5.15 Explain Social Learning Theory, Making Reference to Two Relevant Studies

Why is social learning theory important?

Social learning theory spans all three levels of analysis and is fundamental to being human. Social learning explains how culture is transmitted to children, explains the cognitive mediation of reinforcement, and is clearly tied to the biological level of analysis through the **cultural acquisition device** (CAD) and **mirror neurons**.

You must understand social learning theory because it is tied to so many other areas of the syllabus.

Albert Bandura is the representative theorist. Social learning theory is a very current explanation of behavior with more strengths than weaknesses.

The Bobo experiments are popular with teachers and students and I review two of them in depth. However, *social learning is not just about Bobo.*

Bandura may be the most cited researcher in the history of psychology. This may be true and I can see why. Social learning theory applies to a wide range of human behaviors. These include mental disorders such as depression, phobias, and eating disorders, education, aggression and delinquency, moral behavior, gender roles and identity, health psychology, sport psychology, careers and organizational psychology, culture and behavior, language, and terrorism. Large amounts of research support social learning theory; it has method, observer, time, space, and combined levels of **triangulation**.

Social learning research about language, depression, and aggression is reviewed in this book.

Note to the teacher

You can find a large number of Bandura's original articles at www.des.emory.edu/mfp/BanduraPubs.html.

Three key concepts

Three key concepts are important to know. **Modeling** was the focus of Bandura's earliest research. Modeling means to observe the actions of another person, form an idea of how one should behave, and use the ideas as a guide for future behavior (Bandura, 1977). **Self-efficacy**, the belief that one is capable of starting and carrying through a required action, was added a little later. **Moral disengagement**, when someone abandons a moral belief, helps explain terrorism. All three are important in understanding modern uses of social learning theory.

Social learning theory has a cultural context

Social learning theory is *situated* in a **cultural** context. Modeling and self-efficacy unfold within cultures. Social cognitive theory explains how people grow and change in all cultures (Bandura, 2002). Bandura cautions cross-cultural researchers not to simply view humans as falling into extreme categories such as **individualism** and **collectivism**. Bandura's warning is similar to what Triandis said about the individual and the dimensions of culture; individuals have access to both ends of the continuum. In fact, *self-efficacy is often incorrectly associated just with individualistic cultures* (Bandura, 2002). Successful behavior that adapts to the demands of any culture requires a combination of personal, proxy, and collective **agency**.

Agency means to intentionally influence one's personal and life circumstances. Personal agency is one's own actions. Proxy agency means that one more capable than the individual is selected to guide others' behavior. Collective agency means that people do not behave in a vacuum; they pool together to achieve what they cannot do alone. The *degree* to which these three types of agency exist varies from culture to culture. *Self-efficacy is the key ingredient to agency at all three levels.* "Although efficacy beliefs have generalized functional value, how they are developed and structured, the ways in which they are exercised, and the purposes to which they are put, vary cross-culturally" (p. 273). A large amount of research applies self-efficacy to cultural differences. One example reviewed in this book is about depression and self-efficacy.

Social learning theory is bidirectional

Bandura frequently uses the term **bidirectional**. Bandura believes in biological predispositions for behavior, such as genes for aggression and an innate capacity for language, but *emphasizes modeling and self-efficacy in a cultural context as the greatest determinants of behavior.* Genes do not directly cause aggression and having innate grammar does not account for how we learn to *use* the grammar. Even in 1977, Bandura wrote that, although extremists existed for both environmental and the biological explanations of behavior, he thought that it was "widely acknowledged that experiential and physiological influences interact in subtle ways to determine behavior and therefore are not easily separable" (p. 16).

Should we have animal or human research?

Bandura (1973) is critical of using animals in research. Human experiments are necessary because the determinants of behavior are *not the same across species.* In addition, experiments are the only way to see the actual causes of behavior. However, results from controlled experiments should be similar to naturalistic and longitudinal studies before the experiments are accepted.

Why is social learning theory different from cognitive theory and Skinnerian psychology?

One reason social learning theory is different from cognitive theory is that it focuses on the mental processing of reinforcement. Reinforcement plays a strong role in social learning. *Reinforcement is a generic term.* Social learning reinforcement is not the same as the Skinnerian concepts of positive and negative reinforcement in operant conditioning. Bandura identified numerous types of reinforcement, such as vicarious and self-reinforcement, that relate to symbolic processing. Avoid statements such as "a behavior is due to reinforcement" in essays. Be specific in your word choice. What do you mean by operant conditioning or social learning?

In addition, social learning theorists believe that *self-efficacy is the greatest predictor of behavior, downplaying or even modifying biology.* **Gender** and **culture** affects self-efficacy that in turn affects the **anticipation of reinforcement**. Cognitive psychologists assume that biology is an important determinant of behavior that is closely intertwined with the cognitive processes they study. Cognitive psychologists assume a very important biological basis for the cognitive processes they study, often including biology as too closely intertwined in mental processing the be downplayed.

Bandura's theories on the mental processing of reinforcement are a radical departure from Skinner's operant conditioning. Bandura (1977) says that humans are far too complex to fall under the forces of operant conditioning.

Bandura says that operant conditioning best explains the simple behaviors of animals, which is the kind of evidence that Skinner provided. Humans have a great deal to learn and mistakes can be costly, *so our survival depends on a shorter form of learning.* Humans do not learn about cultural traditions or the dangers of the world through trial and error. "One does not teach children to swim, adolescents to drive, and novice medical students to perform surgery by having them discover the appropriate behavior through the consequences of their successes and failures" (Bandura, 1977, p. 12). The transmission of culture would be hard if members of a cultural group learned about traditions only through trial and error. *models demonstrate appropriate cultural behavior.* A cultural group's language is an example of something so complex that it *cannot* be fully acquired without modeling.

The basics of social learning: Modeling and self-efficacy

Modeling occurs through four processes, **attention**, **retention**, **reproduction**, and **motivation**.

1. A child pays attention to a model. In Bobo experiment #1, on modeling and aggression, the models were an adult live model, a film of an adult model, or a film of a cartoon character model. The children attended to how the models verbally and physically behaved toward the Bobo doll.
2. Children retain the observations for later use. Retention, or *learning,* was measured by asking the children to repeat the scenes they observed. Both male and female children displayed what they saw.
3. Children's behavior in spontaneous play tested the reproduction of what the children observed. Bandura said that children learn behaviors that are not necessarily reproduced unless the behaviors receive reinforcement. While both male and female children showed that they retained the same behaviors, boys reproduced the aggressive behaviors in spontaneous play far more often than the girls.
4. The motivation is the *anticipated consequences* for reproducing the modeled behaviors. According to social learning theorists, boys receive rewards more often for using aggression than girls. This is the explanation for why boys produce the aggression.

Young children start off **imitating** adult behavior, and their accuracy depends largely on the model's reactions. If young children do not have reinforcement easily available to them, their ability to imitate quickly declines (Bandura, 1977). *Young children without symbolic* ***language*** *cannot easily store information cognitively for later use and rely on trial and error to learn what to do.*

As children acquire abstract reasoning, they become capable of **delayed imitation** (Bandura, 1977). This is the start of *modeling as the cognitive processing of reinforcement.* Now children use verbal symbols to acquire and retain observed behavior. *Language is the primary way that children model once they have representational thought.* Social learning occurs rapidly once children are able to store and creatively use modeled behavior through verbal symbols.

This is more evidence that language is fundamental to human behavior.

The **anticipation of reinforcement** is a key to explaining which behaviors are actually *performed* in a cultural group. Bandura (1977) discussed two general types of anticipated reinforcement, **extrinsic** and **intrinsic**.

Extrinsic reinforcements are external and arbitrarily associated with a behavior. **External reinforcement** is extrinsic and is socially arranged. Examples of external reinforcement are receiving pay for a job or a car for getting good grades. External reinforcements are successful in reducing many unwanted behaviors, such as **asthma** attacks, **eating disorders**, **aggression**, and **psychosomatic complaints** (Bandura, 1977).

Intrinsic reinforcement is a little harder to understand but applicable to much of the research on social learning. There are many examples of intrinsic reinforcement. If you slip on icy steps, the consequences are external but naturally related (rather than being arbitrarily related) to the behavior and you are more careful in the future. Bandura calls this being regulated by sensory effects. A second type of intrinsic reinforcement is when your sensory effects are internal. During **meditation**, the relaxation you feel is intrinsically motivating and occurs within you. A third kind of intrinsic reinforcement occurs when a person makes a self-judgment about his or her own behavior. You appraise the reinforcement internally, but the motivators for the evaluations are arbitrary. Bandura wrote a lot about **sport psychology** and here is one example where it relates to social learning. A soccer player who spends hours perfecting a skill uses internal self-appraisals but eventually gets the external rewards of an improved performance that helps the team.

Two types of reinforcement are important that regulate behavior extrinsically and intrinsically.

1. Vicarious reinforcement. When you see something happen to another person, you process the information and learn from their successes and failures. Vicarious reinforcement is both external and extrinsic. The Bobo experiments demonstrate vicarious reinforcement in the lab. A model rewarded for a behavior is more effective than modeling without a reward. Second, if a model goes unpunished for an undesirable behavior, it increases similar acts in the observer. Third, the vicarious viewing of punished behavior reduces similar acts by the observer. **Symbolic learning**, such as viewing television models, falls under this category. Symbolic learning is one explanation of **phobias**. Monkeys with no prior fear of snakes can develop a fear after viewing a video of monkeys showing fear of snakes (Zinbarg & Mineka, 2000). Girls have been found to model low efficacy of female **math** models (Bandura, 1997). In humans, vicarious reinforcement depends on specific variables, such as the characteristics of the models, the intensity of the consequences, and the ability of the model to justify behavior (Bandura, 1977).

2. Self-reinforcement, sometimes called self-generated reinforcement. Much self-reinforcement is intrinsic. The idea behind self-reinforcement is that human behavior is not bound to external reinforcements (Bandura, 1977). People hold firm beliefs that are not easily changed. "Because of their symbolizing and self-reactive capacities, humans are less dependent upon immediate external support for their behavior" (p. 129). Self-regulation is the motivation for much human behavior. Humans have standards of behavior that we model from adults and then we use self-appraisals to judge the quality of our behaviors. Each new behavior is judged against previous behavior. Think of all the behavior we self-regulate, such as school performance, sport performance, gender-role expectations, what is gained in an aggressive or immoral act, or even how terrorists judge the value of a mission.

Self-efficacy is important to understanding how humans anticipate reinforcement. Bandura (1997) defines self-efficacy as the "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). Highly perceived self-efficacy to follow through on a behavior is related to the performance of both prosocial behaviors and antisocial behaviors. For example, one purpose of schools is to promote high self-efficacy for achievement through teacher models with high self-efficacy for their own understanding of a subject. However, criminals can have high efficacy in their ability to follow through with an antisocial aggressive act.

Gender and culture affect self-efficacy that in turn affects the anticipation of reinforcement. This is a powerful generalization that explains a wide variety of behavior, such as academic abilities, depression, and delinquency.

Strengths and limitations of social learning theory

Strengths

1. It has cultural relevance.
2. It has a bidirectional focus.
3. Social learning theory is current; it is even related to biology through the CAD and mirror neurons. Social learning theorists place their emphasis on anticipating reinforcements and self-efficacy as predictors of behavior, factors that modify biology.
4. Bandura used humans in experiments, downplaying animal models as valid for studying humans. This was an advance over theories using animals.
5. Another strong point is the varied research methods and strong triangulation. Social learning theory has method, observer, space, time, and combined levels of triangulation.
6. Social learning research is highly ethical. Even experiments on self-efficacy are ethical, as experiment participants are those with pre-existing low efficacy or efficacy is assessed through in survey studies where there is no manipulation of results. All participants in mental health experiments are worked with until their self-efficacy levels rise. I challenge the criticism that the Bobo studies were unethical. I discuss ethics of the Bobo experiments later in this section. Did participating in the studies really create harm or does it just seem as if it did?
7. Social learning offers explanations of many human behaviors.

Limitations: They are much harder to find!

1. Social learning theory does not explain certain kinds of behaviors. For example, grammar is something we come biologically equipped with at birth to acquire, though Bandura believes that models help with the learning of grammar. In addition, social learning explanations of mental illness emphasize disorders such as depression, anxiety, and eating disorders. Social learning is not the primary focus of autism and schizophrenia explanations. In these cases, damage to the brain may *affect* social learning, such as recent discoveries about mirror neurons and the inability of autistics to socially learn but are not primary causes.
2. Sometimes students write that the Bobo experiments are artificial and lack population and ecological validity. I put this under limitations only because students often write this on exams, but I challenge the argument that artificiality is a criticism. *Lab experiments are supposed to be artificial.* In addition, modeling research is not method bound; the experiments fit into a wider body of research using other methods. Any *one* experiment lacks ecological validity but Bandura does not make claims based on *one* experiment.

Mirror neurons: What the brain does during social learning

Mirror neuron research probably applies to all social learning experiences and is likely the biology behind social learning theory. **Mirror neurons** appear to fire automatically during social learning so we should care about the content of television, movies, and video games. Parenting and teaching take on even more importance in light of mirror neuron research.

Mirror neurons keep popping up in studies I read and may be fundamentally important to being human.

Approximately 25% to 30% of juvenile offenders say that they have attempted crimes seen in media (Huesmann & Kirwil, 2007). For example, "A 7-year-old in Texas has been watch-

ing wrestling on television when he turns away from the TV and, mimicking a move he has just seen, runs at his 3-year-old brother with his arm extended, hits him in the neck, and kills him" (p. 555).

It is no surprise that **aggression** is popular with students. We are all fascinated and perplexed with why people imitate media. While there are important genetic predispositions to aggression, much of it is socially learned. Violent copycat crimes occur *shortly after witnessing violence* (Huesmann & Kirwil, 2007). Media prime the imitation. But a level of analysis approach tells us that there is more to the story. Something must happen in the brain that affects the mind during social learning. Cultural values mediate the entire process. While the brain is important, the Bobo experiments and related ethnographies show that children do not act aggressively when taught not to do so. The good news is that parents can act as inhibitors to aggression.

Neurons and neural networks are explained in introductory texts. New research adds to our knowledge about neuron systems. The discovery of mirror neurons in the mid 1990s may be the biological basis of social learning. The first experiments showed that mirror neurons fire in the premotor cortex of monkeys when they performed hand actions, when they saw another perform hand actions, and when they heard the sound of a task they had experienced, such as the sound of paper tearing (Dobbs, 2006). We now know that human mirror neurons are more numerous and complicated than those in monkeys. In addition to firing in the premotor cortex, human mirror neurons fire in brain areas related to language, such as **Broca's area**.

Primates and humans imitate hand movements from early life. The hitting and grabbing that children observe from media sources are similar to all of the other motor functions imitated in mirror neuron experiments (Huesmann & Kirwil, 2007). In addition, research shows that babies imitate facial expressions. Facial expressions appear linked to one's emotions. Psychologists think that imitating another's facial expression automatically activates emotions that then activate **schemas** and **scripts** about how to behave.

Mirror neurons are part of our theme about humans living together in cultures. Social learning is one category of the cultural acquisition device (CAD), so mirror neurons help explain how humans develop cultures. As social learning is an **etic**, it is likely an evolutionary adaptation. V.S. Ramachandran (no date) believes that human cultural inheritance "characterizes our species and liberates us from the constraints of a purely gene based evolution" (p. 5).

Marco Iacoboni and colleagues (2005) write that scientists are learning more all the time about the functions of mirror neurons. Early monkey experiments show that mirror neurons are active in recognizing others' actions, showing *what* mirror neurons do. For example, "John sees Mary grasp an apple" (p. 1). Studies now show that mirror neurons help humans understand others' **intentions**, *why* another is doing an action. For example, why is Mary grasping the apple? Perhaps she will eat it or throw it. *Context* is necessary for understanding others' intentions. If Mary has a scowl on her face, she may throw the apple.

Iacoboni and colleagues designed a correlation study to see how mirror neurons networks helped in decoding another's intentions.

Participants were 23 right-handed males and females with an average age of 26.3. They were recruited from newspaper ads.

This study used repeated measures. Participants watched three movie clips showing context alone, action alone, and then context with actions (the intentions clips). A blank resting screen appeared between each clip. The context movie showed two pictures of a tea service, one before tea and the other after tea. The action movie featured a coffee mug on a blank background and a person either grasping it with the entire hand or just on the handle. The intention movie showed both types of grasping interspersed in the before and after tea clips.

The action- and context-only movies did not contain information that allowed participants to infer intention. Some participants were told to just watch the clips and others were told to pay attention to the grasping and try and decide what the intention was.

Functional MRI scans recorded brain activity in all conditions, including the resting time. Brain areas were correlated with watching the different clips and with the instructions given to only watch the movies or to pay attention to the intentions.

More neural activity was recorded when participants watched all three movie clips over the resting time. The most important scans examined differences between the intention condition and the action/context conditions. There was no difference between the scans of those told to just watch the clips and those told to pay attention to the intentions. Both groups showed an understanding of the intentions when debriefed. Understanding another's intentions is automatic, activating the left frontal lobes of everyone. The differences occurred between the intention clip and the other two. Reading another's intentions activates neurons in the interior frontal cortex, an area known to have mirror neurons.

The authors concluded that mirror neurons are active when decoding another's intentions. This is not a cause-and-effect experiment; it just shows that certain brain parts are active at the same time a person is doing a different task. The study is important because it is the first evidence that specific neurons fire when someone tries to figure out what another is doing, a process called "logically related neurons" (Iacobani et al., 2005, p.5). Motor neurons fire in chains that are logically related to each other.

V. S. Ramachandran (no date) believes "that mirror neurons will do for psychology what DNA did for biology; they will provide a unifying framework and help explain a host of mental abilities that have hitherto remained mysterious and inaccessible to experiments" (p. 1). Ramachandran thinks that mirror neurons are a key ingredient for explaining language evolution. Mirror neurons might be responsible for humans being able to understand the gestures of others that then provided the chance for language to evolve. One case of an autistic child shows that his mirror neurons do not fire properly. Ramachandran expects that mirror neuron theory will help explain and possibly treat the problems that people with **autism** have understanding and empathizing with others.

Aggression and social learning explanations: An introduction

Albert Bandura makes many contributions to explanations of **aggression**. I review modeling, self-efficacy, and moral disengagement in each of the next three sections.

Bandura emphasizes the social determinants of behavior over biological predispositions. Bandura believes there is too much emphasis on the biology of aggression (Bandura, 2001). "People possess the biological potential for aggression, but the answer to the cultural variation in aggressiveness lies more in ideology than in biology" (p. 20).

Bobo study #1: Aggression—learning versus performance

The Bobo studies are popular; they are experiments from the 1960s showing how normal children model aggression. Each Bobo experiment has a specific purpose. In addition, criticisms about the ethics and the artificial nature of the Bobo studies require some investigation.

One purpose of modeling research is to show *the difference between learning aggression and actually performing it* (Bandura, 1973). One of the Bobo experiments examined "the hypothesis that reinforcements administered to a model influence the performance but not the acquisition" of behavior (Bandura, 1965, p. 589). Even today, the implications of these findings are great. It is important to Bandura that the theory be tested in tightly controlled experi-

ments *before* it is applied. This particular Bobo experiment confirms that children only perform what they learn in the presence of reinforcement. The experiment fits into a larger body of research that includes observations from cultural psychologists and anthropologists.

Experiment participants were 33 boys and 33 girls from the Stanford Nursery School between the ages of 42 and 71 months. Participants were randomly assigned to one of three groups and each group contained males and females. A female administered the study and the models were males.

Children were tested individually. The female experimenter told the children she had some work to do before going to the "surprise playroom," but that the child could watch a television show while waiting. The film showed a man ordering the Bobo doll to move. When the Bobo doll did not move, the model used four *novel* physical and verbal types of aggression against it. One example was that the model "pummeled it on the head with a mallet. Each response was accompanied by the verbalization, "Sockeroo. . . stay down" (p. 590–591). In the first condition, the model was rewarded with verbal praise and food treats for showing aggression to the Bobo doll. In the second condition, the model was punished with a scolding for showing aggression to the Bobo doll. In the third condition, a model received no consequences.

Two people collected data for the experiment using observation. It is a mistake to think of the Bobo experiments as observation studies. Observation was a technique used to gather the experimental data.

To test for *performance,* observers watched as the children were brought into the "surprise playroom" right after they saw the model. The room contained a variety of toys, including anything used by the model against the Bobo doll. Each child spent 10 minutes in the playroom with the Bobo doll and toys and did whatever they wished during the time. Observers recorded behavior every 5 seconds. Rater reliability between the observers was 99% correct.

To test for *learning,* the experimenter next entered the room with juice and booklets of stickers. The children were instructed that for each modeled verbal and physical behavior they demonstrated, they would receive a sticker and juice.

Results showed that the performance of modeled aggression was different than demonstrations of what was learned. Children seeing a model rewarded or receiving no consequences modeled more aggression than those seeing the model punished. A **gender difference** was found. Boys modeled aggression more than girls in all three conditions. There was especially a difference when the model was punished. Interestingly, boys performed a large amount of aggression even when the model was punished. However, gender differences disappeared when the children were asked to show what they learned. When given a positive incentive to show aggression, both males and females demonstrated what they learned.

Two important conclusions come from these results. First, learned behaviors are modeled only when they receive reinforcement. Second, the models acted as *disinhibitors* for the boys far more than the girls, reflecting the differences in reinforcement that males and females receive for aggression throughout their lives from models.

Why was it important to study aggression in a lab experiment?

The Bobo experiments are tightly controlled lab experiments where the researchers have full control over the independent variable. Students frequently have two criticisms about the experiments. One is that the experiments are too artificial. The second is that the experiments lack ecological validity. Ecological validity is the extent to which the conditions of the investigation can be generalized outside of the study. But are these valid criticisms?

Experiments are too often criticized for investigating exactly what people wish to know—the cause of behavior (Bandura, 1973). Experiments pinpoint specific causes. Cause cannot be known from naturalistic observations or from correlations. Lab conditions hold one variable constant while others are manipulated. Criticisms that experiments are artificial reflect a misunderstanding of how knowledge advances. "Experiments are not intended to duplicate events as they occur in real life, and they would lose their value if they did" (p. 63). Theories are tested in the lab, not real life. As a funny example, Bandura points out that airline travelers do not rely on actual flights to determine the safety of new airplane designs. New airplanes are first tested in labs. Once a cause is established in a lab, it can be tested in the field. Results of lab experiments should be consistent with other types of research. This same idea applies to interpreting all tightly controlled experiments. Look to see if the experiment has **method triangulation**. If so, then its lack of ecological validity is diluted.

In addition to these two criticisms, many are concerned about the novel behaviors used by the models, saying that the novel behaviors are different from what the children know. However, the experimental design *deliberately* used novel behaviors. Novel behaviors act as controls for previous learning. Prior aggressive behavior *confounds* the experiment. Criticisms that the novel behaviors taught to children do not reflect their real-life aggression are superficial. The intent was to see if the child modeled the model's behaviors. The novel behaviors may not reflect what the children do in real life but testing real life was not the purpose of the experiment. The experiment meant to predict the conditions under which someone would perform aggression. Again, experiments must be artificial in order to test a theory. No one should make a claim based on the results of one experiment. Alone, an experiment lacks ecological validity. Poor ecological validity is not as much of a problem the study is placed within a larger body of research.

Are the Bobo experiments unethical?

Two ethical issues to consider are *potential harm* and *removing adverse effects.* Critics claim that the children were harmed because they were exposed to novel forms of aggression that they did not already know. In addition, the children might continue to perform the aggression. Here are some things to consider. The sample used normal children, not delinquents or those at risk for delinquency. The parents were likely to act as inhibitors of aggression. Even if they learned it, did they perform it? There is no evidence that the children continued to use the aggressive behaviors modeled in the experiments. Watch having an automatic response that the Bobo studies were unethical.

With this said about artificiality and ethics, here is another Bobo experiment.

Bobo study #2: Aggression—the effect of symbolic modeling on behavior

The experiment investigated the effect of symbolic models on behavior. Bandura (1973) writes that humans do not learn simply through direct experiences in daily life. Instead, much of our modeling is vicarious, or through symbols given symbolic value. Symbolic modeling has the potential to account for large amounts of social learning.

Forty-eight boys and 48 girls from the Stanford Nursery School were randomly assigned to one of three conditions experimental conditions, a live model, a film model of a real person, and a cartoon model. The live model condition and the film model condition used both a male and female. Each model showed physical and verbal aggression to a Bobo doll. Control subjects observed either a nonaggressive model or no model. Each participant group contained half males and half females. Participants were equally allocated to the conditions

based on ratings of their baseline aggressive interactions at the school to ensure that participant variables did not affect the results. A female conducted the experiment.

Each participant was tested individually in a playroom. The children sat a table containing many toys. The live model was escorted into the room after the child and given a separate play table. After a minute, the live model turned to the Bobo doll and spent the rest of the 10-minute time period behaving aggressively toward the doll. The film of the live model and the cartoon model performed the same aggressive acts as the live model, such as kicking it around the room and tossing it in the air, saying, "Sock him in the nose" or "Kick him." The cartoon model was a female dressed as a black cat similar to popular cartoon figures. The space was made to look like a cartoon with artificial grass and a backdrop of trees and birds.

Next, the participants were tested for modeled aggression in a different room. The goal of the experiment required that the children display *delayed* modeling, as it was thought that a model's greatest influence on aggression occurred in later situations, when the use of the behavior was beneficial. To achieve this effect, participants were taken to a room that contained toys and told they could play. Quickly though, the experimenter interrupted the play, saying that those toys were really reserved for other children but another set of toys could be played with in another room. Each child was then escorted to another playroom and they could play with a variety of toys, including both nonaggressive toys and those used in the model's behavior toward the Bobo doll. Observations of 20 minutes of play were gathered by independent raters, coded as imitative (including strikes with the mallet), partially imitative, mallet aggression (actually aggression with objects other than the mallet), nonimitative aggression, and aggressive gun play.

As predicted, seeing aggressive models increased a child's aggression. Mildly frustrating the children by interrupting their play ensured that researchers were testing delayed aggression. Children seeing a nonaggressive model showed the least amount of aggression toward the Bobo doll. Females showed less overall aggression than males. Children in all three experimental conditions modeled aggression significantly more than both control groups. Of the three experimental conditions, the children modeled the most aggression from the films of the human model, including more gun and mallet aggression, suggesting that film models are important teachers of aggression.

Ethnographies support Bandura's Bobo experiments

The differences between learning and performance and the importance of symbolic modeling are applicable to considering **cultural** differences in aggression. Experimental results about the social modeling of aggression are confirmed with ethnographies. *Societies that value and reinforce aggression display more aggression.*

Bandura (1973) writes that the Dugum Dani of New Guinea is an aggressive society. Many of their social and religious practices surround warfare. Children are carefully prepared to take part in planned aggressive displays on specially prepared battlefields. The Dani believe that spirits have the ability to cause damage and sickness in a family unless the family takes the life of an enemy. So warfare is started and maintained by a fear that one has not avenged the spirits. Families are known to even amputate the fingers of female children in order to further console the spirits. Male children go through elaborate war game training. For example, boys fight with grass blades that are not sharp enough to cause injury but mimic the skills needed for battle.

In contrast, the Polynesians of the Society Islands do not value aggression and actively discourage its use. Tahitians are slow to become angry and get over it quickly. They use verbal aggression more than physical aggression. Parents discourage aggression. Verbal aggression

typically receives no consequences so that it does not continue. The strongest deterrent for aggression probably comes from the Polynesian belief that sickness and accidents are punishment from spirits for past actions.

The Bobo experiments and the cross-cultural ethnographies show that modeling is important in aggression. But modeling is just one several factor explaining aggressive behavior.

Aggression: The role of self-efficacy

Peer groups are important places for children to "broaden and validate self-efficacy" (Bandura, 1997, p. 173). Children have a greater risk for using aggression in peer groups when they have high self-efficacy beliefs to use and carry out aggressive acts. In addition, children are at greater risk for delinquency when they generalize aggressive behavior learned from parent models to peer groups and other relationships.

Children have different beliefs about their ability to carry out either prosocial or antisocial acts. *Self-efficacy is a mediator of self-attributions to carry our prosocial or antisocial behaviors.* High self-efficacy beliefs for prosocial behavior result in the use of peaceful means to achieve goals. In contrast, some children have high self-efficacy to use aggression to get what they want and believe they can successfully carry out these acts. These children are more likely to use aggression with peers. Children with low beliefs about their ability to carry out an aggressive act are unlikely to use aggression, even when faced with the hostile intentions.

Peer groups form around similar beliefs and interests. It is likely that children with high self-efficacy beliefs in their ability to use aggression to get what they want attract others with similar beliefs. The peer group then reinforces each other's behavior. Where does the aggression start? Children model much of their self-efficacy beliefs to start and carry out aggressive acts from parents. Parent models are more likely to use punishment and coercion to control children's behavior and are less likely to have positive interactions with their children. Power struggles result where the parents either give in or continue with the punishment until the child gives up. Children generalize their way of handling relationships to relationships outside of the family, including peers.

Aggression: Terrorism and social learning

Note to the teacher

It is well worth the time to consider some causes of terrorism and the challenges of a solution. It takes several days to complete this activity. First, each student finds something that interests them about terrorism in the media and brings it to class. We then share the information. Next, the class brainstorms questions about terrorism that a psychologist might be able to answer. Now we turn to Bandura's explanation. Students print out a copy of Bandura's 2004 writing "The Role of Selective Moral Disengagement in Terrorism and Counterterrorism" from www.des.emory.edu/mfp/BanduraPubs.html. Small groups find Bandura's answers to their questions. It is a humbling activity. Some students start out thinking that there are easy solutions to terrorism but quickly learn about its real complexities.

Bandura writes that one must **morally disengage** to commit a terrorist act.

We are agents of our own behavior, meaning that we judge our actions as right or wrong against certain standards and self-regulate behavior accordingly (Bandura, 2001). These standards come from a variety of sources.

1. Personal ideals
2. Situational circumstances
3. The anticipation of reinforcement from others viewed as more capable. Sometimes we give **proxy control** for our behavior standards to another. Leaders determine accepted behavior in terrorist groups.
4. The anticipation of reinforcement from the larger cultural group. Bandura believes that a group's ideology maintains behavior far more than biology. Adults teach accepted standards to children early.

Humans are self-directed; we make choices to meet goals. Persons in both **individualist** and **collectivist** cultures are self directed, though the standards for choices vary. Moral standards primarily come from childhood teachings.

Morals are fairly stable over time. Core moral values that guide behavior do not change on a regular basis. This is why there must be moral disengagement for someone to commit a terrorist act.

Most of the research on moral disengagement examines military and political aggression (Bandura, 2004). Because of this limited focus, it may appear that moral disengagement happens only in extreme circumstances. In reality, moral disengagement is part of everyday life. Think of moral disengagement in terms of *degrees*. Terrorism is extreme disengagement, but moral disengagement also takes place in corporate misbehavior, politics, and personal relationships. There are plenty of examples where typically honest people further their own interests at the expense of others. Telling a lie to a friend, cheating on one's income taxes, or giving and accepting insider information about a company stock all require disengagement from moral beliefs against lying and cheating. Disengaging requires justifying the behavior, which Bandura calls **self-exonerations**.

People have the ability to choose humane behavior or inhumane behavior, even in the face of extreme circumstances (Bandura, 2001). There are many examples where even under severe pressure, many choose strongly held moral convictions to behave humanely, even receiving punishment for these actions. Deviating from core moral standards requires mental disengagement.

Committing terrorist acts that kill many people by blowing up buses or flying planes into buildings need *special training* that builds on childhood learning. Terrorist training includes morally justifying these actions (Bandura, 2004). For example, Bin Laden portrayed the attacks on the United States as a religious duty, a defensive jihad.

There are many ways to psychologically disengage (Bandura, 2001). They are part of everyday life as well as terrorist training. Again, these take place in *degrees*.

1. The behavior is cognitively restructured. Here are three examples of the process.
   a. The behavior is framed as socially or morally worthy.
   b. Euphemistic language makes the behavior seem appropriate. This means that words making an action seem inoffensive are substituted for distasteful words. Bandura (2004) uses the example of bombs being called "vertically deployed anti-personal devices." People are more likely to commit aggressive acts if the acts are called something else.
   c. **Advantageous comparisons** justify behavior by making a comparison with worse behavior. Here is an everyday example. My husband has justified watching television when I want it turned off by saying "I watch very little television compared to other husbands." At an extreme level, some terrorist groups feel they are less of a problem than other groups because they attack only military targets.

Bandura (2004) uses the example that terrorists sometimes minimize their cruelty by saying it is a way to end the worse cruelty of the existing government. Counterterrorist activities are often justified by claims that they must use violence to end the attacks of terrorists. Each side minimizes their cruelty and condemns the other side, citing their "just causes." It is a real dilemma for groups wanting to use military retaliation against a terrorist act. Moral disengagement must be high for citizens to support the policies.

2. A person lessens their personal responsibility for an action by displacing the responsibility.
3. A person minimizes or challenges the effects of their behavior on others.
4. The victim is dehumanized. Dehumanizing another involves giving them animal qualities or blaming them for bringing on their own suffering.
5. Terrorist activities sometimes have the support from legitimate organizations that may provide indirect support for the violence, such as providing financial assistance.

Bandura (2004) sees no quick fixes for terrorism. Solutions include addressing social situations that drive people to commit terrorist acts. For example, "Islamic terrorists come mainly from populations living in an environment of poverty, political oppression, gross inequities, illiteracy, and a paucity of (means a lack of) opportunities to improve their lives" (p. 150). Bandura writes that Islamic terrorists learned to value suicide bombing from early childhood. It is not easy to reverse values instilled in childhood.

Modeling and language

Language is important to social learning in two ways. First, language is necessary for modeling; it is the primary mode of modeling retention in children with symbolic thinking. By age 3 or 4, children have progressed from using simple imitations to storing information for later creative use. Second, children may benefit from modeling the language use of more capable adults.

The acquisition of normal language is biologically based; social learning does not account for the evolved capacity that children have to acquire language. Dan Slobin (1968) wanted to know if the social learning process was helpful in some way to learning to use our biologically based language.

Slobin believes that the natural environment is the best place to study a child's spontaneous language after an exchange with an adult. Slobin used transcripts from a naturalistic study by Roger Brown and Ursula Bellugi in 1964 to test his ideas. The transcripts were from two children called Adam and Eve for the study. Exchanges between Adam and Eve and their parents were recorded between the ages of 18 months and 3 years in the home setting. Slobin studied the exchanges where a parent first expanded upon what the child said and then the child modeled these expansions in their own speech. Would the modeling of parental expansions benefit the child in some way? Adam and Eve had three possible ways of responding after the parent expanded on their speech. First, they could simply imitate. Second, they could reduce, or even shorten what was said. Third, they could add necessary words to the adult's sentence, such as an article or a pronoun. Here is an example from Slobin's research illustrating the third option. Adam and Eve used the third option more than the other two.

Child: "Pick 'mato."
Adult: "Picking tomatoes up?"
Child: "Pick 'mato up." (p. 171)

The modeling of parental expansions may be helpful to a child in learning to use language.

Slobin thinks that there is a *critical period* for the modeling of expansions. Modeling of expansions may be most beneficial when a child is in the *telegraphic phase,* when children use two-word phrases such as "cookie get." The benefits of modeling parental expansions taper off at 3, when children start constructing full sentence.

Do children learn to construct grammatical sentences without modeling? It is impossible to know because children are not raised without hearing adults use language. Cases of feral children who did not hear human language suggest that we do need to hear language from other humans. Perhaps there is an important role for modeling in activating evolved language capacities.

Depression and social learning theory

This material is also relevant for section 7.9 on the etiologies of depression.

Everyone faces obstacles and experiences failures (Bandura, 1997). Why can some people manage obstacles and failures while others become depressed? Perceived self-efficacy is the key. *Self-efficacy is the mental mediator that pulls together all other cognitive and behavioral theories of depression.* Self-efficacy is the greatest determinant of how one manages cognitions and analyzes behavior.

Self-efficacy contributes to depression in four ways. First, social support is a big factor in stress **resilience.** To what extent does a person have the self-efficacy to build and maintain social support systems? Second, to what extent is a person able to turn off negative thoughts? Third, how does a person set and evaluate goals? Fourth, to what extent does a person judge their personal experiences in relation to the experiences of others?

Good social support is critical for coping effectively with stressors. "A sense of personal efficacy not only mediates the impact of social support on depression but also functions as a determinant of social support" (p. 158). People with high self-efficacy beliefs for creating and maintaining social support systems have a lower risk of depression. Social networks in turn enhance a person's self-efficacy. Others in a social network act as models for effective problem solving. Social networks are created; those with low self-efficacy are more isolated and at greater risk for depression. While most of the self-efficacy and depression research uses adults as subjects, some research on teenagers reveals why **gender differences** in coping with stressors become evident at puberty. Both male and female adolescents with depression report low self-efficacy to manage academic demands. However, females also report low efficacy to manage social relationships and in managing the self.

Depressed persons have lower self-efficacy to turn off negative thoughts than nondepressed persons. They realize that distractions from negative thoughts are beneficial but tend to use other negative thoughts as distractions. Depressed persons get into a cycle where one negative thought leads to another. Unfortunately, they are good at turning off positive thoughts. In addition, depressed persons tend to ruminate over setbacks. The time spent ruminating over failures is a predictor of both the severity and length of depression.

Depressed persons have trouble setting realistic goals. They are more likely to set vague, idealistic, and unattainable goals. When depressed persons fail to achieve goals, their motivation falls and their sad mood rises. Nondepressed persons set attainable specific goals, and when they fail, they have greater motivation to move forward more quickly.

Depressed persons frequently judge their performance against that of others and use the conclusions as evidence that they are worthless. Depressed persons are more likely to judge themselves against the successes of others without a realistic picture of how much effort another expended. Females are more likely than males to devalue themselves in relation to others.

Many studies on the etiology (contributing factors) of depression have found correlations between self-efficacy and depression. But some questions remain. Next, we will review a study clarifying the relationships between gender, culture, self-efficacy, relationship harmony, and depressed symptoms in adolescents.

Sylvia Chen and colleagues (2006) compared the etiology of depression in adolescents from the United States and Hong Kong. Data were gathered with questionnaires and analyzed with means, standard deviations, and correlations.

The authors write that both self-efficacy and good relationships are important to adolescent development. However, individualist cultures valuing an independent self emphasize one's personal self-efficacy and collectivist cultures valuing an interdependent self emphasize relationship harmony. The authors believed that different cultural values related to **individualism** or **collectivism** might make adolescents more sensitive to either self-efficacy or relationship harmony as an etiology for depression.

The authors predicted "that both self-efficacy and relationship harmony will significantly predict depressed symptoms in each of these two cultural groups, and that the pathway of self-efficacy to depression will be stronger among American adolescents, whereas that of relationship harmony will be stronger among Hong Kong adolescents" (p. 646).

The sample included 1171 Hong Kong (873 males, 898 females) and 501 U.S. (198 males, 303 females) participants from secondary school volunteers with an average age of 15. Questionnaires were completed during class time.

Three separate questionnaires measured the degree of self-efficacy, the degree of relationship harmony, and depressed symptoms.

The 10-item General Self-Efficacy Scale (GSE) measured perceived self-efficacy. "I can solve most problems if I invest the necessary effort" is one example of a question.

The scale used a 4-point Likert scale of "not at all true" to "exactly true."

The 5-item Interrelationship Harmony Inventory (IH) measured relationship harmony. "My parents and I have a harmonious relationship" is one example of a question. Students rated their responses on a scale of 1, very low, to 7, very high.

Self-reports about depression symptoms were obtained with an adapted Beck Depression Inventory (BDI) and its Chinese version. The BDI has tested well for cross-cultural **validity**, so it is a good choice to measure depressive symptoms. The BDI contains questions about how someone is feeling and participants rate themselves on a Likert scale from 0, "I do not feel sad," to 3, "I am so sad or unhappy that I can't stand it."

The results include the following:

1. The means showed that self-efficacy differed between males and females. Males had higher mean self-efficacy scores in both cultures.
2. Differences in mean scores were found between the two cultures in both self-efficacy and in family harmony, with the U.S. sample higher on both.
3. Culture was correlated to how participants became depressed (the two pathways). While self-efficacy was correlated with depression in both cultures, it was a stronger pathway for depression in the U.S. adolescents than it was for Hong Kong adolescents. However, both pathways supplemented the other in both samples, so future research should investigate the role of self-efficacy and relationship harmony in adolescent depression.
4. The authors believe that individualism and collectivism contributed to the differences found in self-efficacy and depressed mood. While no data were directly collected on individualism and collectivism, the results from Chen and colleagues are consistent with other research suggesting that personal capabilities and autonomy are more related to mood in individualistic cultures. Chen and colleagues speculate that other di-

mensions of culture could help explain the differences in pathways, such as **tightness, looseness,** the **independent self,** and the **interdependent self.**

It is typical that etiologies of mental illness in humans use correlations to analyze data. It would be unethical to create conditions that cause mental illness. This means that the variables are related and that no variable is known as a cause of depression.

5.16 Discuss the Use of Compliance Techniques

Social influence is adaptive behavior

This section and the next two are unified under the study of **social influence,** or how interpersonal interactions shape the expected behaviors of a group (Fiske, 2004).

Compliance, conformity, and **obedience** are three general types of social influence and the five **core social motives** explain why people respond to them. For example, belonging needs make sure that we respond to others' requests. All three forms of social influence fit under the general theme of this book; humans evolved a **social intelligence** (section 3.5) that allowed us to live together in **cultures.** Without the ability to socially influence each other, we would not function well in groups. It is *adaptive* to belong to a group.

Cross-cultural research is one focus of new research investigating how social influence theories apply to everyone.

What is compliance and what are some common techniques?

Compliance is "yielding to social pressure in one's public behavior, even though one's private beliefs may not have changed" (Matsumoto, 2008, p. 369).

Robert Cialdini and Brad Sagarin (2005) write that compliance techniques are used both professionally, in sales and fundraising, and in everyday life. *It is easiest to study compliance techniques through the behavior of compliance professionals and then generalize the knowledge to understanding how humans exert social influence over each other in everyday life.*

Compliance techniques socially evolved. The **evolution** of social influences ties social psychology to the biological level of analysis. Compliance professionals who use the techniques successfully prosper and survive, passing their success to the next generation.

Cialdini and Sagarin (2005) identify and analyze six psychological principles that organize compliance techniques.

1. **Reciprocity.** People are more likely to comply with requests from someone who has already done them a favor. Reciprocity served an evolutionary purpose. People could give away things without really giving them away because another person is likely to return the favor. The **door-in-the-face** concession is one variation where an extreme request is made, refused, and then the person makes a less demanding request, actually the real request.
2. **Social validation.** People are more likely to comply with persons who think and do things in a similar way. Looking for social validation frequently works, as we are correct much of the time when we look to others for guidance. In addition, it may be easier to get someone from a collectivist culture to comply.
3. **Commitment/consistency.** Humans want consistency and are more likely to comply with a request if they have already committed to a similar request. Leon Festinger studied how people struggle to keep consistency. Professionals use a variety of strategies