often we have to continue with life as usual while dealing with some ongoing situation of threat: carry on at work during a drawn-out marital fight, do the taxes despite a child’s worrisome illness.

Attention primed to focus on a threat dominates even when other matters should be more pressing;

thoughts of the threat intrude out of turn. The operational definition of anxiety is, in fact, this very intrusion.

The role of intrusion in anxiety is most thoroughly described by the psychiatrist Mardi Horowitz (Horowitz, 1983). “Intrusion,” Horowitz writes, refers to “unbidden ideas and pangs of feeling which are difficult to dispel, and of direct or symbolic behavioral reenactments of the stress event.” This squares well with an attentional definition of anxiety: unbidden thoughts and feelings impinge on awareness.

Horowitz showed how anxiety impinges on awareness with a simple experiment. He had groups of volunteers watch one of two stressful films—one showing ritual circumcision among teenage Aborigines, the other depicting bloody accidents in a woodworking shop (both are mildly horrifying)—as well as a neutral film of a man jogging.

After seeing the films, the volunteers undertook a task in which they rate whether a tone was higher, lower, or the same as the preceding tone. This task, though boring, demands a focused, sustained vigilance. Between segments of tones, the volunteers wrote a report of what had been on their mind during the task.

Not surprisingly, the volunteers reported far more intruding film flashbacks during the tone task after seeing the films on circumcision or accidents than after the film about running. The more people were upset by the films, the more intrusions.

Based on a detailed investigation of dozens of patients with stress-based symptoms, Horowitz has been able to enumerate many of the guises and disguises anxious intrusions take. His list is wide-ranging and particularly instructive: every one of the varieties of intrusions is some aspect of the stress response carried to an extreme. These include:

- Pangs of emotion, waves of feeling that well up and subside rather than being a prevailing mood.
- Preoccupation and ruminations, a continual awareness of the stressful event that recurs

*(continued)*

uncontrollably, beyond the bounds of ordinary thinking through of a problem.

- Intrusive ideas, sudden unbidden thoughts that have nothing to do with the mental task at hand.
- Persistent thoughts and feelings, emotions or ideas which the person cannot stop once they start.
- Hypervigilance, excessive alertness, scanning and searching with a tense expectancy.
- Insomnia, intrusive ideas and images that disturb sleep.
- Bad dreams, including nightmares and anxious awakening, as well as any upsetting dream. The bad dream does not necessarily have any overt content related to a real event.

- Unbidden sensations, the sudden, unwanted entry into awareness of sensations that are unusually intense or are unrelated to the situation at the moment.
- Startle reactions, flinching or blanching in response to stimuli that typically do not warrant such reactions.

**References**

**Horowitz, M.** (1983). Psychological response to serious life events. In Shlomo Breznitz (ed.), *The Denial of Stress*. New York: International Universities Press.

**Weltman, G., Smith, J.E., & Egstrom, G.H.** (1971). Perceptual narrowing during simulated pressure-chamber exposure, *Human Factors*, 13, 79–107.

Source: **Goleman, D.** (1985). *Vital Lies, Simple Truths: The Psychology of Self-Deception*. New York: Simon and Schuster, 44–46.

 **Understanding the Reading**

**Directions:** Answer the following questions in the space provided.

1. Where does anxiety fit on the scale of arousal?

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2. What happens during an anxiety state?

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3. What happened to the divers as their level of anxiety increased?

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4. What is the attentional definition of anxiety?

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5. Identify three features of the stress response to an extreme.

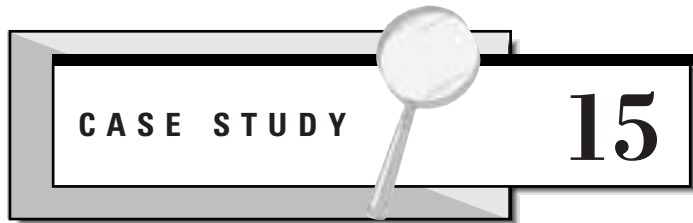
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 **Thinking Critically**

**Directions:** Answer the following questions on a separate sheet of paper.

6. Why is it more difficult to concentrate on boring tasks when you are under extreme stress?
7. Describe a stressful situation that you have encountered. Did you experience any of the anxious intrusions? If so, what were they? If not, how did you avoid these intrusions?



# CASE STUDY 15

## Juror Stress

**Directions:** Read the following case study, then answer the questions that follow.

How do jury trials that involve many gory details, photographs, and exhibits affect the stress level of the jury? If there is an effect, does it hamper juries in their duty to find guilt or innocence? As more cases receive significant nationwide press coverage, psychologists have begun to examine the stress levels of juries.

### Hypothesis

Juror stress during long and difficult cases involving gruesome details can result in immediate physical and psychological symptoms of stress and can have long-lasting consequences.

### Method

Thomas Hafemeister, J.D., Ph.D., and Larry Ventis, Ph.D., have designed and begun a major longitudinal study of jury stress. The study began with a pilot program using jurors from two separate juries with two defendants from the same case. The case involved a “notorious 1993 carjacking in Maryland in which a woman was dragged for more than a mile from her car door as she tried to save her baby, who was still in the car.”

The survey group consisted of 20 jurors, 8 alternates, and 120 ‘veniremen’ who were part of the original pool questioned to serve on the jury but were not selected. The 120 veniremen served as the control group for the study. The group was surveyed immediately after the trial using a 90-item checklist designed to measure 20 aspects of jury stress. In addition to stress aspects that were part of the trial, the survey also measured the stress caused by disruption to the jurors’ personal lives. The survey was re-administered to the same group three months later.

### Results

The veniremen, as expected, did not show marked levels of stress resulting from the trial. The jurors and alternates experienced significant stress as a result of their service. The findings on the alternates yielded a surprising amount of stress that seemed to stem from the fact that they had listened to all the evidence, but were not given the opportunity to participate in the verdict.

In the survey immediately after the trial, women showed more stress than men. The survey three months later, however, showed no significant differences in the stress level of the genders as a result of their jury experience.

The gruesome evidence and testimony, as well as the deliberations, were found to be highly stressful for all jurors.

### Conclusions

Jury stress is likely the inevitable product of the responsibility placed on the jurors. However, some courts have taken an active role in helping jurors deal with the stress. Hafemeister recommends a five-step model for jury debriefing that includes: “making sure jurors understand the reasons for the debriefing; reviewing normal reactions to stress with jurors; encouraging but not forcing jurors to discuss their reactions to the trial; fostering mutual support and understanding among jurors; and making concrete suggestions about returning successfully to their daily lives.”

Source: DeAngelis, T. (1995). What factors influence juror decision-making. *APA Monitor*, 26 (6), 5–6.

**Understanding the Case Study**

Directions: Answer the following questions in the space provided.

1. What are veniremen?

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2. How did the veniremen function in this survey? Why?

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3. When were the surveys administered to the jurors?

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4. What was the surprising factor in the alternates' stress level?

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5. What suggestions did Hafemeister make for helping jurors deal with stress during a trial?

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**Thinking Critically**

Directions: Answer the following questions in the space provided.

6. Among our constitutional rights is the right to a fair trial by a jury of our peers. Does juror stress threaten our right to a fair trial? Defend your answer.

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7. In highly publicized cases, jurors are often sequestered to avoid being influenced by the media or by other people's discussion of the case. What effect do you think sequestration has on juror stress?

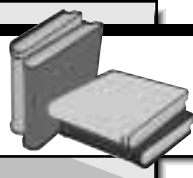
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## READING



## 16

## The Hunt for Mood Genes

**Directions:** Read the following selection, then answer the questions that follow.

Manic depression, commonly called bipolar disorder, is one of many psychological disorders that are thought to have a genetic basis. Researchers have documented family histories of these disorders and hypothesize that heredity plays a part in the development of the disorder. Until recently, however, researchers have not had the tools to test and confirm their hypotheses. New technologies are beginning to allow psychobiologists to zero in on the specific genes that contribute to the development of bipolar disorder. Although some controversies surround this sort of research, many psychologists and physicians hope that such research will lead to effective treatments for bipolar disorder.

Researchers are hunting for “mood-disorder” genes that lead to manic-depression. If such mood genes are found, they should help scientists devise better drugs to control the disease, predicts neurobiologist Samuel H. Barondes, author of *Mood Genes*.

Manic-depression affects one out of every 100 people, and it runs in families. Therefore, the illness is likely to have a genetic basis. However, Barondes says that a combination of genes working together is probably at the root of manic-depression, rather than simply one gene, as with sickle cell anemia. Environment and life experiences also play a role.

The process of finding the specific genes responsible for manic-depression out of the 100,000 or so human genes is like tracking down an enemy spy with a secret radio transmitter by gradually homing in on the source of the radio waves.

The mood-gene hunter first finds a family or isolated population that is prone to manic-depression, then analyzes the DNA from this population to see if the people who have the disorder also have certain genetic markers (the few thousand genes or segments of DNA whose locations are known). If it happens that manic-depression is “linked” to any of these markers, the hunter knows a mood gene lies close to that marker on a particular chromosome, thus narrowing the search.

The results so far are tantalizing but inconclusive. According to one study, the “long arm” of chromosome 18 appears to be a hot spot for mood genes, but other studies have pointed to areas on chromosomes 4, 6, 13, and 15 as well.

Finding mood genes will allow testing to determine whether individuals from affected families are likely to

get the disease. Mood-gene tests would also verify the diagnoses of manic-depression in people who show symptoms.

Controversy for mood-gene testing seems likely: It may eventually be performed on fetuses, and some parents might choose abortion rather than bear children with the disease. People will object to mood-gene research for this reason, but Barondes argues that the benefits for disease sufferers will be too enormous to forgo.

New drugs made possible by mood-gene research may be effective enough to render the disease harmless, so the issue of eugenics could become moot. New drugs would result from a better understanding of the proteins, enzymes, or hormones that mood genes make and the jobs that these specialized molecules perform in the emotional circuitry of the brain.

“Knowing the identity and function of mood genes will provide the opportunity to develop whole new categories of drugs with completely different molecular targets. Such a change of direction is sorely needed,” Barondes writes. Current antidepressant drugs, such as Prozac, were discovered by accident. Scientists aren’t sure exactly why they work, and they don’t work well in all cases.

“In the long run a major benefit of mood-gene discovery may be the prevention of all symptoms of manic-depression—even initial attacks,” Barondes posits, concluding that such knowledge “may not just be used to foretell our destinies, but also to forestall them.”

Source: **Minerd, J.** (1999). The hunt for mood genes. *Futurist*, 33 (5), 11.

**Understanding the Reading**

Directions: Answer the following questions in the space provided.

- 1. How common is manic depression (bipolar disorder)?

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- 2. How could identifying the specific gene or genes involved be used to help people with a genetic tendency for the disorder?

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- 3. What potential controversies does the author raise about the gene research?

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- 4. Why does Samuel Barondes think that knowing the identity and function of mood genes could aid in the development of drugs to treat the disorders?

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**Thinking Critically**

Directions: Answer the following questions in the space provided.

- 5. Take one of the following positions and write a defense of the position:

Gene research to find the exact source of psychological disorders should be funded by tax dollars.

Gene research has too much potential for misuse. No tax dollars should be used to fund such research.

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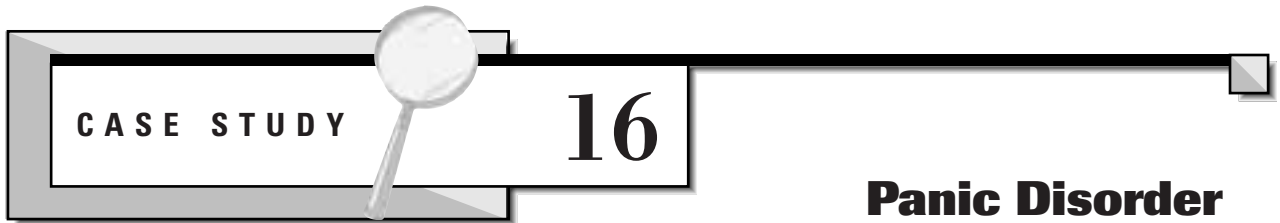
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- 6. What do you think Samuel Barondes means when he says that the knowledge gained from the research “may not just be used to foretell our destinies, but also to forestall them”?

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# CASE STUDY 16

## Panic Disorder

**Directions:** Read the following case study, then answer the questions that follow.

### Case History

Jane had been a shy child who disliked being far away from her mother. She experienced a great deal of separation anxiety, especially when she was young. Her father was an alcoholic, and when he was drinking, her parents would get into loud arguments. Her parents' fighting terrified her. When she was 17, her father was murdered by a mugger.

Jane married at 21 and had three children during the next nine years. She was content as a homemaker and took great pride in her immaculate housekeeping. She began experiencing panic attacks when she was 26. She would awaken in the middle of the night in terror. She would be sweating and her heart would be pounding. For some time, she did not tell anyone about the attacks, which always occurred at night. At first the attacks were infrequent, but as she became more frightened by what was happening to her, the frequency of the attacks increased.

She began to have attacks during the day, especially when she was outside the house and around other people. Her rapid pulse and shortness of breath would cause dizziness. She was afraid that she was dying. She grew increasingly isolated and stayed at home whenever possible. Even going to the grocery became a nearly impossible task. Her husband insisted that she seek treatment.

### Diagnosis

Over the next 20 years, Jane saw 200 doctors. None were able to relieve her symptoms for any length of time. She was diagnosed with severe depression and given electric shock therapy. Although Jane was depressed, her problem was not depression. It was only a symptom of her real disorder. She was treated with a variety of antidepressants and anti-anxiety drugs. Other than Valium, none gave her any relief, and Valium only helped up to a point. The physicians treated her symptoms by removing her tonsils,

pulling her teeth, telling her that she had an inner ear imbalance, and a variety of other treatments that proved worthless. Jane often felt like she was going to die, and no one seemed to know how to provide an answer.

When Jane was 37, her husband died suddenly. The panic attacks also ceased. For several years, she threw herself into working as an office manager and raising her children. She seemed like a different person. At 42, she remarried. When her second husband began drinking, the panic attacks returned. She was hospitalized three times, but the doctors could not find any physical cause for her problem. They recommended therapy. Jane finally saw a therapist who correctly diagnosed her panic disorder.

The therapist knew that research indicates that separation anxiety and fear of being alone during childhood is one suspected cause of panic disorder later in life. The attacks usually begin during a person's late teens or early twenties. Additional research has concluded that shy children are more prone to anxiety in adulthood than outgoing children (Ritter, 1995). Alcoholism in the family is also suspected as a contributing factor. A Duke University study found "that adult children of alcoholics showed a significantly higher tendency toward panic disorder than the general population" (Wilson, 1993).

Initially, Jane's attacks began at night while she was asleep. Researchers have found that "nocturnal panic attacks occur during light sleep when the body is relaxed and heart rate and respiration have slowed. Some researchers think that a sensitive person might react to a change in her body, such as muscle twitches, during this period of relaxation" (Barlow & Cerny, 1988). Other researchers propose the "false-suffocation alarm" theory. This theory concludes that the person suffers from a breathing problem that sends a signal to the brain that the person is suffocating. The sensation is false, but the result is a panic attack (Talan, 1994).

Why did Jane's panic attacks cease for sever-

*(continued)*

al years? Researchers are not certain, but they have found that there is no noticeable pattern in the attacks. They may occur regularly for a time, suddenly cease, and just as suddenly reappear. In Jane's case, the need to support and raise her family after her first husband's death may have helped ease the attacks. Many sufferers of panic disorder find that throwing themselves into work does help the symptoms. Work, however, is not a cure; the attacks usually begin again. The immediate cause of Jane's recurrent attacks may have been her second husband's drinking. This may have reminded her too much of her childhood struggles with an alcoholic father.

**Treatment**

Once properly diagnosed, therapists currently recommend a combination of cognitive, behavior, and drug therapy to help a person recover. Medication is used only to control the symptoms while the person is working on recovery. Medication is not considered a long-term solution. Cognitive therapy helped Jane the

most. She came to realize that she had distorted ideas about herself and her environment. As she learned to change those ideas, her symptoms diminished. Jane learned to think logically about her fears and to understand that most of them were unwarranted. She came to understand that there was nothing physically wrong with her. She also accepted the fact that she would have panic attacks from time to time, but that they would not kill her. As she accepted the attacks, they occurred less frequently.

**References**

**Barlow, D.H., & Cerny, J.A.** (1988). *Psychological Treatment of Panic*. New York: The Guilford Press, 16.  
**Ritter, M.** (1995, May 25). Inhibited tots may suffer anxiety later, study says. *The Record*.  
**Talan, J.** (1994, May 30). The realm of Freud may lose a territory. *The Record*.  
**Wilson, M., et al.** (1993). Psychiatric disorders in adult children of alcoholics. *American Journal of Psychiatry*, 150 (5), 793-800.

Source: **Weinstock, L., & Gilman, E.** (1998). *Overcoming Panic Disorder*. Chicago, IL: Contemporary Books.

 **Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

1. When did Jane's panic attacks begin? When did the initial attacks occur?

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2. What incorrect diagnoses did Jane receive?

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3. What caused Jane's panic attacks to cease for a time?

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4. What theories have been proposed for the causes of panic disorder?

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5. How is panic disorder generally treated today?

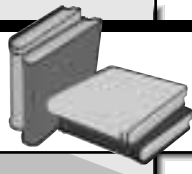
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 **Thinking Critically**

**Directions:** Answer the following questions on a separate sheet of paper.

6. Why do you think panic disorder is so difficult to diagnose?
7. Why do you think that Jane's need to work and raise her children alone eased her symptoms for a period of time?

## READING



## 17

## Modifying Orangutan Behavior

**Directions:** Read the following selection, then answer the questions that follow.

Behavior modification techniques are widely used with humans to help change unwanted behaviors. Behavior modification techniques include classical conditioning and operant conditioning. One form of operant conditioning involves giving rewards for desired behavior. The reward encourages repetition of the behavior. Specialists at the Kansas City Zoo used special food rewards to gain the trust of a pregnant orangutan. By modifying her behavior, they were able to monitor the health of the fetus during its development.

...This is the story of the one-of-a-kind relationship between the baby's mother and the humans who take care of her.

During the last several years, zoologist Beth Moore and senior staff veterinarian Kirk Suedmeyer have worked countless hours to get the mother, named Jill, to trust them. In the end, using positive reinforcement, they trained her to do things that no other zoo in the world has been able to get an orangutan to do.

They got her to stick her arm into PVC pipe with a hole cut in the top so Suedmeyer could regularly draw blood. They had her urinate into a cup and hand it over for analysis. And, almost unbelievable, they trained her to waddle to the front of her cage, grab the bars over her head and allow Suedmeyer to rub gel on her swollen tummy for ultrasounds.

That allowed caretakers to monitor the health of the orangutan fetus like never before—a critical step, because Jill's last baby was stillborn.

Zoo Director Mark Wourms was thrilled. Not only did the accomplishment reflect well on the Kansas City Zoo, but it also provided researchers with "invaluable information about reproduction in an endangered species."

As long as anyone can remember, if zoo staff needed to draw blood or perform an ultrasound on orangutans or other great apes, they had to immobilize them first.

Orangutans are extremely strong—six to seven times stronger than humans. Getting close to them can be dangerous. That makes the prospect of giving them shots, drawing blood and rubbing ultrasound goo on their bellies all the more dicey.

So how did the Kansas City Zoo manage it? Suedmeyer just smiled.

"All you have to do is ask them," he said. "We just never asked them before." Why go to the time, trouble and expense of shooting them with a tranquilizer dart

when you can earn their cooperation with positive reinforcement?

Enter the pudding and frozen raspberries. Orangutans love them. They also love gelatin, frozen blueberries and yogurt. You can see it in their faces as they lift their heads and pucker their lips—the universal orangutan symbol for "more."

With time, training and big spoonfuls of treats, Suedmeyer and Moore learned orangutans would do almost anything.

The program of behavior modification—called operant conditioning—began almost seven years ago with another orangutan. It started with changing the animal's feelings about the vet.

"Before," Suedmeyer said, "every time I would come up, it was a bad thing."

Then he changed his approach. He decided to come to the bars and just sit. No tranquilizer gun. No nothing, he just sat.

Eventually, through training, the animal learned that if he came close to Suedmeyer, he would be rewarded—with pudding, raspberries or something else.

They trained Jill the same way.

Come here, get a treat. Put your arm through the pipe, get a treat. Let them stick you with a needle and get a really, really big treat.

Since zoo staff members knew they would need to see the infant orangutan, Moore even used positive reinforcement to train Jill to show her the baby.

They practiced with a stuffed orangutan.

"We started with her touching the baby outside bars," Moore said.

"Eventually we gave her the little stuffed animal inside the bars. And we were teaching her things, like to hold it up in case we needed to give it a bottle.

"But when she had her own baby, I thought: 'Oh my gosh. There's just no way she's going to let us see it.'"

But Jill surprised Moore by showing her the baby, named Pendamai, an Indonesian word meaning “peacemaker.”

“She came up to the bars, and I told her it was really a beautiful baby,” Moore said. “I said, ‘Gosh, Jill you did such a beautiful job.’ And I said, ‘Can I see your baby?’” And she just sort of leaned forward and let us look at the baby.

Zoo spokeswoman Denise Rendina saw the whole thing.

“That animal absolutely presented the baby for Beth to see,” she said. “I was just like, ‘That is just the

sweetest thing I have ever seen.’ It was phenomenal.”

Whether you want an animal to show you her baby or let you give her a shot, the key is patience, trust, training and rewards.

Orangutans can’t reason like humans, Suedmeyer said. But they can make a simple cost-benefit decision.

“It’s like: ‘Yeah, that’s going to hurt. But it won’t hurt that badly, and I really like those raspberries.’”

Source: **Fussell, James A.** (1999, October 24). Zoo staff wins ape mom’s trust. *Kansas City Star*. Reprinted in *The Columbus Dispatch*. p. 6D.

## Understanding the Reading

**Directions:** Answer the following questions in the space provided.

1. Identify three things Jill, the orangutan, was taught to do.

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2. What rewards did the zoologist and veterinarian use to modify Jill’s behavior?

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3. How did the behavior modification help them monitor the health of the fetus?

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4. Why had Jill learned to dislike the veterinarian?

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5. Once the baby was born, how did the behavior modification help the veterinarians monitor the baby’s health?

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## Thinking Critically

**Directions:** Answer the following questions on a separate sheet of paper.

6. How did the zoologist and veterinarian use systematic desensitization to accomplish their goals?
7. What similarities and differences exist between behavior modification in humans and in animals?



**CASE STUDY** **17** **Family Therapist and School Counselor Work as a Team**

**Directions:** Read the following case study, then answer the questions that follow.

The following study uses a team approach to provide therapy to a 9-year-old boy who is having trouble in school and with his social skills. By working together, the school, the family unit, and the family therapist can best address Robert's problems. The study is presented by the family therapist.

### **Case Study**

Robert, a 9-year-old boy in the fourth grade, was brought to me by his mother. This was done on the advice of Robert's school counselor, who felt Robert's repeated misbehavior was out of control. The school counselor also felt that Robert's problems stemmed from conflict within his family, and that seeking services outside the school would be beneficial for the whole family (this center was on a referral list for Robert's school district). Additionally, the school counselor knew that "in order to fully understand [Robert's] behavior, a counselor has to understand both the teacher-student interaction and the interactions within [Robert's] family" (Hinkle & Wells, 1995).

Cindy, Robert's mother, reported that Robert was easily distracted and often got frustrated with specific tasks that led to Robert getting into fights with his fellow students. Robert also complained constantly about the advanced-level courses he was taking in school, which included intensive reading assignments. Socially, Robert was involved with a boys club off and on for one year until his mother took this privilege away as a punishment for his behavior. According to Cindy, Robert had very few friends because he always ended up fighting with them. Robert's sister, Rebecca, an 11-year-old in the fifth grade, was also in advanced classes but did not exhibit the same behaviors as Robert. Her chief complaint was that she did not like to read. Cindy and David (children's biological father) have been divorced five years and were separated for two years before then. The children have always resided with Cindy, with David living two states away. The children have very little contact with their father, in fact, the last visit was two years

ago and they only saw him for one day. Up until recently, David called Robert and Rebecca two or three times a year and sent Cindy child support every six to nine months. Within the last month, David had called them four times.

### **Family Sessions**

For the initial visit, Cindy intended for Robert to have an individual session; after all, Robert's school counselor suggested that Robert had some emotional problems. However, the client for that session (and those to come) would be the whole family, since the focus of intervention efforts would be for the family-school subsystem (Lewis, 1996).

### **Members**

As a family, Cindy, Rebecca, and Robert spoke of their "system" and defined the members and their roles via a family genogram [a chart of their family relationship]. Cindy held the authority and, with Robert and Rebecca's input, made all the decisions. All appeared quite close and communicated well with each other, sharing feelings and thoughts freely. When asked about David's role, Cindy and Rebecca became teary eyed reportedly because they never talk about his absence; Robert said he did not care about his dad. Cindy admitted her bitterness about David not being a responsible father and her sadness for the children not having a close relationship with him.

### **Roles**

Cindy stated that she was a full-time nurse, which leaves her drained at the end of the day.

*(continued)*

After her “compensated” work at a local hospital, she goes home, where she performs various household chores, including cooking dinner, washing dishes and clothes, and helping Robert and Rebecca with their homework. Robert and Rebecca spend the day at school and the afternoon in day care. At home, they spend up to five hours completing their homework. Robert and Rebecca have assigned chores, but these are often put aside so they can complete their homework.

## School

Robert stated that the teachers at his and Rebecca’s school did not like him and never listened to him. Furthermore, they assigned “stupid” homework that was too difficult for any “human being” to do. Rebecca did not complain as much but admitted getting frustrated with the many assigned readings. Cindy stated that the school counselor recommended that Robert see a therapist because his chronic behavior was more than could be handled at school. Robert acknowledged that he often did not feel in control and was not sure why.

## Intervention

To offer problem-oriented family counseling to this group, it was important to collaborate with the other “professionals” involved with Robert and his family (Kraus, 1998). This collaboration formed a structure made up of separate organizations so there would be a “pooling of resources and expertise with a commitment of partnership agencies to a common mission” (Cassidy & LaDuca, 1997). This collaboration included the family members, the family therapist, and the school counselor. The school counselor had to be recruited, since she represented a unique position within Robert’s school as a liaison with his teachers. Coordinating a meeting of this type can be difficult when there are many individuals involved. However, the information gathered is invaluable because it serves to educate all those involved about factors of which each may be unaware.

It was in this collaborative “community” (Keys et al., 1998) that information was shared about Robert’s behavior. Cindy and I learned from the school counselor and teachers that

Robert acted out during transitions and complained that many of the boys in his classes tried to start fights with him. They also felt that Robert was lacking appropriate social skills. To reciprocate, Cindy and I shared that Robert resented his father and his father’s random phone calls; he felt he did not have a constant “male” to talk to, let alone listen to him. . . . It was also shared that Cindy was not allowing Robert to attend a boys club as a consequence of him not completing his homework.

## Discussion

After this meeting, it was agreed that the desired change was for Robert to feel in control of his emotions. Thus, a mutual agreement was established. Cindy’s role would be to set up a household structure with rewards and consequences for chores and homework and allow Robert (and Rebecca) opportunities to interact socially with other children outside of school. This would include Robert attending the boys club unconditionally and possibly getting a mentor. . . . Also, as a family, Cindy, Rebecca, and Robert would have to set aside some quality time where each could be free from his or her daily routines. Finally, family members would need to discuss the father’s role in their lives and set up an agreement with him to establish a routine of communication.

My role would be one of continuing sessions in which Robert could talk about his feelings toward his father and the family could connect these emotions with Robert’s current anger. Another role would be to encourage the family to develop a schedule so that each member could share a proportionate amount of household chores with encouragement from Cindy.

The school counselor would have the task of coordinating classroom arrangements with Robert’s teachers. This would include placing Robert in the front of the classroom to reduce his distractions and pairing him with another student so he would have the opportunity to improve his social skills. The school counselor would also place Robert in a group counseling setting with other children who shared similar issues.

Thus, there was now a family-school coalition involved in helping Robert express and control his emotions. . . . Hence, as family therapists,

*(continued)*

our role is often to look at the whole family as our client. In doing so, we have to offer “our” whole family; that is, our fellow school counselors. This inclusion is an example to our clients that it often takes a collaborative effort to address issues.

the assessment of the situation and the eventual treatment plan. Although the roles and settings differ, the school counselor and family therapist have a common goal—to provide a service that is in the best interest of the family. To do less is to risk failure.

**Conclusion**

Families must be studied and treated contextually if pertinent issues are to be included within the formula for effectively addressing their concerns. When a child is experiencing difficulty at home or at school, it is important to include parties from both settings to assist in bringing about the most effective treatment plan. With this as a given, it is imperative that the school counselor and family therapist be open to the various cultural influences that are affecting the presenting problems. For either party to ignore the influence that these various settings have on family life is to be left ignorant of significant information that could affect both

**References**

**Cassidy, K.A., & LaDuca, S.T.** (1997). Sweet home family support center: A collaboration between education and human services. In W.M. Walsh & G.R. Williams (Eds.), *Schools and Family Therapy: Using Systems Theory and Family Therapy in the Resolution of School Problems*. Springfield, IL: Charles C. Thomas.

**Hinkle, J.S., & Wells, M.E.** (1995). Family counseling in the schools. Greensboro, NC: ERIC/CASS.

**Keys, S.G., Bemak, F., Carpenter, S.L., & King-Sears, M.E.** (1998). Collaborative consultant: A role for counselors serving at-risk youth. *Journal of Counseling and Development, 76*, 123–133.

**Kraus, I.** (1998). A fresh look at school counseling: A family-systems approach. *Professional School Counseling, 1*(4), 12–17.

**Lewis, B.** (1996). A proposal for initiating family counseling interventions by school counselors. *The School Counselor, 44*(2), 93–99.

Source: **Rotter, J.C., & Boveja, M.E.** (1999). Family therapists and school counselors: A collaborative endeavor. *Family Journal, 7* (3), 276–279.

 **Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

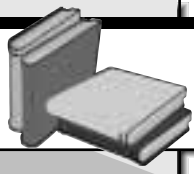
1. What problems was Robert having at school?  
\_\_\_\_\_
2. What was Robert’s relationship with his mother and father?  
\_\_\_\_\_
3. What professionals formed a collaborative team to provide help to Robert and his family?  
\_\_\_\_\_
4. What family changes were recommended to Cindy and her family?  
\_\_\_\_\_
5. What changes were recommended for Robert at school?  
\_\_\_\_\_

 **Thinking Critically**

**Directions:** Answer the following questions on a separate sheet of paper.

6. How might the irregular contact with his father have affected Robert’s behavior with his peers?
7. The study recommends treating families in context. What does this mean? Why is it important?

## READING



## 18

## What Makes a Good Marriage?

**Directions:** Read the following selection, then answer the questions that follow.

What makes a marriage work? Psychologist John Gottman is using a state-of-the-art laboratory to conduct a longitudinal study to learn more about what ingredients make a successful marriage. Although much research has focused on couples who are dealing with difficulties, Gottman's study also examines characteristics that lead to successful marriages.

The myth of marriage goes like this: somewhere out there is the perfect soul mate, the yin that meshes easily and effortlessly with your yang. And then there is the reality of marriage, which, as any spouse knows, is not unlike what Thomas Edison once said about genius: 1 percent inspiration and 99 percent perspiration. That sweaty part, the hard work of keeping a marriage healthy and strong, fascinates John Gottman. He's a psychologist at the University of Washington, and he has spent more than two decades trying to unravel the bewildering complex of emotions that binds two humans together for a year, a decade or even (if you're lucky) a lifetime.

Gottman, 56, comes to this endeavor with the best of qualifications: he's got the spirit of a scientist and the soul of a romantic. A survivor of one divorce, he's now happily married to fellow psychologist Julie Schwartz Gottman (they run couples workshops together). His daunting task is to quantify such intangibles as joy, contempt and tension. Ground zero for this research is the Family Research Laboratory on the Seattle campus (nicknamed the Love Lab). It consists of a series of nondescript offices equipped with video cameras and pulse, sweat and movement monitors to read the hearts and minds of hundreds of couples who have volunteered to be guinea pigs in longitudinal studies of the marital relationship. These volunteers have opened up their lives to the researchers, dissecting everything from the frequency of sex to who takes out the garbage. . . .

Among his unexpected conclusions: anger is not the most destructive emotion in a marriage, since both happy and miserable couples fight. Many popular therapies aim at defusing anger between spouses, but Gottman found that the real demons (he calls them "the Four Horsemen of the Apocalypse") are criticism, contempt, defensiveness and stonewalling. His research shows that the best way to keep these demons at bay is for couples to develop a "love map" of their spouse's dreams and fears. The happy couples all had such a deep understanding of their partner's

psyche that they could navigate roadblocks without creating emotional gridlock.

Gottman's research also contradicts the Mars-Venus school of relationships, which holds that men and women come from two very different emotional worlds. According to his studies, gender differences may contribute to marital problems, but they don't cause them. Equal percentages of both men and women he interviewed said that the quality of the spousal friendship is the most important factor in marital satisfaction.

Gottman says he can predict, with more than 90 percent accuracy, which couples are likely to end up in divorce court. The first seven years are especially precarious; the average time for a divorce in this group is 5.2 years. The next danger point comes around 16 to 20 years into the marriage, with an average of 16.4 years. He describes one couple he first met as newlyweds: even then they began every discussion of their problems with sarcasm or criticism, what Gottman calls a "harsh start-up." Although they professed to be in love and committed to the relationship, Gottman correctly predicted that they were in trouble. Four years later they were headed for divorce, he says.

An unequal balance of power is also deadly to a marriage. Gottman found that a husband who doesn't share power with his wife has a much higher risk of damaging the relationship. Why are men singled out? Gottman says his data show that most wives, even those in unstable marriages, are likely to accept their husband's influence. It's the men who need to shape up, he says. The changes can be simple, like turning off the football game when she needs to talk. Gottman says the gesture proves he values "us" over "me."

Gottman's research is built on the work of many other scientists who have focused on emotion and human interaction. Early studies of marriage relied heavily on questionnaires filled out by couples, but these were often inaccurate. In the 1970s several psychology labs began using direct observation of couples to study marriage. A big boon was a relatively

(continued)



new tool for psychologists: videotape. Having a visual record that could be endlessly replayed made it much easier to study the emotional flow between spouses. In 1978 researchers Paul Ekman and Wallace Friesen devised a coding system for the human face that eventually provided another way to measure interchange between spouses.

Although early studies focused on couples in trouble, Gottman thought it was also important to study couples whose marriages work; he thinks they're the real experts. The Love Lab volunteers are interviewed about the history of their marriage. They then talk in front of the cameras about subjects that cause conflict between them. One couple, . . . , Tim and Kara, argued constantly about his friend Buddy, who often wound up spending the night on Tim and Kara's couch. The researchers take scenes like this and break down every second of interaction to create a statistical pattern of good and bad moments. How many times did she roll her eyes (a sign of contempt) when he spoke? How often did he fidget (indicating tension or stress)? The frequency of negative and positive expressions, combined with the data collected by the heart, sweat and other monitors, provides a multidimensional view of the relationship. (Tim and Kara ultimately decided Buddy could stay, only not as often.)

Gottman and other researchers see their work as a matter of public health. The average couple who seek help have been having problems for six years—long enough to have done serious damage to their relationship. That delay, Gottman says, is as dangerous as putting off regular mammograms. The United States has one of the highest divorce rates in the industrialized world, and studies have shown a direct correlation between marriage and well-being. Happily married people are healthier; even their immune systems work better than those of people who are unhappily married or divorced. Kids suffer as well; if their parents split, they're more likely to have emotional or school problems.

But going to a marriage counselor won't necessarily help. "Therapy is at an impasse," Gottman says, "because it is not based on solid empirical knowledge of what real couples do to keep their marriages happy and stable." In a 1995 *Consumer Reports* survey, marriage therapy ranked at the bottom of a poll of patient satisfaction with various psychotherapies. The magazine said part of the problem was that "almost anyone can hang out a shingle as a marriage counselor." Even credentialed therapists may use approaches that have no basis in research. Several recent studies have shown that many current treatments produce few long-term benefits for couples who seek help.

One example: the process called "active listening." It was originally used by therapists to objectively summarize the complaints of a patient and validate the

way the patient is feeling. ("So, I'm hearing that you think your father always liked your sister better and you're hurt by that.") In recent years this technique has been modified for marital therapy—ineffectively, Gottman says. Even highly trained therapists would have a hard time stepping back in the middle of a fight and saying, "So, I'm hearing that you think I'm a fat, lazy slob."

Happily married couples have a very different way of relating to each other during disputes, Gottman found. The partners make frequent "repair attempts," reaching out to each other in an effort to prevent negativity from getting out of control in the midst of conflict. Humor is often part of a successful repair attempt. In his book, Gottman describes one couple arguing about the kind of car to buy (she favors a minivan; he wants a snazzier Jeep). In the midst of yelling, the wife suddenly puts her hand on her hip and sticks out her tongue—mimicking their 4-year-old son. They both start laughing, and the tension is defused.

In happy unions, couples build what Gottman calls a "sound marital house" by working together and appreciating the best in each other. They learn to cope with the two kinds of problems that are part of every marriage: solvable conflicts and perpetual problems that may represent underlying conflicts and that can lead to emotional gridlock. Gottman says 69 percent of marital conflicts fall into the latter category. Happy spouses deal with these issues in a way that strengthens the marriage. One couple Gottman studied argued constantly about order in their household (she demanded neatness, and he couldn't care less). Over the years they managed to accommodate their differences, acknowledging that their affection for each other was more important than newspapers piled up in the corner of the living room.

As psychologists learn more about marriage, they have begun devising new approaches to therapy. Philip Cowan and Carolyn Pape-Cowan, a husband-and-wife team (married for 41 years) at the University of California, Berkeley, are looking at one of the most critical periods in a marriage: the birth of a first child. (Two-thirds of couples experience a "precipitous drop" in marital satisfaction at this point, researchers say.) "Trying to take two people's dreams of a perfect family and make them one is quite a trick," Pape-Cowan says. The happiest couples were those who looked on their spouses as partners with whom they shared household and child-care duties. The Cowans say one way to help spouses get through the transition to parenting would be ongoing group sessions with other young families to provide the kind of support people used to get from their communities and extended families.

Two other researchers—Neil Jacobson at the University of Washington and Andrew Christensen at

*(continued)*

UCLA—have developed what they call “acceptance therapy” after studying the interactions of couples in conflict. The goal of their therapy is to help people learn to live with aspects of their spouse’s characters that simply can’t be changed. “People can love each other not just for what they have in common but for things that make them complementary,” says Jacobson. “When we looked at a clinical sample of what predicted failure in traditional behavior therapy, what we came upon again and again was an inability to accept differences.”

Despite all these advances in marital therapy, researchers still say they can’t save all marriages—and in fact there are some that shouldn’t be saved.

Patterns of physical abuse, for example, are extremely difficult to alter, Gottman says. And there are cases where the differences between the spouses are so profound and longstanding that even the best therapy is futile. Gottman says one quick way to test whether a couple still has a chance is to ask what initially attracted them to each other. If they can recall those magic first moments (and smile when they talk about them), all is not lost. “We can still fan the embers,” says Gottman. For all the rest of us, there’s hope.

Source: **Kantrowitz, B., & Wingert, P.** (1999, April 19). The science of a good marriage: Psychology is unlocking the secrets of happy couples. *Newsweek*, 133 (16), 52–57.

### **Understanding the Reading**

**Directions:** Answer the following questions in the space provided.

1. What was John Gottman’s unexpected conclusion in conducting his longitudinal study?  
\_\_\_\_\_  
\_\_\_\_\_
2. What emotions and behaviors has Gottman identified that are destructive to marriage?  
\_\_\_\_\_  
\_\_\_\_\_
3. What technology do researchers use today to help gather data? What type of data can be gathered with this tool?  
\_\_\_\_\_  
\_\_\_\_\_
4. Why do researchers see their work as a matter of public health?  
\_\_\_\_\_  
\_\_\_\_\_
5. What do the Cowans recommend to address the stress that many marriages experience at the birth of their first child?  
\_\_\_\_\_  
\_\_\_\_\_

### **Thinking Critically**

**Directions:** Answer the following questions on a separate sheet of paper.

6. Why may “active listening” not work as a therapy technique in marriage counseling?
7. Zick Rubin has identified three components of romantic love: need, attachment, and intimacy. How can love maps and acceptance therapy strengthen these three components?



**CASE STUDY** **18** **Culture and Conflict Resolution**

**Directions:** Read the following case study, then answer the questions that follow.

### Background

Culture may be defined as an integrated pattern of beliefs, activities, and knowledge that one generation passes to the next. People within the culture share a common language, manner of acting, and beliefs that guide behavior. Although culture changes over time, these changes tend to be slow and subtle. A major cultural divide exists between individualistic cultures like the United States and collectivistic cultures such as the Chinese and the Kurds. In individualistic cultures, the individual's opinions, beliefs, and attitudes are given priority. In collectivistic cultures, the group's opinions, beliefs, and attitudes are given priority. Understanding differences in these cultures helps us live in a global world. When conflicts arise, each culture has different expectations about how to resolve them. This study examines the way in which conflicts are resolved and disputes are settled in the two types of culture.

### Hypothesis

In individualistic cultures, conflicts are resolved using a formal legal process. The laws of the state take priority over tradition or moral values. Conflicts between family members, friends, or neighbors often end up in the formal legal system. When conflicts reach the legal system, members of the culture accept the state's rule of law. In collectivistic cultures, tradition and religion take priority over laws enacted by the state. Disputes, especially those among family members, friends, and neighbors are often resolved informally, rather than through the formal legal system.

### Method

The study examined three cultures: one individualistic, Germany, and two collectivistic, Kurdish and Lebanese. The study was conducted in Germany. The Kurdish and Lebanese partici-

pants were seeking asylum in Germany. They were recent arrivals to Germany and had spent their adult lives to that point in either Turkey (Kurds) or Lebanon (Lebanese). They were asked to respond to the interviewers' questions based on their understanding of the legal systems of their homeland. The German participants were directed to respond based on their understanding of the German culture and legal system.

To verify the original assessment that the Germans had a more individualistic mind-set, while the Kurds and Lebanese had a more collectivistic mind-set, participants completed a 14-question survey used to measure individualism and collectivism.

The interviews were conducted in the native language of each participant. The interviewers all used the same questionnaire. It consisted of five vignettes involving typical conflict situations. Cultural experts reviewed the vignettes to ensure that the conflict situations in the vignettes were typical of what would be found in the cultures of the participants.

The first vignette was as follows: "Imagine that your cousin had bought a second-hand car from a stranger. Because the engine broke down after two days, the cousin wants an explanation from the seller; the seller claims not to know him and denies that he sold him a car. A heated argument turns into a physical fight in which the cousin is severely injured."

After reading the vignette, the interviewers asked a series of open-ended questions about the participants' views of legitimate authority, their willingness to accept government law over in-group resolution of conflicts, and their views on shame and guilt.

### Results

The 14-question survey verified the researcher's assessment that German culture tends to be individualistic and the culture of the Kurds and Lebanese tends to be collectivistic.

*(continued)*

For purposes of analysis, the responses of the Kurds and Lebanese were combined and compared with the German responses.

Legitimate authority to resolve conflicts rests with the state in individualistic cultures. German participants were much more willing to resolve disputes in court than were the Lebanese and Kurdish participants. Participants from the collectivistic cultures gave more weight to tradition and religion as the legitimate authority in resolving conflict.

In addition, members of individualistic cultures preferred a formal process to resolve disputes and conflicts. When crimes were committed, the Germans recommended calling the police and involving the courts. Members of the collectivistic cultures preferred an informal process that involved self-regulation and a willingness of the offending party to apologize. Often family members of the parties in a conflict help resolve the dispute.

### Conclusion

Members of collectivistic cultures are more willing to abide by the norms of tradition and religious or moral authority. They are less likely to involve the state, represented by police authority and the court system, in settling disputes, especially if those disputes involve people in their own group. For example, disputes among family members or neighbors do not generally find their way to court in collectivistic cultures. Instead they are resolved as a part of normal social relationships with a friend or family member serving as a mediator between the parties in conflict.

Members of individualistic cultures tend to rely more heavily on the state and the formal legal system to resolve conflicts. They prefer legal consistency and are willing to take disputes involving family members or friends through the formal legal process.

Source: Bierbrauer, G. (1994). Toward an understanding of legal culture: Variations in individualism and collectivism between Kurds, Lebanese, and Germans. *Law & Society Review, 28* (2), 243–64.

### Understanding the Case Study

**Directions:** Answer the following questions in the space provided.

1. How are individuals and groups viewed differently in individualistic and collectivistic cultures?

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2. What is the hypothesis of the study?

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3. What method was used to conduct the study?

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4. How did the researchers verify the accuracy of their assumption about the culture of each participant? Was their assumption accurate?

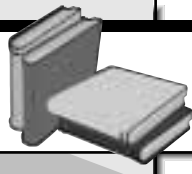
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### Thinking Critically

**Directions:** Answer the following questions on a separate sheet of paper.

5. Given the nature of each culture, explain why collectivistic cultures rely more heavily on tradition and religious and moral authority, while individualistic cultures rely more heavily on the authority of the state.
6. Write a vignette that could be used to assess collectivistic and individualistic viewpoints. Then discuss the vignette from each perspective.

## READING

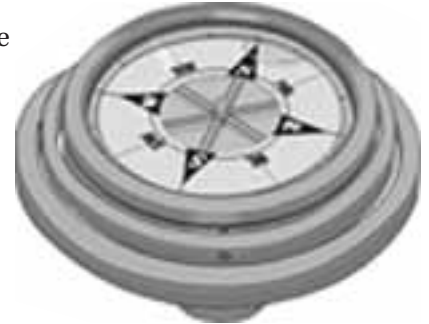


## 19

## Who's Steering the Ship?

**Directions:** Read the following selection, then answer the questions that follow.

What makes a good leader? Some personality traits may help make a leader. But most psychologists agree that leadership skills can be learned. Great leaders agree that they are always learning and improving their skills. One skill that good leaders develop is called the “law of navigation,” which is the ability to chart a course for the group. Whether the group is a large corporation or a small social club, it must have a purpose and a direction. Effective leaders set a direction and communicate their plan to the group.



In 1911, two groups of explorers set off on an incredible mission. Though they used different strategies and routes, the leaders of the teams had the same goal: to be the first in history to reach the South Pole. Their stories are life-and-death illustrations of the Law of Navigation.

One of the groups was led by Norwegian explorer Roald Amundsen. Ironically, Amundsen had not originally intended to go to Antarctica. His desire was to be the first man to reach the North Pole. But when he discovered that Robert Peary had beaten him there, Amundsen changed his goal and headed toward the other end of the earth. North or south—he knew his planning would pay off.

### Amundsen Carefully Charted His Course

Before his team ever set off, Amundsen had painstakingly planned his trip. He studied the methods of the Eskimos and other experienced Arctic travelers and determined that their best course of action would be to transport all their equipment and supplies by dogsled. When he assembled his team, he chose expert skiers and dog handlers. His strategy was simple. The dogs would do most of the work as the group traveled fifteen to twenty miles in a six-hour period each day. That would allow both the dogs and the men plenty of time to rest each day for the following day's travel.

Amundsen's forethought and attention to detail were incredible. He located and stocked supply depots all along the route. That way they would not have to carry every bit of their supplies with them the whole trip. He also equipped his people with the best gear possible. Amundsen had carefully considered every possible aspect of the journey, thought it through, and planned accordingly. And it paid off. The worst prob-

lem they experienced on the trip was an infected tooth that one man had to have extracted.

### Scott Violated the Law of Navigation

The other team of men was led by Robert Falcon Scott, a British naval officer who had previously done some exploring in the Antarctic area. Scott's expedition was the antithesis [opposite] of Amundsen's. Instead of using dogsleds, Scott decided to use motorized sledges and ponies. Their problems began when the motors on the sledges stopped working only five days into the trip. The ponies didn't fare well either in those frigid temperatures. When they reached the foot of the Transantarctic Mountains, all of the poor animals had to be killed. As a result, the team members themselves ended up hauling the two-hundred-pound sledges. It was arduous [difficult] work.

Scott hadn't given enough attention to the team's other equipment. Their clothes were so poorly designed that all the men developed frostbite. One team member required an hour every morning just to get his boots onto his swollen, gangrenous feet. And everyone became snowblind because of the inadequate goggles Scott had supplied. On top of everything else, the team was always low on food and water. That was also due to Scott's poor planning. The depots of supplies Scott established were inadequately stocked, too far apart, and often poorly marked, which made them very difficult to find. Because they were continually low on fuel to melt snow, everyone became dehydrated. Making things even worse was Scott's last minute decision to take along a fifth man, even though they had prepared enough supplies for only four.

After covering a grueling eight hundred miles in ten weeks, Scott's exhausted group finally arrived at the South Pole on January 17, 1912. There they found

*(continued)*

the Norwegian flag flapping in the wind and a letter from Amundsen. The other well-led team had beaten them to their goal by more than a month!

### **If You Don't Live by the Law of Navigation. . .**

As bad as their trip to the pole was, that isn't the worst part of their story. The trek back was horrific. Scott and his men were starving and suffering from scurvy. But Scott, unable to navigate to the very end, was oblivious to their plight. With time running out and desperately low on food, Scott insisted that they collect thirty pounds of geological specimens to take back—more weight to be carried by the worn-out men.

Their progress became slower and slower. One member of the party sank into a stupor and died. Another, Lawrence Oates, was in terrible shape. The former army officer, who had originally been brought along to take care of the ponies, had frostbite so severe that he had trouble going on. Because he believed he was endangering the team's survival, it's said that he purposely walked out into a blizzard to relieve the group of himself as a liability. Before he left the tent and headed out into the storm, he said, "I am just going outside; I may be some time."

Scott and his final two team members made it only a little farther north before giving up. The return trip had already taken two months, and still they were 150 miles from their base camp. There they died. We know their story only because they spent their last hours writing in their diaries. . . . Scott had courage, but not leadership. Because he was unable to live by the Law of Navigation, he and his companions died by it.

Followers need leaders able to effectively navigate for them. When they're facing life-and-death situations, the necessity is painfully obvious. But, even when consequences aren't as serious, the need is just as great. The truth is that nearly anyone can steer the ship, but it takes a leader to chart the course. That is the Law of Navigation.

### **Navigators See the Trip Ahead**

General Electric chairman Jack Welch asserts, "A good leader remains focused. . . . Controlling your direction is better than being controlled by it." Welch is right, but leaders who navigate do even more than control the direction in which they and their people travel. They see the whole trip in their minds before they leave the dock. They have a vision for their destination, they understand what it will take to get there, they know who they'll need on the team to be successful, and they recognize the obstacles long before they appear on the horizon. Leroy Eims, author of *Be the Leader You Were Meant to Be*, writes, "A leader is one who sees more than others see, who sees farther than others see, and who sees before others do."

The larger the organization, the more clearly the leader has to be able to see ahead. That's true because sheer size makes midcourse corrections more difficult. And if there are errors, many more people are affected than when you're traveling alone or with only a few people. The disaster shown in the recent film *Titanic* was a good example of that kind of problem. The crew could not see far enough ahead to avoid the iceberg altogether, and they could not maneuver enough to change course once the object was spotted because of the size of the ship, the largest built at that time. The result was that more than one thousand people lost their lives.

### **Where the Leader Goes. . .**

First-rate navigators always have in mind that other people are depending on them and their ability to chart a good course. I read an observation by James A. Autry in *Life and Work: A Manager's Search for Meaning* that illustrates this idea. He said that occasionally you hear about the crash of four military planes flying together in a formation. The reason for the loss of all four is this: When jet fighters fly in groups of four, one pilot—the leader—designates where the team will fly. The other three planes fly on the leader's wing, watching him and following him wherever he goes. Whatever moves he makes, the rest of his team will make along with him. That's true whether he soars in the clouds or smashes into a mountaintop.

Before leaders take their people on a journey, they go through a process in order to give the trip the best chance of being a success.

### **Navigators Draw on Past Experience**

Every past success and failure can be a source of information and wisdom—if you allow it to be. Successes teach you about yourself and what you're capable of doing with your particular gifts and talents. Failures show what kinds of wrong assumptions you've made and where your methods are flawed. If you fail to learn from your mistakes, you're going to fail again and again. That's why effective navigators start with experience. But they certainly don't end there.

### **Navigators Listen to What Others Have to Say**

No matter how much you learn from the past, it will never tell you all you need to know for the present. That's why top-notch navigators gather information from many sources. They get ideas from members of their leadership team. They talk to the people in their organization to find out what's happening on the grass-roots level. And they spend time with leaders from outside the organization who can mentor them.

(continued)

**Navigators Examine the Conditions before Making Commitments**

I like action, and my personality prompts me to be spontaneous. On top of that, I have reliable intuition when it comes to leadership. But I'm also conscious of my responsibilities as a leader. So before I make commitments that are going to impact my people, I take stock and thoroughly think things through. Good navigators count the cost before making commitments for themselves and others.

**Navigators Make Sure Their Conclusions Represent both Faith and Fact**

Being able to navigate for others requires a leader to possess a positive attitude. You've got to have faith

that you can take your people all the way. If you can't confidently make the trip in your mind, you're not going to be able to take it in real life. On the other hand, you also have to be able to see the facts realistically. You can't minimize obstacles or rationalize your challenges. If you don't go in with your eyes wide open, you're going to get blindsided. As Bill Easum observes, "Realistic leaders are objective enough to minimize illusions. They understand that self-deception can cost them their vision." Sometimes it's difficult balancing optimism and realism, intuition and planning, faith and fact. But that's what it takes to be effective as a navigating leader.

Source: **Maxwell, J.C.** (1998). *The 21 Irrefutable Laws of Leadership*. Nashville, TN: Thomas Nelson, Inc., 33-39.

 **Understanding the Reading**

**Directions:** Answer the following questions in the space provided.

1. What were the differences between Amundsen's and Scott's expeditions?

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2. How did these differences affect the outcomes of the expeditions?

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3. What does Leroy Eims say about leaders?

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4. How can failures in leadership help a leader?

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5. How does the author describe the qualities of effective navigating leaders?

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 **Thinking Critically**

**Directions:** Answer the following questions on a separate sheet of paper.

6. What styles of leadership might use the law of navigation discussed by the author?
7. Evaluate the leader of a secondary group to which you belong based on his or her ability to chart a course for the group.

## CASE STUDY

## 19

**Parental Involvement  
and Students'  
Aggressive Behaviors**

**Directions:** Read the following case study, then answer the questions that follow.

**Introduction**

Aggressive and violent acts have increased in schools across the United States. Violence prevention programs seek to reverse the trend. A cross-sectional study of middle school students explored whether there should be a strong parental component in such programs.

**Hypothesis**

The researchers stated their hypothesis as follows: “that students who do not live with both parents, who have poor relationships with their parents, who have low parental monitoring, and who perceive that their parents support fighting will be more likely to exhibit aggressive behavior and carry weapons.”

**Method**

The study consisted of a survey of all sixth, seventh, and eighth graders from urban middle schools in a large school district in Texas. The final sample included 8,865 usable surveys, representing 88.5 percent of the school population. Students were evenly distributed by gender and grade.

Before the survey was administered, parental permission was obtained. Students were assured that all results would be confidential. Students were given the opportunity to decline participation, although few did. The first part of the survey asked students to self-report their aggressive behaviors during the past week. Aggressive behaviors ranged from teasing and name-calling to fighting. Students reported the number of times during the past week that they had engaged in such behaviors using a scale of 0 to 6 times. Separate questions asked for the frequency of fighting, injuries due to fighting, and if weapons had been brought to school.

The second section of the survey asked students to describe their relationships with their parents. Specifically, it asked students who they

lived with, how well they got along with their parents, and how closely their parents monitored their activities. This section also included a series of 10 statements designed to assess students' perception of their parents' attitude about aggressiveness and violence. Students responded “yes” or “no” to these statements indicating if their parents had recommended this solution to conflict. For example, one statement was “If someone calls you names, ignore them.” Students responded by indicating if their parents had ever given them this advice.

**Results**

The average number of aggressive acts committed by students in the prior week was 16, although the majority of these acts were not considered violent. About 10 percent admitted to carrying a handgun to school and 25 percent had brought other kinds of weapons to school. On all measures of aggressive behavior, the incidence was lower for girls than for boys.

In the family life measures, 60 percent reported that they lived with both parents, and 70 percent said that they had a good or very good relationship with their parents. There was a marked difference in parental monitoring between boys and girls. Only 50 percent of the boys reported that their parents monitored the majority of their activities, while 66 percent of the girls reported high parental monitoring.

All the measures of family structure played a significant role in aggressiveness of these students. Students who lived with both parents were the least likely to commit violent acts at school. They were less likely to fight, be injured in a fight, or carry a weapon. Students who had a good relationship with their parents were somewhat less likely to commit violent acts or to be involved in fights. In addition, those students who reported high parental monitoring were three times less likely to commit aggressive acts.

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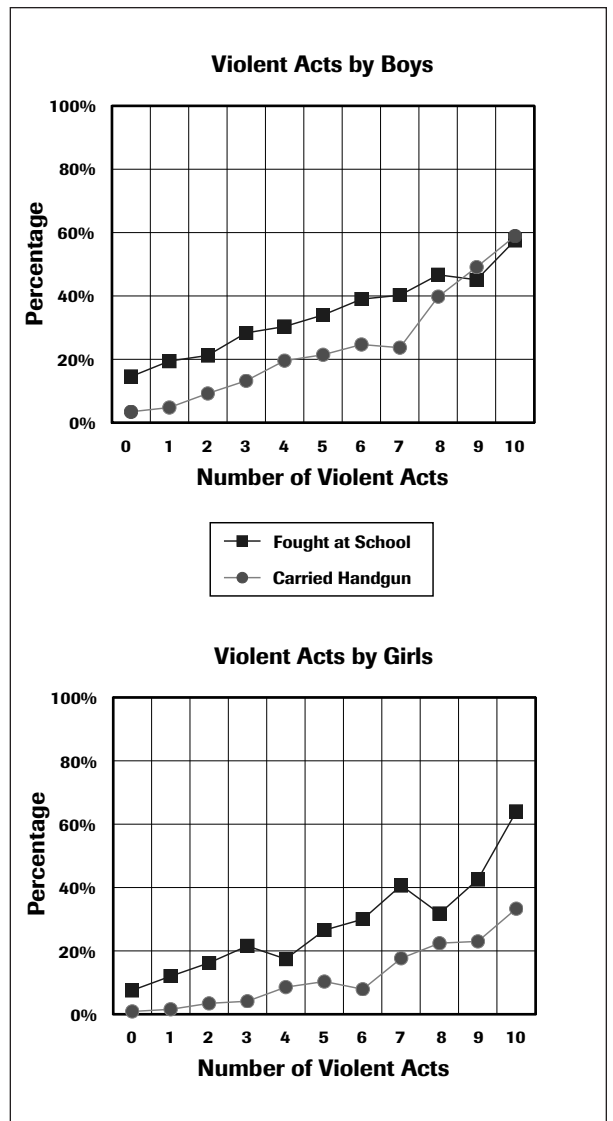


The final measure of family structure and aggressiveness compared student aggressiveness and students' perceived parental stance toward aggression and violence. Of all the measures, relationship proved strongest. Students who believed their parents supported fighting as a solution to problems were much more likely to resort to violence to resolve conflicts. For example, only 14.5 percent of boys who said their parents supported peaceful solutions had been involved in a fight at school within the past week, while 57.5 percent of boys who believed their parents supported aggression had been involved in a fight. The difference among girls is even more striking with a range from 7.5 percent to 64 percent.

**Conclusions**

Most observers believe that the prevalence of violence and aggression in schools today is too high. As psychologists and school administrators search for ways to reduce aggression, parental involvement will be a key factor in any program's success. While prevention programs may not be able to influence the basic family structure, the programs can encourage parental involvement with their children. These programs can also include an educational element for parents to encourage them to support peaceful solutions to conflict.

Source: **Orpinas, P., & Murray, N.** (1999). Parental influences on students' aggressive behaviors and weapon carrying. *Behavior, 26* (6), 774-87.



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**Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

1. What is the hypothesis of this study?

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2. Who were the participants in this study?

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(continued)

3. What was the average number of aggressive acts committed by students in the prior week?

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4. Which of the family structure measures influenced students' aggressive behaviors?

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5. Which family structure measure is most clearly related to school violence?

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 **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

6. What elements would you include in a violence prevention plan for students? Why?

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7. What elements would you include in a violence prevention plan for parents? Why?

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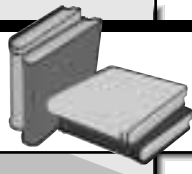
8. What other factors may be contributing to the rise of violence in schools?

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## READING



## 20

## Folklore, Gossip, and the Internet

**Directions:** Read the following selection, then answer the questions that follow.

Do you remember the old game of telephone? You would pass a secret message from person to person and see how garbled the original message became by the end of the line. Gossip is as old as human history. Today, however, electronic communication can spread gossip around the globe almost instantaneously. Once gossip or myth has begun to circulate on the Web, it is proving difficult to stop.



A phony Web site touting a mythical corporate takeover sent stock prices soaring—and then plummeting—on Wall Street Wednesday [April 7, 1999]. It hammered home an important lesson that is often lost in the hype about the Internet: You can't believe everything you read on line—even when it's relayed by well-meaning colleagues and friends. Rumors and hoaxes proliferate in cyberspace, and perfectly reasonable people are prone to believe them and pass them on.

"We trust technology more than the government," said Patricia Turner, a professor of African-American studies at the University of California at Davis and author of *I Heard It Through the Grapevine*. "The Internet seems to be a sophisticated purveyor of information, so we think, 'If it comes through expensive hardware, it must be so.'"

The bogus Web site, which looked like a page of *Bloomberg News* and "reported" the sale of an American technology company called Pairgain Technologies Inc., was obviously the work of a sophisticated snake-in-the-grass. And the fraud worked: Some investors were left sheepishly counting their losses, while some day traders, who use the Internet to capitalize on instant changes in stock prices, undoubtedly cleared a tidy profit.

Government regulators were searching for the source of the story yesterday, and Lycos Inc., which operates the service where the phony Web page appeared, said it would cooperate.

Hackers and hoaxers who alter pages or post phony sites are as old as the medium itself; just this

week, a prankster set up a satiric page designed to convince browsers it was the official Senate campaign site for Mayor Rudolph Giuliani of New York. And cyber celebrity Matt Drudge routinely spreads rumors on his widely read Web site. But the spread of misinformation on line isn't always malicious, although it is almost always infectious. As more and more people are relying on the Internet for information and communication, the old-fashioned urban legend—once passed from neighbor to neighbor by word of mouth—has proliferated in cyberspace. Tall tales of horror and doom, of corruption and gloom, breed rapidly in cyberspace, spreading as fast as a cold virus in a room full of toddlers.

Some of these rumors are harmless, like the widely circulated tale about the upscale department store that charged \$250 for a cookie recipe. Others are annoying, like the chain e-mail promising good luck or quick cash. But still others have the potential to harm businesses or to inspire genuine fear.

A few examples: Have you heard the one about designer Tommy Hilfiger making racist statements on the Oprah Winfrey show? Have you been warned about asbestos in tampons or air freshener that kills pets? Have you been cautioned about kidnapers in mall parking lots or gang members lurking on highways or needles infected with the AIDS virus that show up in movie theaters and coin-return slots? Have you been alerted that the Voter Rights Act is set to expire in 2007, disenfranchising African-Americans? None of these stories is true. But all of them have been circu-

lating for years via e-mail and electronic bulletin boards. Enough people believe them to make these rumors multiply with a few taps on a keyboard and a click of a mouse.

Folklorists who study such trends say these rumors proliferate because they tap into deep societal fears. "They touch on our ambivalence about the things we worry about, the things that concern us," Turner said. Rumors about the spread of the AIDS virus and tall tales about stolen kidneys, for instance, reflect common anxieties about infectious disease as well as a general concern about the health care system. And rumors about government conspiracies, such as the one about the Voter Rights Act, reveal an overall societal distrust of "official" information.

At the same time, these stories can stroke egos; people who pass them on to friends and colleagues often feel as if they are doing a good deed. "It feeds a person's sense of self-importance," said Barbara Mikkelson, . . . "They think, 'If I can warn you about this big scary thing that is happening in our world, for that moment, I will feel like I'm in the spotlight a little bit.'

"And you also have access to a wider audience," she said. "Before if you got a great story, you'd make a photocopy and stick it up on the bulletin board by the elevator. Now all you have to do is hit the alt-forward key and send it out." The ease of transmission makes it nearly impossible to kill an Internet rumor, no matter how outrageous, defamatory, or potentially damaging. The Hilfiger rumor, for one, exploded on the Internet in 1996, and it's still going strong. According to the story, long proven false, the designer went on the Oprah show and said that he didn't want African-Americans or Asians to wear his pricy signature clothing. Both Hilfiger and representatives from the Oprah show issued statements denying the rumor—Hilfiger has never even appeared on the show—but the tale simmers down for a while and then reemerges apace.

That kind of story is what experts call a "diving rumor," a tale that is repeatedly debunked but refuses

to die. "It's like one of those carnival games, where you have a mallet and you have to hit whatever comes up," said Gary Alan Fine, a sociology professor at Northwestern University and author of *Manufacturing Tales*. "It comes up. It is batted down. Then a few weeks later, it comes up again in another place."

A textbook example of a diving rumor emerged late last year. According to the original tale, Steve Burns, host of the Nickelodeon children's show "Blue's Clues," had died in a car crash. The rumor fizzled, but a few weeks ago, it reemerged—with dramatic embellishment. The new version claims that the cable network is covering up Burns's death by using a look-alike in the show, a tale similar to the "Paul is dead" stories that circulated about Paul McCartney in the '60s and '70s. But this particular story didn't just affect mature adults: It spread among young children, who were understandably distraught. "Some people might think this is a joke, but it isn't funny for these children," said Angela Santomero, the show's co-creator and co-executive producer. "They regard Steve as a great camp counselor, and that's why they're so upset." Daniel Anderson, a psychology professor at the University of Massachusetts at Amherst and a "Blue's Clues" consultant, said the rumors were likely started by cynical adults who are put off by the show's innocence. "There is a resentment of the characters that have special places in the hearts of children," he said. "But these kinds of rumors can be extremely destructive and are certainly upsetting to young children." . . .

For all of its chaotic freedom, the Internet has a dark side: Every day is April Fools' Day in cyberspace. Pernicious rumors are difficult to squelch and even harder to trace. "It's hard to find the precise moment when an urban legend comes into being," said Mikkelson. "It's like trying to find out where a river starts."

Source: **Hartigan, P.** (1999, April 9). Unfounded rumors can prove indestructible in cyberspace. *Boston Globe*, p. A1.

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## Understanding the Reading

**Directions:** Answer the following questions in the space provided.

1. What happened when a phony Web site announced a mythical corporate takeover?

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(continued)

2. How were urban legends spread before the Internet?

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3. Give an example of a business that may have been harmed from a myth that was spread via the Internet.

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4. Why do folklorists say these rumors multiply?

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5. What is a “diving rumor”?

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 **Thinking Critically**

Directions: Answer the following questions in the space provided.

6. How can you avoid being fooled by an urban myth?

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7. How would you feel if you were the victim of untrue rumors spreading on the Internet? What would you do to address the falsehood?

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8. How do these urban myths strengthen your existing attitudes?

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## CASE STUDY

## 20

**“The Jury Will Disregard That!”**

**Directions:** Read the following case study, then answer the questions that follow.

**Hypothesis**

When a judge tells a jury to disregard certain information, can the jury forget what they have read or heard? How can the opposing attorney minimize the effects of such information? The hypothesis of this case study assumes that an attorney can reduce the effects of pretrial publicity or inadmissible evidence by creating the suspicion that this information was presented with ulterior motives.

**Method**

To test the hypothesis, an experiment was conducted in which participants became mock jurors in a murder trial. Researchers prepared a trial transcript and created what looked like copies of newspaper articles and a set of instructions to the jurors. These were standard judicial instructions directing jurors to not be influenced by prejudice or passion, and to make all judgments “from evidence received in the trial and not from any other source.”

Participants were asked to imagine that they were jurors in an actual trial. Each was to read the material provided and make a decision concerning innocence or guilt in the case. There would be no jury deliberation. Responses from each “juror” would be anonymous.

All participants read the same 22-page transcript of the trial, *State of New York v. Charles Wilson*. The defendant, Charles Wilson, was accused of killing his estranged wife and a male neighbor. The transcript consisted of the judge’s opening instructions to the jury, the opening and closing statements of the prosecution and the defense, and the testimony of six witnesses.

The prosecution argued that Wilson believed his wife was having an affair, hired a private investigator to prove this, and killed his wife and the neighbor when he discovered them together in her home. Wilson had moved out of their home two weeks before the murder. The knife

used to kill the victims had Wilson’s fingerprints on it, and a witness testified that he had seen the defendant in front of his wife’s home on the night of the killings.

The defense argued that the evidence against Wilson was circumstantial; that Wilson’s fingerprints were on the knife because it was his own hunting knife, which was among the many personal items he had left in the house when he moved out; and that the testimony of the eyewitness was unreliable and not relevant to the murders themselves.

Participants were randomly assigned to one of three groups: the control group, the pretrial publicity group, and the suspicion group. The control group read only the transcript of the trial. Their judgment then was solely based on the facts presented in the case.

Before being given the transcript, participants in the pretrial publicity group were given copies of newspaper-style articles. One described the crime, the accusations against the defendant, and that he had been arraigned. A second article reported that Wilson had a history of beating his wife and reported that “sources” said Wilson’s fingerprints had been found on the murder weapon and that witnesses had placed him at the scene of the crime. Also included was a column called “In My Opinion” complete with a photograph of the “columnist.” This column, written in an emotional and hostile way, reported that Wilson was an alcoholic, prone to violence when drinking, and quoted unnamed sources saying Wilson was jealous of his wife. The column contained other bits of negative information about Wilson and called strongly for his conviction.

Participants in the suspicion group were also given the packet of newspaper articles and the column, plus one additional item: a brief news article that called into question the motives of the media covering the case. At no point was the columnist mentioned specifically, although the

*(continued)*

defense attorney did deny the allegations in the column. The defense attorney called the media coverage of the case “completely libelous” and said, “The coverage of this case serves as another fine example of how the media manipulates information to sell papers, and knowingly ignores facts which would point toward a defendant’s innocence.” The attorney suggested that the district attorney’s office may have planted information in the media “in order to sway public opinion.”

**Results**

The principal hypothesis was that exposing participants to pretrial publicity would increase the likelihood that they would think the defendant was guilty, but that making participants suspicious about the pretrial publicity would reduce this effort.

In the “no publicity” control group, a minority of the jurors offered a guilty verdict. Of the pretrial publicity group, more than three-quarters voted guilty, indicating that negative pretrial publicity tended to bias the participants against the defendant. Participants in the suspicion group, however, were no more likely to convict than were jurors in the control group.

**Conclusions**

The study shows that pretrial publicity against the defendant can influence a jury toward conviction, but that creating suspicion regarding the motives behind the source(s) of such publicity can offset the negative effects.

Source: **Fein, S., & McCloskey, A.L.** (1997). Can the jury disregard that information? The use of suspicion to reduce the prejudicial effects of pretrial publicity and inadmissible testimony. *Personality & Social Psychology Bulletin, 23* (11), 1215–26.

 **Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

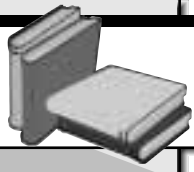
1. What was the hypothesis of this case study?  
\_\_\_\_\_
2. What kind of “evidence” did the researchers prepare to serve as pretrial publicity?  
\_\_\_\_\_
3. How did the column, “In My Opinion,” create the attitude in the reader that the defendant was guilty or not guilty?  
\_\_\_\_\_
4. Were the jurors to deliberate together and decide as a group, or were their decisions to be made individually? Why?  
\_\_\_\_\_
5. How did the results vary among the control, pretrial publicity, and suspicion groups?  
\_\_\_\_\_

 **Thinking Critically**

**Directions:** Answer the following questions on a separate sheet of paper.

6. In a case where there has been considerable pretrial publicity, why would a judge instruct a jury to make all judgments “from evidence received in the trial and not from any other source”?
7. How can pretrial publicity prejudice people who serve on juries? How can this prejudice be lessened?

## READING



## 21

**Steve Blass Disease**

**Directions:** Read the following selection, then answer the questions that follow.

Professional athletes are paid large sums of money to entertain us. We demand excellence in return for that money. What happens when a successful athlete suddenly loses his ability to perform, not because of a physical problem, but because of a psychological problem? Steve Blass did not find an answer to this problem. Today the advances in sports psychology may be able to supply other professional athletes the help they need to stay on top of their game.

It almost never fails. Any time a big league pitcher can't find home plate with his fastball, Steve Blass gets a telephone call. Any second now, he can expect Atlanta pitcher Mark Wohlers' agent to break in with an emergency call. "They say, 'We'd like you to talk to this guy,'" Blass says, "and I say, 'I'm the last guy you want to talk to him!'"

Blass is baseball's most enduring mental mystery. After pitching the Pittsburgh Pirates to the 1971 World Series title, and winning 19 games the next year, Blass lost control of his pitches in 1973 and was out of the game, at 32, in 1974. "To this day, I don't know what caused it," says Blass, now a Pirate broadcaster. "I never had a sore arm in my life." The malady remains commonly known in baseball circles as "Steve Blass Disease." Blass didn't have a team psychologist to turn to, although on his own he sought out everything short of shock therapy. "I went to a hypnotist and he said, 'You're a bad subject.'" Blass wishes he could have tapped into today's advances in sports psychology. "I think there would be more things for me to try," he says. There have been considerable strides made in helping athletes cope with the mental side of sports. Agent Leigh Steinberg says many of his famous clients use acupuncture, acupressure, meditation and yoga for stress relief. The Dodgers and Angels have sports psychologists on staff, although many players are still reluctant to take a seat on the couch. "No one wants to admit it's mental," Angel team psychologist Ken Ravizza says. "They say 'It's my arm, my mechanics, it's not my head.' It's the biggest barrier I have to overcome, the whole shrink image. I say, 'I'm not a shrink, I'm a stretch.' On the Angels, maybe one-fourth of the guys are really into it." Troy Percival and Tim Salmon are two Angels not reluctant to admit they work with Ravizza. Percival uses breathing techniques to stay calm on the mound. "The game goes from 100 to 1,000 mph," he says. "If you can't slow it down, the game's over."

Modern sports psychology was popularized in the late 1960s by Soviet and East German doctors in their work with Olympic athletes. Yet, 30 years later, Ravizza says only about half a dozen major league baseball teams employ psychologists. In the macho world of baseball, getting players to open up is about as easy as hitting Greg Maddux. "This is about being great, it's not that you're messed up," Ravizza tells players. Former Angel Damion Easley, now with Detroit, has been using hypnotherapist Pete Siegel since 1995, yet only recently admitted it publicly. Easley didn't even tell his teammates. Salmon says, "A lot of players say, 'Hey, wait a minute, I don't need my whole game analyzed.'" Easley finally "came out" because he credits Siegel for salvaging his career. "I feel it's my responsibility to help others," Easley said recently.

"And when I went through a tough time, this is how I got out." Ravizza is not familiar with Siegel's work, but says that, in general, players have to be careful in seeking counsel. "There is no magic dust," Ravizza says. "A hypnotist says, 'I'm going to change you overnight?' I'm sorry, I disagree. You might get a quick fix, but it's got to be developed over time. I see a lot of people selling witch oil." Salmon agrees. "People are always looking to jump on your coattails and be associated with success of a person," he says. "You can confuse players, overload players. Paralysis by analysis. I take a very simple approach." Some see today's modern players and wonder how they could possibly be stressed out. "In my day, you had to produce on the field, then had to work in the winter to put food on the table," former Dodger Ralph Branca says. "I'd say there was more pressure in my day." Many of today's players enjoy salaries that can secure them for life, free agency, guaranteed contracts and no-trade clauses. "There could be a lack of pressure," St. Louis Cardinal Manager Tony La Russa argues. "It's a tough time to be excellent, tougher now than ever before."

*(continued)*



You have to dig real deep inside yourself. A lot of the natural motivators are not there anymore, like survival, like conditions of employment. A lot of them don't worry, believe me." Yet, if stress on the modern athlete is different, Steinberg argues that it's very real. "Every single week, unhappy athletes call up," Steinberg says. Salmon also disagrees that today's athletes have less stress. "ESPN shows everything you do," Salmon says. "On every news channel there is some sarcastic sportscaster, part-time comedian. If you screw up, some guy makes a joke about it and all the guys in the locker room are watching. Scrutiny, that's probably different than in the past." Steinberg says increased media coverage and sports-talk radio have dramatically raised expectations for players and fans. "People with large amounts of money, power and success are not necessarily calm, placid and content," Steinberg says. "Unfortunately, if they don't deal with it well, it can be alcohol that ends up being the stress reliever." Steinberg says he doesn't believe any of his top clients, mostly NFL stars, see sports psychologists. Who needs a shrink when you can lean on your agent? It is Steinberg, in fact, who serves as his clients' primary care giver. Steinberg has found one method of therapy particularly effective. "You will find, while not

scientific, for many athletes it's the ability to sit on a chair at home, with no one talking to them, with a satellite dish, flipping from TV show to TV show," Steinberg says.

"That's probably the No. 1 method of vegging out." Ravizza thinks most fans underestimate what it means to be in the public spotlight. "One of the biggest fears of pro athletes is embarrassment," he says.

"When it comes to performance, that hasn't changed. They all stand naked before the gods, and the great ones thrive on that." Sports psychology could not solve the mystery of Steve Blass, although he left no base unturned in search of a cure. "I would put two film projectors in a room and put up the footage when I was throwing good and when I was throwing bad, and I didn't see any difference," he says. "I could warm up in the bullpen and be fine, but when I got a hitter up there, I just froze up." Blass' legacy? "Me and Lou Gehrig," he says. "The only two guys with diseases named after us."

Source: **Dufresne, C.** (1998, August 9). Skull sessions: Many forms of therapy are available to help today's stressed-out, struggling athlete cope with the mental side of the world of sports. *Los Angeles Times*. p. 12.

### Understanding the Reading

**Directions:** Answer the following questions in the space provided.

1. What happened to Steve Blass that ended his professional baseball career?

\_\_\_\_\_

2. How was modern sports psychology popularized?

\_\_\_\_\_

3. What does Ken Ravizza, the Anaheim Angels team psychologist, caution about seeking counsel?

\_\_\_\_\_

4. What is the difference between the stress felt by professional baseball players today compared to players in the 1950s and 1960s?

\_\_\_\_\_

### Thinking Critically

**Directions:** Answer the following questions on a separate sheet of paper.

5. If you were a sports psychologist and had a player who suddenly was unable to perform, what types of therapy or treatment would you recommend?
6. Assume you listen to a sports-talk radio program. The professional team in your city has just hired a sports psychologist. Many fans are calling in complaining about pampering million-dollar athletes. You think it is a good idea to have a sports psychologist available to players. When you call in to the show, what would you say?

## CASE STUDY

## 21

**“Can I Get Some Service Here?”**

**Directions:** Read the following case study, then answer the questions that follow.

**Hypothesis**

Common sense tells us that waiting time in checkout lines directly correlates with customer satisfaction, a subject of concern for some industrial/organizational and consumer psychologists. Customer satisfaction increases as waiting time decreases. There, however, is a difference between objective waiting time and perceived waiting time. Objective waiting time is the actual time spent in line. The perceived waiting time may be longer or shorter than the objective waiting time depending on a variety of factors such as the person's mood, what else the person has to do, the apparent efficiency or inefficiency of the checkers, and the customer's expectations about waiting in line. For this study, both objective and perceived waiting times were assessed.

**Method**

To test the hypothesis, two large, high-volume supermarkets from different chains were selected. The store in Sacramento, California, is located in a predominately white community. Customers' median age is 37.4 years and median income is \$37,721. The Woodland, California, store is located in a community with a predominantly white and Hispanic population. Customers' median age is 30.4 years and median income is \$34,420.

Store management at both stores cooperated with the study. Measurements were taken during slow times (8 A.M. to 11 A.M.) and busy times (4:30 P.M. to 7:30 P.M.) on two separate Saturdays. Observation prior to these two dates determined which checkers were faster and which were slower.

Several research teams were used. Each consisted of three or four members so that as large a sample as possible could be gathered. Some researchers were assigned to the checkers. They used naturalistic observation techniques and recorded the wait time and serve time. Wait time

is defined as the time when the person entered the line until the time the checker began to serve him or her. The serve time measured the actual checkout process from the checker's greeting to the point where the money was received and the receipt was given.

The remaining researchers were assigned to interview customers as they started to leave the store. The brief interview consisted of four questions:

1. How long do you think you were waiting in line today before you reached the checker? (perceived wait time)
2. Was your wait today shorter, longer, or about as long as you expected? (participant's expectations about the wait)
3. How satisfied are you with the service you received today? (satisfaction with the checker)
4. How satisfied are you with the store? (satisfaction with the store)

The sample consisted of 117 customers from the Woodland supermarket and 155 customers from the Sacramento store.

**Results**

Research confirmed that the store environment (busy or slow) and the speed of the checkers (faster or slower) did affect objective waiting time, perceived waiting time, and serve time.

Objective waiting time was longer at the Sacramento supermarket when the store was busy. Objective waiting time was longer at the Woodland supermarket when the store was slow. At both stores objective waiting time was longer with a slow checker than with a fast checker.

Perceived waiting time was longer at the Sacramento store when the store was busy, whereas the opposite was true at the Woodland store. At the Sacramento store, perceived waiting time was longer with the slower checker, whereas at the Woodland store the speed of the checker

*(continued)*

did not affect the customer's perceived waiting time.

Serve time was constant at the Sacramento store but was longer at the Woodland store when the store was not busy.

At both the Sacramento and the Woodland stores, customers were more satisfied with their service when their waiting times were shorter than or as long as they expected. Waiting time expectations did not affect customers' satisfaction with the store itself, in either supermarket.

Customer satisfaction was high at both the Sacramento store and the Woodland store. Eighty-nine percent of customers at the Sacramento store, and 96 percent of customers at the Woodland store indicated that their waiting times were shorter than or as long as they expected.

**Conclusions**

Results of the study confirmed that as perceived waiting time decreases, satisfaction with the server increases. Interestingly, perceived waiting time influenced satisfaction or dissatisfaction with the server but had very little influence on satisfaction with the store.

For the majority of customers, their perceived waiting time was greater than their objec-

tive waiting time. Customers' perception of waiting time, not the actual waiting time, did influence their satisfaction with the service.

Checkout time at the Sacramento store did not vary as much between busy times and slow times, but objective time, perceived time, and serve time were longer at the Woodland store during times when the store was not so busy. Apparently checkers at the Woodland store varied their speed with the changes in the store environment (busy or not busy). Customer satisfaction at the Woodland store increased, not decreased, with the slower speed of the checkers, suggesting that interaction between customer and checker increase during slow times. Results imply that this heightened interaction increases customer satisfaction with the service.

This study showed that longer perceived waiting time and longer objective waiting time do not necessarily decrease customer satisfaction. Interaction between checker and customer, which this study did not measure, may be more influential than perceived or objective waiting time.

Source: Tom, G., & Lucey, S. (1997). A field study investigating the effect of waiting time on customer satisfaction. *Journal of Psychology: Interdisciplinary and Applied*, 131 (6), 655-60.

 **Understanding the Case Study**

**Directions:** Answer the following questions in the space provided.

- 1. Standing in line is common in fast-food outlets, retail stores, banks, theme parks, and other places. What type of store was selected as the setting for this study?

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\_\_\_\_\_

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- 2. What is the difference between objective and perceived wait time?

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3. What four questions did the interviewers ask?

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4. Why was the objective wait time longer at the Woodland store when the store was not busy?

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 **Thinking Critically**

**Directions:** Answer the following questions in the space provided.

5. Why is it important for store management to study customer satisfaction as it correlates with customers' wait times?

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6. If the study showed that perceived wait time is important to the customer, what could store managers do to make perceived wait time seem shorter for shoppers?

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7. As an industrial/organizational or consumer psychologist, what recommendations would you make to the management of the Woodland store about the personality characteristics of checkers? Explain your answer.

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# Answer Key

## Chapter 1, Reading

1. Psychologists use the *Ethical Principles and Code of Conduct* from the American Psychological Association.
2. Ethical behavior consists of actions and decisions that follow a set of moral values or a code of professional conduct.
3. They could do harm through commission or omission errors. Commission represents actions taken that result in harm. Omission represents actions not taken or information not given that results in harm.
4. Student answers may vary. In a broad sense, all nine of the items could be viewed as general ethical principles for living. However, the broadest statements seem to be “being just,” “being faithful,” and “treating others with caring and compassion.”
5. Student answers will vary. The motivations for psychologists to act unethically include greed, desire for recognition, an unfeeling or uncaring attitude, and revenge.
6. Students may agree or disagree with this statement. Those who agree with it will argue that the code of conduct gives a psychologist significant boundaries that can be recognized and acted upon, even by someone with no moral principles. Students may point to people they know who lead, or appear to lead, double lives, one professional and one personal. Those who disagree will argue that a lack of ethical principles in one’s personal life will eventually spill over into one’s professional life. The media regularly report examples of such behavior.
7. The ultimate goal is to treat clients with respect and dignity as human beings, to improve their condition, and to give them respect.

## Chapter 1, Case Study

1. Its purpose was to use scientific research to explain psychic phenomena.
2. The two reasons cited are the resistance of those practicing psychic phenomena to being subjected to scientific experimentation and a lack of financial resources to conduct the study.
3. The society studied thought transference, hypnosis, witchcraft, apparitions, and mental telepathy.
4. He said that they were closed-minded in their thinking, because they dismissed any phenomena that did not fit into their idea of the way things should be.
5. Students should recognize that although the society collected an impressive body of evidence, its entire purpose was to develop theories to explain such phenomena. It failed in that endeavor.

6. It appears that he did support their research since he encouraged them to continue to gather and record facts.
7. William James was interested in mental processes and the way that mental processes could improve everyday life. If the society could have produced useful theories about psychic phenomena, James hoped that psychologists could find ways to use these phenomena to help people with everyday living.
8. Answers will vary. Possible answers include the fact that some aspects of behavior defy scientific explanations or that researchers have not yet been able to understand how the human mind works well enough to create scientific theories for some phenomena.

## Chapter 2, Reading

1. He believed his treatment worked because some people got better. He rationalized that those who died were too sick to have been saved by any treatment.
2. Scientific theories must be stated in such a way that predictions made using the theory can be proved false.
3. Specific predictions can be made using good theories.
4. The quality of the confirming evidence is more important than its quantity.
5. Student answers may vary. Some students may say that the theory could be confirmed in a general way by suggesting to participants who are under hypnosis things that have not occurred. If, when the participants are returned to normal consciousness, they remember these false events as true, you would have a confirmation of the theory.
6. When research results falsify a theory, researchers have a basis for developing new theories and ruling out other possibilities. For example, the earliest proposals that different parts of the brain were responsible for different functions proved to be an accurate insight, even though the specific functions assigned to various areas of the brain proved to be totally wrong.

## Chapter 2, Case Study

1. Researchers were studying how race, gender, style of clothing, and type of store affected the delay in service by salesclerks.
2. Retail stores in two shopping malls were used in the study. The stores were one-entrance (smaller) stores that specialized in female, male, or gender-neutral merchandise.
3. The delay in service (based on the race, gender, or attire of the customer) was being measured.

# Answer Key

4. Caucasian males in business clothing received the fastest service. African American males in casual attire received the slowest service.
5. The independent variables are gender, race, type of store, and type of clothing.
6. Student answers will vary. Many will say that salesclerks should be reminded of the importance of all customers. Service based on race or gender should not be the model used by any store. Service based on attire may be somewhat more defensible, especially if the store is busy. Salesclerks should be reminded, however, that first impressions can be misleading.
7. The malls used in this study were located in predominantly Caucasian, upscale areas. Also, the salesclerks were primarily Caucasian. Future studies could use urban malls and stores with a better racial mix of salesclerks and customers.

## Chapter 3, Reading

1. In 1993, 48 percent of preschool children with working mothers were cared for by a relative.
2. Prior to the Industrial Revolution, mothers were economically productive workers and primary child caregivers.
3. World War II caused large numbers of mothers to enter the workforce to replace the male workers away at war.
4. Children from low-income families gain the most benefit from quality child care because low-income children benefit from learning opportunities and social and emotional supports that they otherwise might not get.
5. In agricultural societies, where the home and the farm were seen as a unit, mothers contributed to the family's income by working on the farm. Since much of the family's food came from the farm, mothers also canned and preserved food for use during the winter. This assured that the family would have food during the farm's nonproductive months even if there was limited income during those months. Mothers also took the primary responsibility for child rearing.

In industrial societies, work was no longer done at home, which often left the mother unable to provide economically for the family. Her role became primarily one of child rearing. If the family's income was not sufficient, however, many mothers had to learn to juggle work outside the home with child-rearing responsibilities.

6. Student answers will vary. Societies that value the economic role of mothers in the workplace will support that role by accommodating the responsibilities of work and child care. Providing quality child care is a signal of support, while lack of good,

affordable care signals a lack of support. Also, the values that society places on child rearing will affect the decision of mothers to enter the workforce. If having "all the right things" is viewed as critically important, many mothers of preschoolers may feel pressured to re-enter the workforce even if they would prefer to stay at home.

## Chapter 3, Case Study

1. The purpose of the study was to see if young children engage in and understand body image and dieting behavior. The study's participants were 431 children in the second, third, and fourth grades in Melbourne, Australia.
2. Results showed that 19.3 percent of boys and 23.7 percent of girls were overweight while 59.9 percent of boys and 48.6 percent of girls were of normal weight.
3. Children were asked to select the figure that most resembled them, the ideal figure, and the one that they felt most like.
4. Children had actively reduced their intake of specific foods, reduced their overall food intake, and eaten healthier foods.
5. The study did not support the idea that young children understand the relationship between restrictive eating habits and body-image dissatisfaction. This indicates that children do not yet have fully developed abstract reasoning skills and that their reasons for dieting are other than because of poor body image.
6. Student answers will vary. Examples include unrealistic expectations and trying to fit in with peers.
7. Student answers will vary. Recommendations may include encouraging parents to know what their children think about their body and how that affects their self-image, and helping their children identify other qualities about people that are more meaningful than physical appearance.

## Chapter 4, Reading

1. Society paid close attention to the moral, intellectual, and social development of teens. Society also recognized adolescence as a time of transition from childhood to adulthood.
2. The author cites the pace of change, adults who are too busy for parenting, adults who have not yet matured fully themselves, aggressiveness of merchandisers and the media to sell to the teen market, and the serious real-world problems that are commonplace in high schools.
3. High schools have become miniature communities with all the social problems found in the adult world.

# Answer Key

4. The author cites increased vulnerability to stress, while exposing teens to increased stress.
5. Student answers will vary. Although teens may have a difficult time understanding the point of view of older generations, they will likely relate to many of the societal problems the author lists.
6. Student answers will vary. The letters should be in good form. Students who support no limits on the types of merchandise and media available to them will cite the right to free speech. If the majority of the class favors no restrictions, cite studies on the desensitization of children resulting from repeated exposure to such things as violence and sexual innuendo.

## Chapter 4, Case Study

1. The estrogen level increases rapidly.
2. Emotional dysregulation is the seeming inability to control one's emotions. It occurs frequently during adolescence.
3. The longitudinal study was designed to study the effect of hormonal changes and stress on the likelihood of developing depression either during adolescence or adulthood.
4. The categories are positive, early transient, late transient, and recurrent. She concluded that hormonal changes during puberty do not cause psychological problems later in life.
5. Recurrent participants had higher body fat and experienced menarche earlier. They also experienced numerous other emotional and social problems during adolescence.
6. The study suggests that physical appearance is extremely important to adolescent females.
7. Student answers will vary. Evidence to support the biological (innate) basis for the behavior would state that female evolution has been based primarily on the ability to attract a mate and take one's place in society as a childbearer. Evidence to support that the behavior is learned would come from the social development theorists who would provide examples from other cultures in which physical appearance does not seem to cause the stress in adolescence that occurs among American teens.

## Chapter 5, Reading

1. Creativity does not decline with age, but may change in form. Also, creativity may enhance the enjoyment of old age.
2. 'Swan-song' creativity is a time in which people's work becomes more meaningful and aesthetically concise as they face death.

3. A University of Nebraska-Lincoln study indicated that 60 percent of the respondents had become more creative as they aged.
4. The three groups were famous; very successful; and men who had never strived for fame, but who had fulfilling careers. She found that these men were, in general, happy with their lives and that creativity had enhanced their lives even if they had not achieved fame or fortune.
5. In general, creativity can be an end in itself. It is not essential to become famous with one's creative talents to be satisfied. The more important aspect of creativity is the joy and satisfaction that the creativity brings to the creator.
6. Student answers will vary. Often young people tend to view current talents as just for fun or something that can only be done when you are young (e.g., athletic talents). Many creative people find ways to build careers and lifelong hobbies around their creative talents.

## Chapter 5, Case Study

1. The two groups were refugees and survivors of the Holocaust. Refugees had fled Europe, while survivors had suffered through life in a concentration camp.
2. Technical generativity was least evident among the two groups, since many had not completed high school or learned a trade.
3. The refugees were more able to nurture their children as well as provide for their material needs. Survivors provided for the physical needs, but often lacked the ability to give strong nurturing or emotional support.
4. Zionism was the strongest component of cultural generativity for the survivor group.
5. Student answers will vary. The baby boom after World War II seems to indicate that biological generativity was important to veterans. Veterans who have had terrible experiences in war often have a difficult time connecting emotionally to others, so parallels could be drawn with parental generativity. There appears to be little connection between survivors and veterans in terms of technical or cultural generativity.
6. The actual reasons seem to vary. Some survivors simply could not speak of the past. Others did not want their children to know of their pain; they did not want to color the perspective of their children, especially when the children were young. Others felt that their experience was not significant compared to those who died. They wanted the Holocaust remembered, but not necessarily their own stories remembered. Others could not sepa-

# Answer Key

rate the guilt of survival from their stories. To tell of the experience would bring back the guilt. Finally, in some families the Holocaust experience formed a great emotional chasm between the survivor and his or her children. When the survivor was finally ready to speak of the events, the chasm seemed too wide to cross.

## Chapter 6, Reading

1. Common consequences of strokes, head traumas, and spinal cord injuries include loss of physical function, paralysis, cognitive impairment, loss of memory, and changes in personality.
2. The two phases are primary and secondary injury. Primary injury occurs at the moment of the stroke or trauma. The secondary injury occurs over hours or days.
3. Excitotoxicity is a genetically programmed mechanism to kill unneeded or unhealthy cells.
4. The NMDA receptors are left open, minerals enter in excessive quantities, and enzymes are produced that destroy the cell membrane.
5. Student answers will vary. Psychological effects include changes in personality, feelings of hopelessness and despair, and emotional upheaval.
6. Student answers will vary. Scientific clinical studies are needed for all drugs to win approval by the Food and Drug Administration. Although drugs prove effective in animals, the same results may not be obtained in humans. In addition, the various side effects may make the drug unusable in humans. The risk and potential benefits of participating in a study must be carefully weighed.

## Chapter 6, Case Study

1. The left hemisphere controls the right side of the body, language, and verbal reasoning.
2. The right hemisphere controls the left side of the body and spatial reasoning.
3. Zaidel's study confirmed that language is a left-brain function. However, it demonstrated that the right brain does process visual information correctly.
4. Schiffer hypothesized that emotions are processed differently by the left and right hemispheres of the brain.
5. Student answers may vary. Some may conclude that anxiety results from disparity between the left and right hemispheres. If this is true, those with low levels of anxiety have better integrated the two halves of the brain. Therefore, there is little difference when studying only one hemisphere. Others may explain that if the emotions that create the anxiety are stronger in one hemisphere, those with

great anxiety will show a greater difference between hemispheres than those with low levels of anxiety.

6. Additional research could study people with various disorders. Similar tests could be performed with each disorder to determine if anxiety levels change from hemisphere to hemisphere. For example, do most people with depression show greater anxiety in the left or right brain? If it is found that one hemisphere is significant, therapies can be developed to treat that hemisphere.

## Chapter 7, Reading

1. Current patterns call for one extended sleep period. In the past, and in other cultures, sleep is often conducted in two parts with a period of wakefulness or semi-wakefulness in between.
2. Communal sleep equals safe sleep. It provides safety from predators, attackers, and spirits.
3. Fear sleep is a state of deep sleep that is a sudden reaction to intense anxiety or unexpected fright. Certain people who are accustomed to sleeping in sensory-filled locations may engage in fear sleep.
4. He found that people slept in one long stretch for the first few days, presumably to catch up on their sleep. Then they slept in two segments with a time of wakefulness between the segments.
5. The traditional view is that the friend is suffering from insomnia. The anthropological view would suggest that this is a normal sleep pattern. Using the anthropological model, your friend should go to bed earlier and use the wakeful period in the middle of the night in some constructive manner.
6. Student answers will vary. Explanations include artificial light has shortened the sleep cycle, the relative safety of modern life from traditional nighttime threats, and the rise of an industrial society that regulates the day by work shifts.

## Chapter 7, Case Study

1. Chronic pain is long-term pain from a known or unknown source that cannot be relieved through surgery or physical therapy.
2. She was not being helped by any of the traditional approaches to pain management, so she took responsibility for her own health and learned how to manage the pain through self-hypnosis.
3. She used a lake to symbolize her pain.
4. She became more relaxed and eased the pain by visualizing the lake getting smaller. She was able to reduce her pain to a more manageable level.
5. The biopsychosocial approach combines traditional medical treatments like surgery and physical therapy with psychological and social



# Answer Key

approaches such as group therapy, relaxation therapy, hypnosis, and biofeedback.

6. Student answers will vary. Answers should explore the altered state of consciousness achieved during hypnosis as the explanation for success.
7. Student answers will vary. Many students will note a primary advantage of self-hypnosis is the ability to use the technique whenever and wherever one decides, rather than waiting for the hypnotist to become available.

## Chapter 8, Reading

1. Weightlessness is the primary effect on the body during spaceflight.
2. The three semicircular canals of the inner ear are responsible for side to side motion.
3. The otolith organs in the inner ear are responsible for forward motion.
4. In spaceflight, travelers do not feel like they are falling as they do when skydiving probably due to the lack of perceptual cues.
5. Virtual reality games and simulations can create the same type of motion sickness.
6. They experience gravity pulling on their bodies and making them feel heavier than they actually are. They also may experience a variety of illusions.
7. Student answers will vary. Their arguments should center around the ways in which research in space has helped us understand more about how the body works on Earth.
8. This is a creative writing assignment. Challenge students to consider how their day-to-day lives would be different.

## Chapter 8, Case Study

1. Perfect pitch is the ability to identify a note or tone without having another note for reference.
2. The hypothesis was that perfect pitch has both an inherited and a learned component.
3. The researchers used native Vietnamese and Chinese speakers because they use a tonal language.
4. They found that the entire sample had perfect pitch.
5. They used 40 pure tones.
6. The researchers concluded that the ability is inherited, but will flourish only if developed and nurtured.
7. Answers will vary. The most obvious way to test the hypothesis is to conduct a perfect pitch study similar to the one used at the University of Southern California at San Diego with speakers of tonal languages.

8. Answers will vary. An example would be the acute sense of smell that may be inherited, but must be developed for specialized use such as perfume testing.

## Chapter 9, Reading

1. The two explanatory styles are optimist and pessimist.
2. You develop your explanatory style during childhood and adolescence.
3. The three dimensions of the explanatory style are pervasiveness, permanence, and personalization.
4. Pervasiveness and permanence control what you do.
5. Student answers will vary. Students are likely to find that their responses are primarily optimistic or pessimistic.
6. Student answers will vary and the exercise is by no means conclusive. For a more thorough test of optimism and pessimism, use the test developed by Seligman, which is printed in *Learned Optimism*.

## Chapter 9, Case Study

1. Male blue gourami fish establish territories for nesting sites (to attract a suitable mate).
2. The unconditioned stimulus is the stimulus fish, while the conditioned stimulus is the red light.
3. Pavlovian-conditioned fish (PAV) were paired with unconditioned fish (UNP), and Pavlovian-conditioned fish presented with the red light (PAV-L) were paired with Pavlovian-conditioned fish that were not presented with the conditioned stimulus (PAV-NL).
4. No loser of Contest 1 defeated a winner of Contest 1 (0%).
5. The best nesting sites enhance the reproductive possibilities of the male by allowing them to attract the best females.
6. Student answers will vary. Since territorial instincts are strong in other species, it seems likely that similar conditioning would be possible with other types of animals. However, conditioning aggressiveness without pairing it with a strong motivation for the aggressiveness may not be as successful.
7. Student answers will vary. The strongest possibility is that winners incur less pain and take less physical punishment than losers. As a result, winners are more fit and less fearful in later contests.

## Chapter 10, Reading

1. She became depressed because she remembered frustrating or irritating events.
2. Before the tests she would review the highlights of

# Answer Key

her life. During the reviews she generally recalled happy memories. During the memory tests she was reminded of irritations that had occurred.

3. She had forgotten over 400 of the 1,350 items, or about 30 percent.
4. Long-lasting memories tended to be fairly unique, nonrepeated events, or surprising events.
5. Routine events tend to be uninteresting and relatively unimportant. We are unlikely to share them with others or review the events in our minds.
6. Students will complete the sentence in many ways. In general, they will be more likely to remember the surprising event two years from now.
7. Student answers will vary. Some students will point out that Litton was really only testing her ability to remember dates, not general memory function. (Note: This can be extended to a group project in which students design a test of their own memories.)
8. By constantly writing down her memories and testing herself periodically, Litton was using techniques that actually helped to encode memories and improve recall. Most people do not record their memories or test themselves and might not recall events as easily as Litton did.

## Chapter 10, Case Study

1. Some believe that hypnosis can be used to alter memories, as well as enhance them. Since eyewitness testimony is to be based on recollections of the facts, alterations to memories could affect the ability to recall facts correctly.
2. The four principles of the Cognitive Interview are event-interview similarity, focused retrieval, extensive retrieval, and witness-compatible questioning.
3. The control group consisted of the robbery detectives who were not trained in the Cognitive Interview technique.
4. The data were analyzed by comparing the interviews of the trained detectives before and after training and by comparing the post-training interviews of the trained group with interviews of the untrained group.
5. Student answers will vary. Using the information-processing model of memory, we know that memories are originally encoded through our senses. That makes the external conditions of the event important. One way we store information is by its importance. Therefore, events that are more emotional or cognitively more significant may be remembered better or longer.
6. The actual results, which students should be able to infer, indicate that the Cognitive Interview

process does not yield more incorrect facts than standard police interview procedures. The purpose of the Cognitive Interview is not to alter memories, but to retrieve them more effectively.

## Chapter 11, Reading

1. Infants first learn to recognize the sound patterns of their native languages.
2. Jusczyk played each infant's name through a loudspeaker and timed whether and for how long the infant turned his or her head in response.
3. The infant responded for a longer period to his or her own name than to other names, including ones that sounded similar.
4. The critical period theory is the idea that there is a finite period when children can easily learn language.
5. They concluded that children are superior to adults in learning language because they learn sound patterns first and then attach meaning to the patterns.
6. Most students will take the position that second-language instruction should be introduced in younger grades. They will base their reasoning on the reading, which points to children's superior ability to learn languages and the fact that the brain matures by puberty to the point that language learning becomes difficult.
7. Student answers will vary. Abilities at which teens and adults are superior to children include the ability to reason, solve problems, and think critically.

## Chapter 11, Case Study

1. Since the Army is participating in peacekeeping missions with other United Nations troops, it must address how it will keep peace and communicate with troops whose native language is not English.
2. Healy hypothesized that people use strategies from their native language to process and understand foreign language.
3. The three strategies are: noun/noun phrase, noun/pronoun, and noun/zero anaphora.
4. Native Chinese speakers did worse on the unaltered and inappropriate tests, but better on the zero anaphora test. This indicates that these people did use strategies from their native language in understanding their second language.
5. Peacekeepers must clearly understand their roles and avoid conflicts among themselves in order to be able to mediate disputes and diffuse tense situations. Clear and precise communication is necessary to achieve this goal.

# Answer Key

6. Student answers will vary. One suggestion would be to recruit U.S. citizens who are first- or second-generation immigrants from the countries to which you will most likely need to send peace-keeping troops. Such individuals either speak the language or have a working knowledge of the language.

## Chapter 12, Reading

1. The reticular activating system, a small collection of nerves deep in the brain stem, plays a major role in motivation and arousal. It sets the tone for any stimulus that reaches the brain.
2. The neurotransmitters are norepinephrine, dopamine, acetylcholine, and serotonin.
3. The neurochemicals prepare the brain's nerve cells to react more quickly.
4. The emotional brain is the limbic system. It sets the emotional tone for the stimuli we receive, similar to the background music in a movie.
5. One hypothesis is that sleep may replenish the excitatory neurotransmitters in our brain.
6. GABA and adenosine slow brain activity.
7. We feel less vital and less motivated.
8. The coach knows that the body performs better physically, mentally, and emotionally when it is well rested. You should observe the curfew for this one night if you want to perform well on Saturday.
9. Student answers will vary, but the basic response should show that the biological explanation complements the other theories. For example, the incentive theory includes the effect of the environment on motivation, while the biological explanation only explores the chemical changes that affect the strength or weakness of our motivation.
10. Answers will vary. Most students will be able to describe a correlation between their mood and the amount of sleep.

## Chapter 12, Case Study

1. The seven emotions are anger, contempt, disgust, fear, happiness, sadness, and surprise.
2. Researchers theorize that these facial expressions are innate; we are born with them.
3. Display rules that are unique to the culture in which we live affect how and when the expressions are made.
4. The rules are to deamplify, neutralize, amplify, mask, or blend the expression.
5. The primary difference is that the Japanese have a display rule that keeps them from displaying negative emotions in front of someone of higher status. In such situations, the Japanese will mask their facial expressions. The Americans have no such display rule.

6. Student answers will vary. They will likely draw on their own experiences. In some families the display of emotion is discouraged; in others, it is encouraged.
7. Student answers will vary. Display rules usually result from cultural norms, traditions, and social laws. The Japanese have a rather formal and traditional society. The display rules were formed over many centuries to meet their social needs.

## Chapter 13, Reading

1. The exams determine which college or university the student can enter. This, in turn, shapes students' possible choices of jobs upon graduation.
2. He claims that society has lost its vitality because it lacks creative minds with original ideas in the country's various power structures.
3. The office admissions system (OA) is replacing the current system. It uses information about students' extracurricular activities and recommendations in addition to the exam scores.
4. Critics are nervous that the OA system will destroy equality in selection, will result in the dumbing down of education, will hurt the *juku* industry, and will create social unrest.
5. He thinks that the new system will hurt those who have to work after school and are unable to participate in extracurricular activities.
6. The entrance exams allow all students an equal chance at admissions to the best colleges and universities. Admission to these universities has always been based strictly on entrance exam scores, not on who you know or how much money you have.
7. Student answers will vary. Encourage students to research the two systems to find similarities such as the importance of test scores for admission, and differences such as the fact that U.S. colleges and universities have always considered factors other than test scores in making admission decisions.

## Chapter 13, Case Study

1. No, the author believes that laypeople can identify intelligence as well.
2. He asked 476 men and women to describe behaviors that characterize intelligence, academic intelligence, everyday intelligence, and unintelligence. The behaviors were refined into a list of behaviors for each type of intelligence or unintelligence.
3. The participants identified practical problem-solving ability, verbal ability, and social competence.
4. Facets of everyday intelligence are practical problem-solving ability, social competence, character, and interest in learning and culture.

# Answer Key

5. Everyday people had the broader view in that they included everyday competence and common sense in their lists.
6. Student answers will vary. Most students will likely identify some type of “What would you do if” situations.
7. Students are surrounded by academia on a daily basis. Since it is a larger part of their lives than for working people it is likely to be more significant in their descriptions. Also, since many students are relatively young, they may not have discovered the importance of common sense and character in daily living.

## Chapter 14, Reading

1. He identifies risk taking and thrill seeking as our new national behavior.
2. Three expressions of this new behavior are increased participation in extreme sports, career choices in volatile industries, and an upswing in the use of hard drugs.
3. The increased popularity of extreme sports may result from a need for danger and risk, a sense of pushing personal boundaries, the need to test our limits, and the lack of risk in our everyday lives.
4. Risks have been reduced by science, government, lawsuits, and medical advances.
5. He sees risk takers as Type T personalities.
6. Student answers will vary. Students may cite the ability to create that seems to be unique to humans. They could argue that all creativity is a form of risk taking.
7. Farley’s hypothesis supports the view that personality traits are environmentally determined. The genetic makeup of Americans is extremely diverse, making an inherited need for risk taking unlikely. Farley’s position is that culture strongly influences human development of their personalities.
8. Student answers will vary. Some will note that although interest in extreme sports is growing, the total number of Americans involved in these activities is very small. It may not be accurate, therefore, to classify the personality of an entire nation by a small percentage of its population. Some students will support Farley’s view by saying that the cultures of the two countries are vastly different. Cultural influences may shape a personality characteristic like risk taking.

## Chapter 14, Case Study

1. Three hundred eighteen from Berkeley, and 212 from Oakland.
2. The study focused on intrinsic (job satisfaction) and extrinsic (rate of pay, occupational status) career success.

3. The researchers explored several hypotheses, including the following: Neuroticism will be negatively related to intrinsic and extrinsic career success. Extroversion will be positively related to intrinsic and extrinsic career success. Conscientiousness will be positively related to extrinsic career success. Personality measures collected in adulthood will explain more variance in career success than childhood measures. General mental ability will be positively related to extrinsic career success. Personality will explain incremental variance in career success beyond that explained by general mental ability.
4. The study did not support the hypothesis that extroversion is related to job satisfaction (intrinsic career success). It also did not support the hypothesis that personality measures collected in adulthood will explain more of the variance in career success than will childhood measures.
5. The study suggests that career success will be greater when personality traits, general mental ability, and the career path match. If people are not well suited for the career they have chosen, they are likely to face frustration, job burnout, or other negative experiences that will lessen career success.
6. Student answers will vary. Advantages include finding out before you accept a job that you are or are not well suited for it, a reasonably objective way to reduce the list of candidates for a position, and some level of assurance that you will be a good fit with the job. The two largest disadvantages are possible discrimination by eliminating candidates who may be otherwise qualified for the job and eliminating qualified candidates because the job type has not been properly correlated with personality factors or general mental ability.

## Chapter 15, Reading

1. Anxiety is at the extreme high end of the arousal scale.
2. Attention clings to the source of the threat and focuses attention on the threat by narrowing awareness.
3. The divers continued to concentrate on the central task but lost track of the light.
4. The attentional definition of anxiety states that unwanted thoughts and feelings intrude on awareness.
5. Students will list three of the following: pangs of emotion; preoccupation and ruminations; persistent thoughts and feelings, emotions or ideas that the person cannot stop; hypervigilance or excessive alertness; insomnia; bad dreams; unbidden sensations; or heightened startle reactions.
6. Your mind and body are reacting to the stress by focusing attention on the cause of the stress. With

# Answer Key

attention thus focused, boring or repetitive tasks can simply be forgotten.

7. Students will describe various situations in which they felt stress. Students may have experienced any of the symptoms listed in the reading. If they did not experience any of the symptoms, it is likely that the situation was resolved before the anxiety state was reached.

## Chapter 15, Case Study

1. Veniremen are potential jurors who complete the questioning process but are not selected.
2. The veniremen served as the control group because they were not exposed to the independent variable of actually serving on the jury.
3. The surveys were administered immediately after the trial and three months later.
4. The alternates listened to all the testimony and analyzed the evidence, but they played no role in the verdict or sentencing.
5. Hafemeister suggested a five-step model that includes: making sure jurors understand the reasons for the debriefing, reviewing normal reactions to stress with jurors; encouraging but not forcing jurors to discuss their reactions to the trial; fostering mutual support and understanding among jurors; and making concrete suggestions about returning successfully to their daily lives.
6. Student answers may vary. However, if students believe that juror stress affects the fairness of trials, ask them to explain an alternative that would be fairer. The reality is that trials involving gruesome details will create stress; however, helping jurors manage the stress is likely the best way to address the potential problem.
7. Student answers will vary. A few inconclusive studies point to sequestration as a source of juror stress, but there is not clear evidence that the stress affects the outcome of the trial.

## Chapter 16, Reading

1. It affects about 1 in every 100 people, and it runs in families.
2. It would allow testing of members of affected families, verify diagnoses, and, hopefully, lead to new drugs that can treat the disorder.
3. Once the genes are identified, fetuses can be tested, and a positive test could lead to an abortion.
4. Currently, researchers do not know why drugs like Prozac work. Such drugs also do not work for everyone. By identifying the specific genes, more targeted and effective drugs can be developed.
5. Students should write a vigorous defense of the position they choose. Although they may state the

other sides of the controversy, they should clearly take a stand.

6. Barondes envisions a time when psychological disorders can be diagnosed and corrected through gene therapy or molecule manipulation.

## Chapter 16, Case Study

1. The attacks began when Jane was 26. Initially, they occurred only at night.
2. Jane was diagnosed with severe depression, tonsillitis, problems with her teeth, an inner ear imbalance, and other diagnoses of physical ailments.
3. The attacks ceased when her first husband died and she threw herself into working and raising her children.
4. Some researchers think the attacks are caused by the person noticing physical changes while in a light stage of sleep. Others think that people with panic disorder have breathing problems that make them feel like they are suffocating. Other researchers attribute the attacks to separation anxiety and shyness during childhood. Many sufferers are the children of an alcoholic parent.
5. Panic disorder is often treated with cognitive, behavior, and drug therapy. The drugs are used only to control the symptoms while the other therapies are being used.
6. Student answers will vary. The physical symptoms like the increased heart and breathing rates are real. Physicians must first rule out physical problems. Most people who suffer from panic disorder do experience depression. Treating the person for depression, however, will not solve the problem.
7. One of the problems that people with panic disorder face is thinking irrationally about their problems. When they are able to focus on other things and not let the attacks overwhelm them, the symptoms may, for a time, subside.

## Chapter 17, Reading

1. Jill was taught to allow the vet to draw blood, urinate into a cup, and allow an ultrasound.
2. The rewards consisted of pudding, frozen raspberries, gelatin, frozen blueberries, and yogurt.
3. By modifying the orangutan's behavior, they were able to avoid tranquilizing the animal to check the health of the fetus. They were able to draw blood regularly and perform ultrasounds.
4. Jill learned that the veterinarian would disable her with the tranquilizer gun.
5. Through behavior modification, they were able to get Jill to show them the baby.
6. They began the modification by simply sitting outside the bars. Eventually, Jill would be rewarded

# Answer Key

each time she came near the vet. The rewards reduced her anxiety about the vet. Through each stage of the conditioning, the rewards continued to reduce anxiety and encourage Jill to cooperate, even if the procedure was painful or uncomfortable.

7. The basic process of behavior modification is the same for humans and animals. The differences exist in the types of rewards and in the range of applications for which behavior modification is used. In animals, the rewards must be tangible. In humans, the rewards can be intangible, such as acknowledgment and appreciation. In humans, mental imaging can be used to conquer fears, whereas animals do not have the reasoning capacity to respond to mental imaging.

## Chapter 17, Case Study

1. Robert was disruptive especially during transitions, and he often complained that the other boys wanted to fight with him. He lacked good social skills. He also had a great deal of homework and struggled with the amount of reading that was required.
2. Robert had a good relationship with his mother. She was supportive and consulted him in decisions affecting him. Robert had little contact with his father. His father had recently been calling more frequently, but Robert had no stable relationship with him.
3. The professionals were the family therapist and the school counselors. Some students will include Robert's teachers, but the counselor actually participated in the therapy and consulted with teachers about Robert's progress.
4. Cindy would set up a household structure that provided rewards and consequences for chores and schoolwork completion. Robert would be encouraged to interact socially with other children, including attending the boys club. As a family, they would establish quality time that would be free of chores and schoolwork. They would discuss the role of Robert's father and establish a pattern of communication.
5. Robert will be placed at the front of the class to reduce distractions. He will be paired with another student to improve his social skills. He will also participate in group counseling with other children in similar situations.
6. Student answers will vary. Robert does not know what to expect from males. He may be disappointed with infrequent contact and confused by his father's recent attempts to maintain more contact. He may translate that into a lack of trust toward other people, especially his peers.

7. Student answers will vary. Treating a family in context means to consider the circumstances that affect the family and its members. In this case, Robert's behavior at school affected his behavior at home. Additionally, Robert's strained relationship with his father affected him in school and in social situations. By examining all aspects of Robert's situation, the counselor and therapist will be better able to help Robert.

## Chapter 18, Reading

1. He found that anger was not the most destructive emotion in marriage.
2. He has found that criticism, contempt, defensiveness, and stonewalling are destructive. He also identified an unequal balance of power as a cause of marital difficulty.
3. Researchers use videotapes in which they can closely examine the emotional responses between partners. They provide a more accurate record than self-reported behaviors.
4. Studies have shown that happily married couples are healthier and have a stronger immune system. In addition, unhappy marriages often result in emotional problems for the couple and emotional and behavioral problems for the children. By eliminating these problems, better health can be maintained.
5. They recommend that couples share household and child care responsibilities. They also recommend group therapy with other new parents.
6. Student answers will vary. When people are communicating in destructive ways, no amount of active listening is likely to resolve the problem. Gottman identifies criticism, contempt, defensiveness, and stonewalling as demons of marriage. If this is true, couples who listen actively to their partner's expression of these negative emotions will damage their relationship further rather than improving it.
7. Student answer will vary. A love map demonstrates acceptance and intimacy because the person is able to explain his or her spouse's dreams and fears. Acceptance therapy starts from a point of acceptance of the differences that exist in the relationship and communicating the need to maintain and strengthen the relationship.

## Chapter 18, Case Study

1. Individuals' beliefs, opinions, and behaviors are more important in individualistic cultures. In collectivistic cultures, the group's beliefs, opinions, and attitudes are more important than those of the individual.

# Answer Key

2. The hypothesis is that in individualistic cultures, people rely on the formal legal system to resolve disputes even among family members and friends. Collectivistic cultures rely on tradition, moral and religious authority, and an informal dispute resolution process.
3. The researchers used vignettes and a questionnaire assessing people's attitudes. The interviews were conducted in the native language of the participants.
4. They used a 14-item survey. The results did support the researchers' assumption that the Germans were from an individualistic culture and the Kurds and the Lebanese were from a collectivistic culture.
5. In collectivistic cultures, the group and its beliefs, behaviors, and attitudes are more important than the individual. The group often defines these things in terms of tradition or religion. In order to be a part of the group, you learn the same attitudes, beliefs, and behaviors. In individualistic cultures, differences among people are tolerated and, in fact, encouraged. Traditions and religion are not common to all members of the individualistic society. To prevent anarchy, authority to resolve conflict is given to a legitimate authority, such as the state.
6. Student vignettes will vary. Possible vignette: Arthur is shopping for a new dining room set. He is deciding between two antique sets that are similar in style. He finally selects the more expensive of the two, writes a check for the purchase, and makes arrangements with the dealer to deliver the set next week. When the set arrives, it is the wrong one. Arthur phones the dealer, who insists that the correct set has been delivered. The dealer tells Arthur that he had no other sets in his shop that day. The two get in a heated argument. Arthur goes to the dealer's shop to continue the argument. As they argue, an antique lamp gets broken.

Students' analyses of their vignettes should demonstrate that they understand the different approaches used by the two cultures. In an individualistic culture, this type of dispute would likely end up in court. In a collectivistic culture, a friend would likely be called in to mediate the dispute.

## Chapter 19, Reading

1. Amundsen prepared and planned for the expedition in great detail. He consulted experts, the Eskimos (Inuit), about modes of travel and appropriate clothing. He supplied his expedition with adequate supplies and the best gear. He had a clear strategy that balanced progress with the abil-

ities of his team. In contrast, Scott did not consult experts and chose a means of transportation that was unworkable. He did not prepare adequate supplies or gear. He made spur of the moment decisions such as taking an extra team member when adequate supplies were not available or asking team members to carry extra weight.

2. Amundsen and his team achieved their goal and returned home. Scott's expedition did reach its destination, but did not achieve its goal. The team did not have the energy or supplies for the return trip and they all lost their lives.
3. He says that leaders see more than others see, see farther than others, and see things before others do.
4. Leaders can use failures to ponder and change wrong assumptions and flawed methods. They use this knowledge to build future successes.
5. He describes them as optimistic, realistic, prepared, effective, and wise.
6. The authoritarian and democratic leadership styles use the law of navigation. A laissez-faire leader, by definition, does not set direction for the group.
7. Answers will vary. A secondary group could be the school and the leader is the principal. Students evaluate the leader's ability to set a direction for this group. Encourage students to include specific examples when possible.

## Chapter 19, Case Study

1. The hypothesis is that students who do not live with both parents, who have poor relationships with their parents, who have low parental monitoring, and who perceive that their parents support fighting will be more likely to exhibit aggressive behavior and carry weapons.
2. The participants were 8,865 students in the sixth, seventh, and eighth grades in an urban school district in Texas.
3. The average was 16 acts.
4. All four measures influenced aggressiveness: living with both parents, good relationship with parents, parental monitoring, and perceived parental support for aggressiveness.
5. The strongest relationship exists between student violence and a student's perceived parental support for violence.
6. Student answers will vary. Examples include peer resolution of conflicts, role-playing activities that demonstrate alternate means of resolving problems, and counseling available for the stresses faced by teens. Some teens need to improve their social and problem-solving skills. All students need to understand what services are available for

# Answer Key

conflict resolution in a nonaggressive manner.

7. Student answers will vary. Examples include parent education about their role in the aggressiveness of their children and support groups for parents who are struggling with difficult issues in their own lives.
8. Answers will vary. Students may point to the amount of violence in the movies, on TV, or in video games. They may mention increased stress or increased drug use or other social pressures as well.

## Chapter 20, Reading

1. Some investors lost money, while others, especially day traders, made a profit.
2. They spread by word of mouth from person to person or by posting the item on bulletin boards.
3. Tommy Hilfiger was hurt by the story that he stated on Oprah that the company did not want minorities to purchase its expensive clothing. Hilfiger has never appeared on the show, but that has not stopped the rumor from persisting.
4. Rumors multiply because they tap into deep societal fears and stroke egos.
5. A diving rumor is a tale that is repeatedly exposed as false but refuses to die.
6. Student answers will vary. Some students will likely see little reason to avoid these myths; they enjoy the tabloid approach to information. Others will point out that if it sounds unbelievable, you should investigate the facts as thoroughly as possible before passing the legend along.
7. Student answers will vary. Although some students may say they would simply laugh it off, challenge them to think of something that could really hurt them or one of their friends. For some types of rumors, it may be best not to respond because that encourages the rumor to stay alive. If, however, the content could really harm you or someone close to you, you may need to take aggressive action to try to find the source and expose him or her.
8. Answers will vary. Once attitudes are formed they become difficult to change. Information that supports existing attitudes tends to be believed. Information that refutes our attitudes tends to be discounted.

## Chapter 20, Case Study

1. The hypothesis was that jurors are influenced by pretrial publicity about a case. The influence, however, can be mitigated when suspicion is raised about the motives of the media.
2. The researchers created a transcript of the trial,

newspaper articles describing the case, and an opinion column calling for the conviction of the defendant.

3. The opinion column created the attitude in the reader that the defendant was guilty by strongly stating the writer's opinion (which ran against the defendant's innocence) and calling for the defendant's conviction.
4. Jurors were to make their judgments individually. Researchers wanted to test the effects of pretrial publicity, not group conformity.
5. More than three-quarters of the pretrial publicity group voted for conviction. Less than a majority of the control and suspicion groups voted for conviction.
6. The American justice system depends on juries considering only the evidence presented at the trial in making jury decisions, not media coverage and opinions of the case.
7. Pretrial publicity can prejudice a jury by creating the idea of guilt or innocence in people's minds before the actual evidence is presented. Statements made in the media may be presented as facts, even though they could not be presented at the trial as facts. The media may also create an impression of the defendant that is prejudicial. The prejudice can be lessened by changing the site of the trial to a location that has not received the same pretrial publicity. The judge can also instruct the jury not to consider any information except that presented at the trial. In a real juror situation, the verdict must be unanimous. Therefore, if one or two people can focus on the facts of the trial only, the defendant can receive a fair trial.

## Chapter 21, Reading

1. In 1973, he lost control of his pitches. He had no physical problems, and he could not find any mechanical problems with his pitches.
2. It was popularized in the late 1960s by Soviet and East German doctors in their work with Olympic athletes.
3. He cautions that psychologists do not provide magic cures. Hypnosis and other therapies may help, but they take time to work. He also warns that you can overload an athlete with too much analysis, which leads to confusion.
4. Before the high salaries paid to professional baseball players, the players had to worry about supporting their families during the off season when they received no money. Today, the stress results from not having sufficient motivation, being constantly scrutinized in the media, and increased expectations that accompany the large salaries.
5. Student answers will vary. Hypnosis and medita-



# Answer Key

tion are widely used treatments. Cognitive therapy that changes a person's inaccurate ways of thinking would also be a good recommendation.

6. Student answers will vary. Encourage them to make their points clear and brief. For example, a student might say "I think it's a great idea to have a sports psychologist on staff. He can help players keep focused on performing their best. After all, we do want the team to win."

## Chapter 21, Case Study

1. Two supermarkets were selected, 35 miles apart so that their customer base would not overlap.
2. Objective wait time is the actual, measurable time spent standing in line. Perceived wait time is the length of time that the customer thinks he or she has waited in line.
3. How long do you think you were standing in line today before you reached the checker? Was your wait today shorter, longer, or about as long as you expected? How satisfied are you with the service you received today? How satisfied are you with the store?
4. It appears that the checkers spent more time chatting with customers when the store was not busy, which increased both the wait and serve times.
5. Customer satisfaction results in return business for the store. If customers become sufficiently dissatisfied, they will go elsewhere to shop. Although satisfaction may be based on things other than wait time, it is certainly an important factor in customer satisfaction.
6. Answers will vary. Theme parks install video screens that patrons in the long waiting lines can watch. Supermarkets place tabloid racks in checkout lanes so that customers will have something to "read." This may lessen the perceived wait time.
7. Since customer satisfaction was high during the slow time even though the objective wait time was longer, the psychologist could recommend that management look for candidates who are friendly and outgoing, as well as efficient.

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