Faculty Guide

for use with

Moving Images: Exploring Psychology Through Film

WORTH PUBLISHERS
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PROGRAM 1

The Scientific Attitude: Testing Therapeutic Touch (5:21 min)

Description
The program’s opening describes the use of therapeutic touch to treat patients in hundreds of medical centers throughout the United States. A nurse moves her hands a few inches from the body of a leukemia patient. She claims she can feel the defective energy pouring out and is able to channel the healing energy of the universe through her hands into the patient’s body. The patient expresses strong faith in the intervention strategy; she states it brings her comfort at a time when she is feeling helpless and terrified.

For her fourth grade science project, Emily Rosa puts therapeutic touch to the test. She has practitioners rest their hands, palms up, on a flat surface. Working from behind a screen, Emily places her hand over one of the palms (the experimental hand) to see if the practitioner can detect that this palm rather than the other (the control hand) is receiving the energy field. The practitioners fail to beat chance. Nonetheless, their faith in their ability remains unchanged. Emily’s test results were published in the *Journal of the American Medical Association*. Even still, the practice of therapeutic touch remains popular.

The program goes on to explain the placebo effect. Thinking that one is getting a treatment sometimes produces symptom relief. New York University Dr. Michael Aronoff demonstrates. He gives college students a drug and tells them it is either a stimulant or a sleeping pill. Actually, it is a sugar pill. Seventy-five percent of the students claim that the drug had its intended effects, and some even describe dramatic side effects. After learning the pill is an inert substance, one student continues to claim that she truly did experience side effects.

Interpretive Comments
The program dramatically illustrates the fallibility of human intuition and how a simple experiment can put our ideas to the test. Emily Rosa’s study demonstrates how curious skepticism and open-minded humility mark the scientific attitude. The coverage also shows how our expectations can powerfully impact our experience and behavior. Finally, it is worth noting that we are often vulnerable to belief perseverance. Our initial conceptions may persist after they have been empirically discredited.

Discussion Questions
1. How does the scientific method contribute to our understanding of human behavior and experience?
2. What specific research strategy did Emily Rosa use to assess the effectiveness of therapeutic touch?
3. What are the implications of the placebo effect for conducting scientific research?

Relevant Topics: Scientific Method, Thought, Therapy
PROGRAM 2

Neural Communication: Neurotransmitter Acetylcholine (4:22 min)

Description
This animated program begins with a clear, concise description of the neuron’s structure including the cell body, axon, and dendrites. It continues with a vivid demonstration of how cells communicate. Electrical signals travel down the axon to the axon terminal. The actual communication occurs at the synapse, the junction between the axon tip of the sending neuron and the dendrite or cell body of the receiving neuron. The electrical impulse triggers the release of neurotransmitter molecules from sacs called vesicles. The release of the neurotransmitter is called exocytosis.

Using acetylcholine as the example, the program shows how this major neurotransmitter crosses the synaptic gap and binds to receptor sites on the receiving neuron. This binding causes channels to open, allowing sodium ions to flow into the receiving cell, which triggers an electric current and a new impulse down the cell membrane. The program indicates that this process occurs all the time, all over the brain, among billions of neurons.

Interpretive Comments
In showing this clip you might remind students that everything psychological is simultaneously biological. Hence, a close examination of the structure of the neuron and of neural communication is necessary to understanding our thoughts, moods, and actions. Acetylcholine (ACH) is a major neurotransmitter that plays a vital role in memory and learning. It is also the messenger at every junction between a motor neuron and skeletal muscle. Thus, if ACH is blocked, our muscles cannot contract. In contrast, if there is a flood of ACH, say, in response to the venom of the black widow spider, we experience violent muscle contractions, convulsions, and death.

Discussion Questions
1. Why is it important for psychologists to study biology?
2. How do you think drugs might impact neural transmission? What might be the effects on human behavior and experience?

Relevant Topics: Neuroscience and Behavior
PROGRAM 3

Brain and Behavior: A Contemporary Phineas Gage (7:27 min)

Description
The program briefly recounts the classic case of the railroad worker Phineas Gage. A freak accident caused a tamping rod to shoot through his cheek and out the top of his skull. Although Gage survived with his mental abilities intact, his personality changed. He became untrustworthy, profane, and dishonest. With his frontal lobes damaged, Gage seemed to lose his moral compass. Antonio Damasio, a University of Iowa neuroscientist, describes how his current patients show similar changes in personality as a result of brain damage. They seem unable to read important social cues including facial expressions. They become unable to meet the demands of social life.

Joe, one of Damasio’s patients and a stroke victim, demonstrates little emotion. His wife describes him as “always being in neutral.” In the lab, Joe exhibits the same emotional response, as measured by skin conductance, to the picture of a Holocaust victim as he does to one of a windmill. Intellectually he understands what he is seeing, but emotionally he does not connect.

Gambling experiments in the laboratory further demonstrate Joe’s limitations. Having the assigned goal of making as much money as possible, most research participants learn to avoid unwise risks over time. They learn the consequences of their choices. Damasio’s patients, such as Joe, do not. Halfway through the experiment, they are bankrupt. Important clues to this maladaptive behavior are found in the polygraph, which monitors participants’ responses as they gamble. Over time most people show a response not only to the consequences of reward and punishment but they also demonstrate an anticipatory emotional response that guides their subsequent choices. Damasio’s patients do not show such anticipatory responses. The “gut” feelings that guide most people’s decisions and connect emotion with reason are not present. As a result, patients like Joe fail to learn from experience and make the wrong decisions, going bankrupt not only in the laboratory but also in everyday life.

Interpretive Comments
The oldest method of studying brain-mind connections is by observing the effects of brain diseases and injuries. The nineteenth century case of Phineas Gage and Antonio Damasio’s current patients dramatically demonstrate the role of the brain in behavior. Regions of the brain perform specific functions; thus, specific changes in the brain produce predictable changes in behavior.

The cases presented in this program also demonstrate the important role that emotion plays in everyday decision making. Emotions guide our living. Because they lack such emotional signals, Damasio’s patients often fail in the workplace as well as in forming and maintaining close interpersonal relations. Such cases highlight the important distinction between academic intelligence and emotional intelligence.

Discussion Questions
1. Why is the study of the brain and brain damage important to psychology?
2. What important role does emotion play in guiding our behavior?
3. How might Joe’s case inform our understanding of human intelligence?

Relevant Topics: Neuroscience and Behavior, Emotion, Learning, Intelligence
PROGRAM 4

Brain Reorganization: Phantom Limb Sensations (3:22 min)

Description
Derek, a patient whose lower arm was amputated as a result of a motorcycle accident, describes the sensations he continues to experience in the absent body part. When neuroscientist V. S. Ramachandran touches Derek’s cheek, the patient reports sensations in his phantom thumb. Similarly, a stroke across the cheek is experienced as a running sensation down the phantom palm and across the four fingers to the thumb.

Ramachandran explains how sensory information from all parts of the body is mapped onto the brain. Normally, input from the face goes only to that part of the brain devoted to the face. However, in the phantom limb patient this sensory input also invades that part of the map that usually receives input from the amputated arm. Finally, Ramachandran demonstrates how the phantom sensations extend beyond pain and pressure to temperature. This time warm water applied to the patient’s cheek produces the sensation of warmth in the phantom thumb and the “pinkie” finger.

Interpretive Comments
The brain enables our seeing, hearing, and feeling. Phantom limb sensations vividly demonstrate how our sense of touch is not merely a function of the region where we feel it but of the brain itself. The sensory cortex (this term is not mentioned in the program) is the area at the front of the parietal lobes that registers and processes body sensations. The more sensitive a body region, the greater the area of the sensory cortex devoted to it.

This clip also highlights the brain’s plasticity. If a body part is removed, sensory fibers that terminate in adjacent areas of the sensory cortex may invade the brain tissue that is no longer receiving sensory input. The hand region is next to the face region on the sensory cortex. Thus when Derek’s face is stroked, he feels the sensation not only on his cheek but also on his nonexistent fingers.

Discussion Questions
1. What do phantom limb sensations teach us about the basis of sensation and perception?
2. What does this case suggest regarding brain structure and function?
3. What might be some of the benefits of the brain plasticity or capacity for modification?

Relevant Topics: Brain Structure and Reorganization, Sensation and Perception
PROGRAM 5

The Nature-Nurture Issue: Sex Reassignment (4:54 min)

Description
The program traces the troubling “John/Joan” case. A surgical accident in infancy left John, born with an identical twin brother, without a penis. Doctors recommended that his parents raise him as a girl based on the assumption that babies are born with a blank slate when it comes to gender identity. John, now Joan, wore dresses and was encouraged to play differently than his brother.

Media and textbook reports indicated that the sex reassignment was working well. In 1973, when John-Joan was ten, Time magazine reported that the experiment was a success, providing strong support that nurture determined gender. However, John-Joan himself tells a different story. He states, “It was a flop, a failure.” Indeed, researcher Milton Diamond who located John-Joan found him to be bitter about his life experience. Diamond suggests that doctors knew the experiment was not working but because they wanted it to work, allowed it to go on: “Rather than looking between the kid’s ears, they looked between the kid’s legs.”

“Joan” was adjusting poorly even though her genitals looked like those of a normal female. Other children teased her about not being very feminine. John-Joan relates the terrible toll the experiment took: “I had a nervous breakdown.” Finally, at age fourteen, John-Joan gained the strength to announce that he was a boy. He stopped taking female hormones immediately, but it took years of surgery for the reconstruction of a penis.

John reports he is now married and the father of three adopted children. He has sexual relations with his wife but cannot, of course, father children. Although he now looks, sounds, and acts like a male, he continues to struggle with his past including the fear that others will discover his life history. John obviously remains a distraught and angry person. The lesson of the John-Joan case, suggests Milton Diamond, is that gender identification comes from the brain, not the genitals.

Interpretive Comments
In presenting this clip, you will surely want to relate the tragic end to the John-Joan case. Bruce Reimer chose suicide on May 4, 2004 rather than live in unbearable torment. “Bruce-Brenda” disguised in the literature as “John-Joan” was born into a working-class family in Winnipeg, Canada, in the mid-60s. In the course of living as a girl, Bruce ripped off dresses, insisted on standing up to urinate, and asked to shave like his father.

The account revisits the biggest and most persistent issue in psychology, namely what are the relative contributions of biology and experience to human traits and behavior. Are we products of nature or nurture? Clearly, this specific case suggests that gender identity is a matter of nature. However, critics warn that sometimes case studies may be misleading. Any given individual may be atypical. Thus, the study of the relative contributions of nature and nurture to gender identity continues to be viewed as one piece of the puzzle.

This tragic case study also demonstrates that psychology is not value-free. Values affect what we study, how we study it, and how we interpret results. Values can even color the facts. Preconceptions, in this case the assumption that nurture wholly determines
gender, along with biased observations and interpretations, contributed to the tragic failure in treatment.

**Discussion Questions**

1. What does the “John-Joan” case suggest regarding the role of nature and nurture in shaping behavior?
2. What are the benefits and limits of using case studies in psychology?
3. Is psychology value free?

**Relevant Topics:** Nature and Nurture of Gender, Human Development, Theoretical Perspectives

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**PROGRAM 6**

**Do Parents Matter? Peer Influence (5:05 min)**

**Description**

Judith Harris explains why she believes research findings indicate that peers have a stronger impact than parents on development. She observes that twins reared apart from birth are as similar in personality as twins who are raised in the same family. Such findings, Harris argues, suggest that the home environment has little influence on personality development.

Obviously heredity shapes us. In addition, through the process of evolution we are programmed to want to become an accepted and valuable member of a group of people like ourselves. We seek to figure out how peers act and then adapt our behavior to theirs. Immigrant families illustrate the power of peer influence. While parents struggle to learn the language of their new culture, young children master it quickly with hardly the trace of an accent. This finding, Harris argues, points to the power of the peer group. Also, whether teens decide to smoke is determined more by whether their friends smoke than by whether their parents do.

Linguist Steven Pinker of MIT agrees with Harris’s analysis and regards her book as a turning point in the history of psychology. He suggests that we need to abandon the idea that parents can mold their children like silly putty and thus determine how they will turn out.

When eighth graders are asked whether parents or friends are more influential in shaping them, their responses are mixed. Psychologist Alan Sroufe, who disagrees with Harris’s analysis, suggests that peers influence more superficial aspects of behavior such as dress, music preferences, and slang vocabulary. In contrast, parents influence moral character, values, and conscience.

Finally, Harris rejects the claim that parents are responsible for producing adolescents who perpetrate school violence. Rather, she argues, evidence suggests that the killings are carried out by those who feel rejected by their peer groups. She concludes that, in the long run, it may be more important to adapt well to one’s peer group than to be happy at home.
Interpretive Comments
Both parents and peers influence us. Howard Gardner suggests that their impact is complementary. Parents may be more important when it comes to our education and learning the values of responsibility, orderliness, and charitableness. Peers may be more important for learning cooperation and how to be popular, as well as for shaping interaction styles among people of the same age.

As Gardner notes, parents also shape the nature of peer influence by choosing the neighborhoods and schools that supply the peers. On a more fundamental level, Harris states that a group of parents can influence the culture that shapes the peer group. Culture, she argues, is transmitted across generations by “parents’-group-to-children’s-group effects.”

Discussion Questions
1. Who has been more influential in shaping you—your parents or your peers?
2. What implications does Judith Harris’s analysis have for child rearing?

Relevant Topics: Human Development, Social Psychology

PROGRAM 7
The “False Belief” Test: Theory of Mind (3:43 min)

Description
The “false belief” test demonstrates that between the ages of three and four, children’s understanding of others’ mental states changes dramatically. In this particular example, children are shown a crayon box and are asked what they think is inside. Expecting to see crayons, they are surprised to discover that the box actually contains candles. When psychologist Alison Gopnik asks a three-year-old, who has just discovered the candles in the box, what others who have never seen the box would think is contained inside; he answers “candles.” Three-year-olds typically think that everyone sees the world in the same way. Others believe and feel as they do.

Next Gopnik performs the same test with a four-year-old. After unexpectedly finding candles in a crayon box, the four-year-old immediately recognizes that others, who have not yet seen the contents of the box, will say that crayons are inside. By age five, Gopnik states that children find the answer to the false belief to be so obvious that it is even silly to ask. Four- and five-year-olds recognize that people can have different beliefs. Moreover, the world is not always the way it seems and people can change their minds.

Interpretive Comments
Results of the false belief test support Piaget’s idea that a child’s mind is not a miniature model of an adult’s. In showing this clip you may want to introduce students to the term “theory of mind.” It refers to people’s ideas about their own and others’ mental states—about their feelings, perceptions, and thoughts, and about the behaviors these might
predict. The program shows that the child’s theory of mind changes between the ages of three and four. Children come to believe that others may hold false beliefs. Moreover, they begin to understand that two people may think very differently about the world.

Our theory of mind also enables us to infer others’ feelings and thereby fosters our capacity for empathy. The growing ability to take another’s perspective is important to social development as well as cognitive development. Finally, assuming another’s perspective better enables us to predict their future behavior.

**Discussion Questions**

1. How do the results with the false belief test support Piaget’s claim that a child’s mind is not a miniature model of an adult’s?
2. What implications might the findings have for understanding a child’s moral development?

**Relevant Topics:** Human Development, Thinking

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**PROGRAM 8**

**The Rouge Test: Self-Recognition (1:31 min)**

**Description**

This program introduces the “rouge” or mirror self-recognition test that offers important clues to the development of self-awareness. Without children’s knowledge, a red mark is rubbed on their foreheads before placing them in front of a mirror. As the narrator explains and the visual shows, infants younger than eighteen months don’t make the connection between self and the image in the mirror. This becomes clear when one infant looks behind the mirror to find the stranger and even greets the image with, “Hi.”

At about eighteen months of age, there is a change in the children’s awareness. They form the link between self and the image in the mirror. Older children touch their own foreheads when they see the red spot.

**Interpretive Comments**

In the late nineteenth century, Charles Darwin suggested that self-awareness begins when we recognize ourselves in a mirror. Research indicates that self-recognition develops gradually over the course of a year. Beginning at about six months, the child reaches toward the mirror to touch his or her image as though it were another child. By eighteen months, children have a notion of how their faces should look and recognize the strange mark on their foreheads. By the time children enter school, they describe themselves in terms of their distinguishing traits. They also come to evaluate themselves and form a concept of the kind of person they would like to become. By age nine or ten, their self-images are relatively stable.

**Discussion Questions**

1. How might nature and nurture shape our sense of self?
3. How do children’s views of themselves affect their actions?

Relevant Topics: Human Development, Personality

PROGRAM 9

Firewalking: Mind Over Matter? (1:48 min)

Description
In this humorous yet revealing clip, ABC’s John Stossel describes how people learn to walk on red-hot coals. Although instructors say that to firewalk, you “must focus your mind,” physicist David Willey disagrees. In setting up his 165-foot fire lane, he explains that anyone can do it. Why? Because wood coals are a poor conductor of heat, one does not have to believe or chant anything, just walk briskly. With some initial apprehension, John Stossel firewalks and is unscathed. Fifteen others follow him without feeling pain or being injured. Clearly, if people hesitated they would be burned.

Interpretive Comments
This brief clip demonstrates that we are not always aware of the factors that influence our experience or behavior. A feat that many assume demonstrates psychokinesis or “mind over matter” has a simpler explanation. Belief in ESP sometimes stems from understandable misperceptions or predictable errors in thinking. Critical thinking requires that we be open to new ideas but also demand clear and reliable evidence for extraordinary claims.

Discussion Questions
1. To what extent do we understand the factors that impact our own experience and behavior?
2. Do you believe extrasensory perception exists? Why or Why not?

Relevant Topics: Sensation and Perception, Extrasensory Perception, Thought
PROGRAM 10

Sensation Without Perception: Visual Prosopagnosia (3:20 min)

Description
Terry Sweeney, a professional photographer, was a firefighter until a brain injury left her with an inability to recognize faces, a rare disorder known as prosopagnosia. In the opening scenes she is shown taking pictures of her mother. Later she is unable to pick her mother from among four faces of adult women. When shown the body as well as the face of each, she correctly identifies her mother by the color of the shirt her mother was wearing. Although sufferers of this disorder know that they are looking at faces, they cannot recognize the face. Recognition of familiar people is sometimes preserved by relying on cues such as clothing, voice, or gait.

Terry describes the enormous psychological impact of her disorder. It is hardest, she reports, on relationships with my family: “I’ve lost everybody.” Terry has similar problems recognizing the faces of celebrities including past presidents and well-known entertainers. Finally, the program shows she even has difficulty recognizing a picture of herself.

Interpretive Comments
The program highlights the difference between sensation, the process by which we detect physical energy and encode it as neural signals, and perception, the process of organizing and interpreting sensory information. Terry is able to differentiate between faces and other objects but is unable to recognize or interpret faces correctly. Those who suffer prosopagnosia can still make accurate judgments about gender, age, and emotion. Moreover, they can recall detailed information about a specific person and they may even be able to imagine faces of familiar people. Still they cannot recognize their own face. Most fundamentally, this example shows how perception is ultimately done in the brain.

Discussion Questions
1. What is the relationship between sensation and perception?
2. What is the role of the brain in perception?
3. What might be the consequences of visual prosopagnosia on social relationships?

Relevant Topics: Sensation and Perception, Neuroscience
PROGRAM 11
Nonconscious Processing: Blindsight (5:34 min)

Description
Neuroscientist Christof Koch explains how he chose the study of visual awareness to understand human consciousness. Of particular interest to him has been the remarkable phenomenon of blindsight. Koch explains how some individuals who have suffered damage to the visual cortex may experience blindness in part of their visual field. When shown a target in the blind field, they report seeing nothing. However, when asked to guess something about the nature of the target, for example, the direction it moves, they offer the correct response.

In the laboratory, neuroscientist Jochen Braun shows how research participants with normal vision wear special goggles to engage in a simulation of blindsight. They are shown a geometric pattern that appears uniform when viewed by both eyes. However, when viewed only by the left eye or only by the right eye, a small distinctive patch appears within the larger pattern. The goggles insure that the primary visual cortex receives information from the left and right eyes separately. When participants are asked to locate the target pattern, they are able to do so even though they are not consciously aware of seeing it.

Braun explains how a “ventral” visual system enables conscious awareness of objects in our world; a second, “dorsal” system operates unconsciously to guide our eye and hand movements. Melvyn Goodale demonstrates how the two visual systems operate with a glass of beer. The first system supports our conscious perception and awareness of the beer; the second operates unconsciously to guide our hand in reaching for it.

Interpretive Comments
In addition to revealing the complexity of perception, including the possible existence of two visual systems, this program demonstrates how we may know more than we realize. Sigmund Freud was right in recognizing that we have limited access to all that goes on in our minds. However, the contemporary understanding of the unconscious mind is very different from the reservoir of repressed and unacceptable thoughts, feelings, and memories that Freud hypothesized.

The current view of the unconscious mind is that, in addition to the parallel processing that occurs in vision without our conscious knowledge, the unconscious involves the schemas that automatically control our perceptions and interpretations, the nonconscious learning that anticipates patterns too complex and too confusing for us to consciously notice, the emotions that activate instantly before conscious analysis, and a self-concept with stereotypes that unconsciously and automatically influence how we process information about ourselves and others. Clearly our access to all what goes on in our mind is limited.

Discussion Questions
1. What does the phenomenon of blindsight indicate about the nature of consciousness?
2. To what degree are we aware of what goes on in our own mind?
3. How does the contemporary view of the unconscious differ from Freud’s view?

Relevant Topics: States of Consciousness, Sensation and Perception
PROGRAM 12

Psychoactive Drugs: Altering Brain Chemistry (4:06 min)

Description
Two persons who abuse alcohol describe its powerfully pleasant effects. Dr. Alan Leshner, Director of the National Institute on Drug Abuse, explains how the major addictive substances alter brain chemistry to produce their effects. Each substance, suggests Leshner, alters dopamine levels in the same general area of the brain.

The program describes the importance of neurotransmitters, including dopamine, in our body’s neural communication system. When we have a pleasurable experience, our brains release dopamine. For example, eating a delicious meal, winning a race, or receiving a romantic kiss are associated with dopamine release. Drug abusers have learned that their drug use reliably produces such dopamine availability. The effects are far more predictable than everyday pleasurable experiences in producing positive effects. As a result of the drug use and the bombardment of dopamine, the brain changes. It becomes dependent on the drug, and once addicted, one can no longer feel okay without the drug.

The program visits Dr. Steve Hyman’s laboratories at the National Institute of Mental Health where narrator Bill Moyers asks why drugs, and not, say, broccoli, prove addicting. Nothing in broccoli, explains Dr. Hyman, taps into the brain’s reward pathways. He indicates that the major addicting drugs are plant products with chemicals that mimic the release of massive amounts of dopamine. “The chemicals in a small number of plants are Trojan horses,” concludes Hyman, “they are masqueraders...they fool the brain.”

Interpretive Comments
Alan Leshner, Director of the National Institute of Drug Abuse, argues that addiction is fundamentally a brain disorder. This clip clearly and concisely shows how addicting drugs alter brain chemistry. You might add that opiate drugs can suppress the body’s own neurotransmitter production. Thus, when the drug is withdrawn, the brain may be deprived of any form of opiate. The distress continues until the brain resumes production of its own opiates or receives more artificial ones.

Drug use triggers negative aftereffects that offset their immediate positive impact. The user requires larger and larger doses to experience the high (tolerance). In turn, the higher dosage causes the negative aftereffects to worsen in the drug’s absence (withdrawal).

Finally, you might note that the behavioral effects of psychoactive drugs stem not only from changes in brain chemistry, but from the user’s expectations, personality, and the situation. For example, when users are given a placebo they think is cocaine, they may have a cocaine-like experience. Expectations also explain why drug experiences vary with cultures. If one culture assumes that a specific drug produces euphoria and another culture does not, each may find its expectations fulfilled.

Discussion Questions
1. Why do some people become regular users of conscious-altering drugs?
2. What social factors might impact drug use?
3. Is addiction a “disease”? Do you think addictions can be overcome voluntarily?

Relevant Topics: Drugs and Consciousness, Addictions, Neuroscience
PROGRAM 13

Estimating Risk: The Availability Heuristic (4:00 min)

Description
This program relates how the media, particularly newsmagazines and television, can lead us to overestimate the likelihood of certain risks. Through the media’s vivid imagery, certain risks become more available in memory and, as a result, we may overestimate certain threats. We may come to fear the wrong things. With frequent reports of aggressive driving labeled “road rage” we come to see it as an increasingly greater threat. In fact, the number of traffic fatalities and reports of reckless driving are, statistics indicate, declining.

The AAA Foundation for Traffic Safety reported a 51 percent increase in incidents of aggressive driving. Upon more careful examination, it is clear that the increase is based, not on law enforcement statistics, but on the number of incidents reported in the press. Ironically, the results of the AAA study led the media to increase their reporting of aggressive driving. The media itself distorted the numbers by calling road rage an “epidemic.”

Simply the term “road rage” may also make incidents of aggressive driving more memorable than when we did not use the term. Similarly, a report of “flesh-eating” bacteria is more vivid and more likely to lead us to believe that our lives are endangered than is a report that three out of a million people are infected with a strep bacterium that is seldom fatal.

The media rarely prints corrections, notes the spokesperson for the AAA Foundation, and when corrections are published, they do not appear on the front page of the newspaper. In short, the media is not self-correcting.

Interpretive Comments
The availability heuristic refers to the human tendency to estimate the likelihood of events based on how readily they come to mind. The availability heuristic is a rule-of-thumb that sometimes leads us astray and more generally highlights the limits of human intuition.

Events come to mind when they are vivid. Clearly through its imagery and frequency of report, the media shapes the vividness of events, and thus, how readily we call them to mind. One result is that we may come to fear the wrong things. Failure to wear seatbelts represents a greater risk than road rage. World hunger represents a greater threat to our well being than terrorism. Influenza takes more lives than anthrax. In our efforts to improve the human condition, where should we invest our limited time, energy, and resources? Obviously in those threats that take the greatest number of lives.

Discussion Questions
1. How do the media impact our view of the world?
2. How does our use of the availability heuristic affect our judgments of risk?
3. What are the benefits and limits of using rules of thumb, such as the availability heuristic?

Relevant Topics: Thought, Media Influence
PROGRAM 14

Animal Language: The Case of Kanzi (5:02 min)

Description
Scientists have long thought that language is unique to the human brain. Sue Savage-Rumbaugh and her colleagues’ work with Kanzi, a bonobo or pygmy chimpanzee, is challenging that claim.

Rumbaugh relates how her work began decades ago with Kanzi’s mother. Using language in which the words were geometric figures (actually called lexigrams), Savage-Rumbaugh attempted to teach Kanzi’s mother that the figures represented real objects. Although his mother failed to master the principle, Kanzi learned the relationships just by watching, even though he was not being rewarded. For example, he learned the symbol for apple without being given one to eat.

Savage-Rumbaugh uses a keyboard containing 256 symbols (lexigrams) to communicate with Kanzi. She points to the symbols as she states the words. Kanzi communicates back by pointing to the appropriate symbols on the keyboard. The pygmy chimp, reports Savage-Rumbaugh, seems most interested in food, tickling, and biting.

Perhaps most significantly, Kanzi is shown responding to novel requests logically and adaptively. In a controlled testing situation, Kanzi responds to 600 sentences that he has not heard before, e.g. “Give the dog a shot,” and “Put the keys in the refrigerator.” The requests are presented in different grammatical forms and are designed to be as unpredictable as possible. Kanzi responded correctly 75 percent of the time, equivalent to what a 2-year-old child did in a similar setting. Although Kanzi seems to comprehend many of the nuances of spoken English, some critics still question whether he has mastered human language.

Interpretive Comments
Whether apes have demonstrated human language depends on how one defines “language.” If language refers to the ability to acquire a vocabulary and to communicate through a meaningful sequence of symbols, clearly Kanzi has these capabilities. He is able to use lexigrams as true symbols, and he has also mastered word order to decipher the meanings of simple multiword sentences.

However, humans alone possess language if “language” refers to the verbal or signed expression of complex grammar. Kanzi has not acquired the rules for distinguishing plural from singular nouns, for marking the tense of verbs, or for marking any words by grammatical class. As Peter Gray concludes, “Apparently, the brain mechanism that makes grammar so easy and natural for human children came about in our evolution sometime after we split off from the line leading to chimpanzees and bonobos.”

Discussion Questions
1. Have you ever felt that an animal was communicating with you?
2. Does Kanzi demonstrate language? Why or why not?
3. What should be the role of animal studies in psychology?

Relevant Topics: Thought and Language
PROGRAM 15

Intelligence: One Ability or Many? (3:06 min)

Description
After seeing and hearing Gloria sing a sophisticated aria from memory, one would not imagine she has an IQ of 65. She has Williams syndrome, a genetically determined, intellectually disabling condition that occurs in approximately 1 in 20,000 births. As she interacts and converses with others, Gloria appears sociable and articulate. Most surprisingly, however, is her musical ability. She has memorized 2000 songs in 25 languages.

At the same time, her father, a retired biology professor, reports that Gloria cannot tie her shoes, write her name, or do simple arithmetic. He indicates that he and Gloria’s mother have sought to develop their daughter’s strengths so that she may become self-supporting. For example, in addition to her singing, Gloria is shown attempting to master the accordion. Our greatest concern, reports Gloria’s father, is what will happen to Gloria, after we die.

Interpretive Comments
Like people with savant syndrome who score low on intelligence tests but have some specific skill, Gloria raises important questions about the nature of intelligence. Does intelligence consist of one ability or several specific abilities? Howard Gardner suggests that we do not have an intelligence but multiple intelligences that are relatively independent of each other. Thus, people show linguistic intelligence, logical-mathematical intelligence, musical intelligence, and spatial intelligence, etc. Psychologists agree that people have specific abilities but debate whether a general intelligence factor (g) runs through them all.

Those with Williams syndrome tend to have mild to severe learning difficulties. They have relatively good verbal abilities and show fluent and articulate speech by school age. In many cases, however, their understanding of speech is not as good as their expression seems to indicate. They also have marked visual-spatial and motor difficulties. Gloria suffers from mild retardation as measured by her intelligence test score. Adults with IQs between 50 and 70 may, with assistance, achieve self-supporting social and vocational skills.

Discussion Questions
1. What is intelligence? Is it one ability or many?
2. Should schools seek to foster the development of all human abilities?
3. How do you feel about mainstreaming children of all ability levels in the same classroom?

Relevant Topics: Intelligence
PROGRAM 16

Eating Disorders: Anorexia Nervosa (4:23 min)

Description
Twenty-five year old Jane Ann Spears was diagnosed as having anorexia nervosa at a very young age. After learning that her jean size was greater than most of her seventh-grade classmates, she was determined to lose weight. Her dieting continued for six years and her weight fell from 102 to 62 pounds. The program relates how anorexia can go hand in hand with bulimia, a disorder marked by food binges followed by forced vomiting. Once started, dieting and binging are very difficult to stop.

The dangers of the eating disorders are apparent in the lives of Kathy Rigby, America’s first gymnastic medalist, and Karen Carpenter, pop vocalist. Rigby’s binging almost ruined her health, and Carpenter died at thirty-two of cardiac arrest brought on by anorexia. The cardiac problems that the eating disorders precipitate are often caused by a shortage of potassium. The reproductive system is also impacted; to conserve energy the body will often shut down the menstrual cycle.

Despite her dieting and significant loss of weight, Jane Ann continued to see herself as overweight. Like many anorexia patients, she was a good student, competitive, and physically attractive. Perhaps most significantly, she came from a family that had very high expectations. Jane Ann reports that she felt she never quite measured up. Her ability to control her food intake became the basis for her self-worth. Group therapy, individual counseling, behavior modification, and even antidepressant drugs are used in the treatment of the eating disorders. Four hospitalizations helped Jane Ann recover from her eating disorder. Jane Ann is now a law student and volunteer counselor for other anorexics.

Interpretive Comments
As this case illustrates, family setting is often the root cause for the development of eating disorders. In addition to the family being competitive and high achieving, the mothers of girls with eating disorders are themselves often focused on their own weight and appearance as well as that of their daughters. Both anorexia and bulimia follow predictable patterns. Anorexia inevitably begins with a weight-loss diet that goes out of control, and bulimia almost always begins after a dieter has broken her diet and gorged.

Genetics also seem to be a factor in eating disorders. Identical twins are more likely to share the disorder than are fraternal twin pairs. Research suggests that those with eating disorders may have an imbalance of neurotransmitters that make them vulnerable to anxiety and depression. As the program suggests, anorexia may go hand in hand with bulimia. About half of those suffering from anorexia show the binge-purge-depression symptoms of bulimia.

Finally, the eating disorders occur mostly in women and in weight-conscious cultures. North American society seems to be weight-obsessed. It defines attractiveness in terms of thinness. Research shows that over the past fifty years there has been a dramatic increase in the number of women who have a poor body image.

Discussion Questions
1. What is the impact of nature and nurture on the eating disorders?
2. What can families and schools do to help prevent eating disorders?
3. What do you think is the most effective treatment for the eating disorders?

Relevant Topics: Motivation, Health Psychology, Psychological Disorders, Therapy

PROGRAM 17

Venting Anger: The Catharsis Hypothesis (5:30 min)

Description
Is the physical expression of anger an effective way to manage it? Ex-marine David Morgan runs a new business in Los Angeles where patrons pay eight dollars for the opportunity to vent their rage by beating a dummy. Some customers claim it helps. For eight hundred dollars, clients can participate in John Lee’s four-day anger release workshop. They are encouraged to yell, throw things, and scream into pillows. Lee suggests that people hold anger in their muscles so to release it they must get physical. Client Michael Blair testifies that, for him, the strategy has been extremely therapeutic.

Iowa State University psychologist Brad Bushman challenges the notion that venting reduces one’s anger. In a laboratory experiment, a confederate angers research participants by providing a negative evaluation of their written essays. Some participants are given the opportunity to drain off their anger by striking a punching bag. Those in a second condition simply wait quietly. When all participants are then given an opportunity to retaliate by blasting the confederate with a loud noise, those who vented are more aggressive than their counterparts. Other studies support Bushman’s conclusion that venting one’s anger tends to amplify rather than reduce hostility.

Interpretive Comments
The program demonstrates the limits of human intuition and the importance of the scientific method in testing claims about human behavior. Conventional wisdom, and in many cases even our personal experience, suggest that “blowing off steam” is a good way to deal with anger. Carefully controlled experiments suggest otherwise. In the long run, the physical expression of anger seems to amplify our hostility.

Experts suggest that simply waiting often brings down one’s level of physiological arousal. Exercising, playing an instrument, disclosing one’s feeling to a friend are alternative ways of managing anger. Finally, a simple nonaccusing statement of feeling can be an important first step in resolving the interpersonal conflicts that generate anger.

Bushman’s study provides an excellent review of the basic elements of experimental design including independent and dependent variables.

Discussion Questions
1. Why do you think many people believe that venting one’s anger is therapeutic?
2. What are effective strategies for anger management?
3. What were the independent and dependent variables in Bushman’s experiment?

Relevant Topics: Emotion, Social Psychology, Research Methodology
PROGRAM 18

Sensation-Seeking: The Biology of Personality (3:06 min)

Description
Are personality differences due more to nature or to nurture? This program uses images of skydiving to introduce personality differences in sensation-seeking, the tendency to seek out thrilling and exciting activities.

PET (positive emission tomography) scans depict brain activity by showing each brain area’s consumption of its chemical fuel, the sugar glucose. Some people have brain regions that show a particularly low metabolic rate. These people tend to be easily bored and thus seek out activities such as skydiving and riding roller coasters that generate greater stimulation. Research suggests that, in comparison to low sensation-seekers, high sensation-seekers tend to have lower levels of the enzyme monomine oxidase (MAO) in their bloodstream.

Personality differences seem to be due to differences in brain chemistry. They are a function of biology as well as experience. This raises the possibility that, just as drugs are available to fine-tune our physical health, they may become available to fine-tune our personalities.

Interpretive Comments
This program explores the possible biological underpinnings of personality. Specifically, differences in the enzyme MAO seem to underlie differences in sensation seeking. After students view this clip, you might explain that certain enzymes, particularly MAO, serve to maintain the proper levels of neurotransmitters in the brain. MAO provides the nervous system’s “brakes,” decomposing neurotransmitters and thus inhibiting neurotransmission. Sensation seekers tend to have low levels of MAO in their bloodstream and thus may be less inhibited and less likely to exercise control over their thoughts, emotions, and behavior.

Marvin Zuckerman’s sensation-seeking scale identifies four forms of sensation seeking:
1. Thrill- and Adventure-Seeking: Some people seek excitement in risky but socially acceptable activities such as parachute jumping, skydiving, and racecar driving.
2. Experience-Seeking: Some people seek sensation through the mind, the senses, and a non-conforming lifestyle.
3. Disinhibition: Those who have chosen a middle-class lifestyle but find it boring may seek escape in social drinking and partying.
4. Boredom Susceptibility: Not so much another form of sensation-seeking as it is a low tolerance for experience that is repetitious or constant. The boredom-susceptible person gets extremely restless when there are long periods of little external stimulation.

Discussion Questions
1. To what extent can people alter their personality?
2. Should we ever use drugs to “fine tune” our personality?

Relevant Topics: Personality, Biology, and Behavior
PROGRAM 19

Fostering Self-Esteem: The Hazards of Pride (3:48 min)

Description
Are elementary school courses that seek to foster self-esteem beneficial? The clip visits a classroom where students are engaged in self-flattery as well as giving each other “warm fuzzies.” Prior research showing a positive correlation between self-esteem and achievement have led some to conclude that fostering self-esteem in children will make them more successful. For example, California invested $750,000 over a three-year period on the Task Force to Promote Self-Esteem. However, the task force’s own study failed to show that self-esteem courses boosted achievement.

Perhaps the most unexpected bad news about the self-esteem movement is that some experts now claim that it may be dangerous. Recent research suggests, for example, that violence may be the product of artificially high self-esteem rather than low self-esteem. In their research, psychologists Brad Bushman and Roy Baumeister found that college students who had inflated views of themselves were more aggressive. For example, compared with those undergraduates who scored lower on a standard self-esteem inventory, those who scored higher retaliated with stronger aggression toward confederates who criticized them.

Research also indicates that prison inmates do not suffer from low self-esteem. In fact, they show higher self-regard, as measured by self-esteem inventories, than do college students. The program concludes by stating that the President of the American Psychological Association now says that promoting baseless self-esteem may be dangerous.

Interpretive Comments
The self-esteem movement suggests that promoting self-esteem is beneficial in protecting us from life’s problems and in fostering achievement. But perhaps, as Roy Baumeister and others suggest, self-esteem is more the product than the cause of achievement. Feeling good about oneself may follow performing well. Thus the best way to boost self-esteem is to encourage effective coping and the exercise of greater effort in meeting life’s challenges.

Research suggests that it is narcissism or an inflated sense of self that is most maladaptive. Other research indicates that people who feel good about themselves are less likely to suffer insomnia, are less vulnerable to social pressure, are less likely to abuse drugs, are more persistent at difficult tasks, and are just plain happier. In short, high self-esteem does pay some significant dividends. Moreover, a detrimental effect of low self-esteem appears in some experimental studies. Temporarily deflating people’s self-image leads them to express greater racial prejudice and generally makes them more likely to disparage others.

Discussion Questions
1. What are the benefits of a positive self-concept?
2. Do you think schools should have self-esteem classes?
3. Where should we find our self-worth; that is, what are the appropriate sources of self-esteem?

Relevant Topics: Personality, Human Development
PROGRAM 20

Personality Assessment: The Barnum Effect (2:19 min)

Description
This segment effectively demonstrates how astrologers persuade people to accept their personality assessments. When ABC’s John Stossel asks astrologer Susan Miller to read his horoscope, he receives a twenty-two-page report. “Cold” readings present so much information that something is certain to be true of everyone. “Warm” readings provide descriptions that are true of most people, for example, “You are thorough, intuitive, and an independent thinker.” Clearly, Stossel has received both cold and warm readings.

Stossel then provides students in a college classroom with personality assessments that are presumably unique to each. In reality, every student receives the same description; it is based on the reading given a mass murderer some years earlier. Many, if not most, students find the descriptions fit them well: “Most of this is me!” and “I love me!”

Interpretive Comments
The “Barnum Effect” gains its name from P.T. Barnum’s claim, “There’s a sucker born every minute.” It refers to people’s ready acceptance of bogus personality descriptions such as those provided by horoscopes. Descriptions that are sympathetic and flattering are likely to be viewed as accurate.

Research has found no support for astrology. For example, birth dates are not correlated with specific character traits. Moreover, people cannot pick out their own horoscope from a lineup of horoscopes. And, given one’s birth date, astrologers do not surpass chance when asked to identify the person from a short lineup of different personality descriptions.

Discussion Questions
1. Why do you think so many people are fascinated by astrology?
2. How would one construct an instrument for personality assessment that is scientifically sound?

Relevant Topics: Personality, Thought
PROGRAM 21

Obsessive-Compulsive Disorder: Ritual Cleansing (4:30 min)

Description
For Gayle Taylor, the touch of a doorknob, light switch, or phone triggers overwhelming anxiety. For the last twelve years she has been obsessed with thoughts of contamination and spends much of each day washing her hands. Gayle suffers from obsessive-compulsive disorder, which is characterized by recurring and disturbing thoughts, ideas, or images (obsessions) and/or behaviors that people feel driven to perform (compulsions). Gayle demonstrates her cleansing ritual, which includes a prewash, wash, and then attention given each fingernail. She reports doing this from eight to 200 times daily.

Gayle’s disorder began with the birth of her daughter Heather. She became obsessed with germs that might hurt her daughter. The obsession and associated compulsion eventually led to divorce and loss of her teaching position. Even Gayle’s daughter began to represent contamination and Heather would have to take a shower to receive a hug.

Gayle describes how the dining room became a holding area for clean and dirty items. Those that could not be cleansed were relegated to the basement. She explains how she was unable to touch a doorknob; all the time knowing her behavior was irrational. A psychotherapist makes the interesting observation that OCD victims do know their disorder is irrational. If they did not, they would be considered psychotic.

People may be biologically predisposed to develop an OCD. Some research traces the disorder to an imbalance in the neurotransmitter serotonin. Thus, antidepressant drugs are often used in treatment. A combination of medication and behavior therapy appears to have been successful in helping Gayle to recover. She is now able to embrace her daughter without fear of contamination.

Interpretive Comments
At some time many of us are obsessed with repetitious thoughts that will not go away, perhaps something as simple as a song that replays itself in our minds over the course of the day. Similarly, we may check and recheck a locked door before going to bed. Such thoughts and behaviors become disorders when they are so persistent that they interfere with our interpersonal relationships or our ability to meet everyday responsibilities. Clearly this is the case with Gayle whose obsessions and compulsions have resulted in divorce and loss of employment.

About two to three percent of the population experience OCD at some time during their lives. It is equally common in males and females, and it most often begins in adolescence or the early 20s. Many people with OCD are also depressed and some have an eating disorder. Cleaning compulsions are very common. Billionaire Howard Hughes became a recluse due to a fear of germs.

For psychodynamic theorists, the victim of OCD is drawn into a battle between anxiety-producing id impulses and anxiety-reducing ego defense mechanisms. The conflict is played out in explicit thoughts and actions rather than unconsciously. In contrast, behaviorists suggest that people happen upon their compulsions quite randomly. In some past anxiety-producing situations, they coincidentally washed their hands. When the fear lifted, they linked improvement to the action. Thus, the act becomes a primary method of
avoiding or reducing anxiety. As the clip suggests, research has linked OCD with low levels of serotonin. This explains why, in additional to traditional psychotherapy, certain antidepressant drugs have been successful in treatment.

Discussion Questions
1. Where should we define the line between normality and disorder? How would you define “psychological disorder”?
2. What do you think was the cause of Gayle’s disorder?
3. How would you evaluate the relative contribution of nature and nurture to obsessive-compulsive disorder?

Relevant Topics: Psychological Disorders, Therapy

PROGRAM 22

Depression: Mike Wallace’s Journey (3:07 min)

Description
CBS News Correspondent Mike Wallace describes his personal struggle with depression. He opens by describing his thoughts of suicide by using pills, a gun, and a plastic bag. “You feel,” he claims, “like a fraud and a freak…you feel that any past accomplishment was blind luck.”

Wallace’s first depressive episode followed a libel suit in 1984. He felt ashamed of his depression and did not reveal the problem to his colleagues. Psychotherapy and medication brought improvement. However, because of the side effects of the antidepressant, he stopped taking it. Later, a tennis accident fostered a keen sense of mortality and led to a second bout with major depression. Again he sought treatment. Eight years later, at the age of seventy-five, he experienced a third episode. Now he takes Zoloft, a cousin to Prozac, and intends to stay on it for the rest of his life. Therapists tell him that, as long as he remains on the medication, his depression is unlikely to return.

Interpretive Comments
Mike Wallace’s celebrity status contributes to the high interest level this clip generates. In addition to illustrating important symptoms of major depression, this clip reveals the stigma that has often been attached with suffering a psychological disorder. Finally, woven through this clip is the importance of biomedical therapy, specifically the antidepressant drugs, in the treatment of psychological disorders.

You might review the bio-psycho-social perspective on psychological disorders after watching this clip. Wallace refers to the biological underpinnings of his depression and, of course, the treatment includes biomedical therapy. Wallace’s thought patterns, particularly how he thought about his own achievements, reveal a negative attribution style that is characteristic of depression. Finally, stressful life experiences, including a libel suit and a tennis accident, were important factors triggering his depressive episodes.
Discussion Questions
1. Do you think society’s attitudes toward psychological disorders and therapy are changing?
2. How would a bio-psycho-social perspective explain the depression that Mike Wallace describes?
3. How should depression be treated?

Relevant Topics: Psychological Disorders, Therapy

PROGRAM 23

Intensive Exposure Therapy: Overcoming Agoraphobia (6:07 min)

Description
Sadada is a young adult female who suffers panic disorder with agoraphobia, the fear of public places or situations in which escape may be difficult or help unavailable. One week before treatment begins, we see Sadada’s phobia vividly demonstrated in her anxious and failed effort to board the Boston subway: “I feel that I would be unable to go back.”

Treatment begins by helping Sadada understand the nature of anxiety, and more specifically, how to deal with the fearful thoughts that accompany her panic attacks. Therapist Sandra Baker explains that her client must “take a leap of faith” in directly confronting her fear. In exposing Sadada to a situation that elicits her fear, the therapist acknowledges that she will likely have a panic attack, but that this will not represent a “meltdown.” To heighten Sadada’s anxiety and to help her more fully experience the impact of exposure therapy, the therapist has her drink a bottle of caffeinated water.

In the reassuring presence of her therapist, Sadada confronts one of her worst fears: boarding and riding an elevator, something she has not done in years. She reports experiencing a “10” on a scale from 1 to 10 in terms of distress. The fear of getting stuck in the elevator elicits a full-fledged panic attack. Nonetheless Sadada successfully rides the elevator with her therapist and, over time, by herself. She eventually rides the subway with her therapist and then alone. By herself, she eventually rides a bus, drives a car, and window shops.

The account ends with Sadada meeting the narrator/journalist in downtown Boston. Clearly she has changed; she is a much happier and healthier person. Together they ride the elevator up fifty-three stories to the top of Boston’s landmark Hub.

Interpretive Comments
Between 2 and 4 percent of the adult population experience agoraphobia each year. Women suffer the disorder twice as often as men. Most often the fear develops in a person’s 20s or 30s. As this case illustrates, people with agoraphobia may avoid entering crowded streets or stores, driving on bridges or over tunnels, traveling on public transportation, and riding elevators. Often victims become prisoners in their own homes. Many people with agoraphobia are prone to panic attacks. Sigmund Freud suffered from agoraphobia.
The exposure therapies have become the most widely used method of behavior therapy. Principles of learning are applied to the elimination of unwanted behaviors. The underlying assumption is that psychological disorders have been learned and thus can be unlearned. Virtual reality exposure therapy is sometimes used with those who are too terrified to experience the situation in reality. For example, the fear of flying may be treated by having patients peer out of the virtual window of a simulated plane, experience the accompanying vibrations, and even hear the engine roar as the plane taxis down the runway.

Discussion Questions
1. What assumptions does intensive exposure therapy make about the nature and causes of phobia?
2. How does intensive exposure therapy utilize principles of learning in the treatment of Sadada?

Relevant Topics: Therapy, Psychological Disorders

PROGRAM 24

Social Rejection: The Need to Belong (3:15 min)

Description
An opening clip from a television program entitled “Freaks and Geeks” highlights the human need to belong. The pain of social rejection is apparent in middle school boys who are the last selected as members of playground softball teams. Psychologist Richard Thompson suggests that children who do not feel socially accepted may be terrified to go to school. He states that about 20 percent of school children, those at the bottom of the social ladder, are at risk for not having a friend. These children tend to be shy, introverted, and often studious.

Human beings show an instinct to affiliate. Thompson suggests that as soon as children are able to crawl they seek out “friends.” By the age of three they are able to talk about those relationships. By the age of twelve, when children begin to separate from their parents and begin to look to a peer group as their new family, it becomes very important to have a friend within that group. On average, elementary schoolchildren can identify five peers as friends. Some travel with a mob, but others have no one. Thompson argues that it’s essential to children’s well being to have at least one.

Interpretive Comments
This program considers the need to belong within the school setting. It highlights the negative impact of social rejection and the important psychological benefits of friendship. Diverse lines of research point to our need to form enduring, close relationships. Indeed, when people are asked: “What is necessary for your happiness?” or “What is it that makes
your life meaningful?” the first thing most mention is intimate relationships with family, friends, or romantic partners.

Mark Leary and his colleagues suggest that our self-esteem is a gauge of how valued and accepted we feel. Thus, much of our interpersonal behavior aims to increase our social acceptance and inclusion. People who feel supported by close relationships enjoy better physical health and are less vulnerable to psychological disorder. In comparison to their single counterparts, married people are less at risk for depression, suicide, and early death. Roy Baumeister and Mark Leary conclude, “human beings are fundamentally and pervasively motivated by a need to belong.”

**Discussion Questions**
1. What are the important ingredients of friendship?
2. What are the benefits of friendship?
3. What should schools do to protect children from the pain of social rejection?

**Relevant Topics**: Social Psychology, Motivation