The Cognitive Perspective

Many psychologists do not totally agree with an operant or behavioral interpretation of learning. They argue that classical and operant conditioning processes overly simplify how organisms, and especially humans, interact with their environments. These psychologists believe that you cannot dismiss cognitive (mental) processes when studying learning, as they believe the operant approach seems to do. This alternative focus on mental activity defines what is typically referred to as the cognitive perspective on learning.

Cognitive interpretations of learning have their roots in Greek philosophy, but resurfaced in the 17th century in the work of the associationists philosophers. British associationistic philosophers such as John Locke and David Hume, also collectively known as the British empiricists philosophers, believed that our experiences throughout life are critical in forming mental associations that define who we are and what we believe. Modern cognitive theories emerged when psychologists, rejecting exclusively consequence-based explanations of behavior, began to elaborate their own interpretations of learning.

Cognitive processes and activities such as information processing, mental representations, predictions, and expectations are central to the cognitive interpretation of learning. Cognitive psychologists don't completely discount the findings of the operant and behaviorally oriented scientists, they merely believe that there are also cognitive events involved in how organisms learn. For cognitive scientists, these events include internal processes which translate into a modern interpretation of a rather ancient concept: the "mind." Thus cognitive events are mental events.

For example, one of the early German gestalt psychologists, Wolfgang Kohler (1925) took a cognitive perspective when he explained the problem-solving behavior he observed in chimpanzees. He believed that these animals, as well as humans, could learn to solve problems though rather sudden insights about the character of a problem and its alternative potential solutions. He gave chimps such objects as boxes and sticks and then hung bananas out of reach to see what the chimps would do to get the bananas. Eventually they stacked the boxes and extended their reach using the stick to knock down the bananas. Kohler thought this sudden assimilation of objects was due to the animal's having a mental insight into possible arrangements that would solve their problem.

Likewise, Edward Tolman (1948) concluded through his work with rats learning to navigate mazes that animals learned about the structure of their environments without the required presence of reinforcement. He let rats explore mazes without the presence of goal boxes where reinforcing consequences were available. Later, these animals with non-reinforced experiences of mazes were compared with rats with no maze experience for their speed of learning when reinforcing consequences were now available. Rats with prior exploratory experience learned more quickly. Tolman thus proposed that animals as well as humans acquire a "cognitive map" which represents their surroundings mentally by direct associative experience. Based on this work Tolman discounted the need for direct contact with behavioral consequences as a necessity of learning. And because you can only see such learning when rewards are made available, he called the learning acquired from mere exploration "latent" learning. While cognitive psychology had its

origins in this early research conducted during the 1930's and 1940's, it has become even more popular today.

For example Albert Bandura (1977) has rejected a strict behavioristic view by demonstrating that individuals can learn without coming into direct physical contact with behavioral consequences in their environments. His research identified the phenomenon called observational learning; a type of learning that occurs by imitating others who serve as models that we see being reinforced, and thus this form is learning is also called imitative learning or modeling. Bandura's best known example of imitative learning involved children watching other children on film acting aggressively during play (Bandura, Ross, |_2 Ross, 1963). Later, when the children who viewed the film were allowed to play in a room that included a "bobo doll" (a child-sized inflated standup doll that children can knock over and it bounces back to an upright position) these children were more aggressive in their play than children who had not watched aggressive models on film. The interpretation was that they had learned to be more aggressive because they had observed other children behaving in an aggressive way.

More recently, Robert Rescorla (1988) has suggested a cognitive interpretation of Pavlovian classical conditioning by suggesting an "expectancy" interpretation of the phenomenon. His theory rests upon the idea that experiencing two stimuli occurring closely together in time leads one to "expect" the occurrence of a subsequent stimulus whenever the first one occurs, and that this expectation accounts for conditioned reflexes.

Another research program that exemplifies a cognitive interpretation are the developments in what has been called "learned helplessness" and its role in the development of depression. Seligman and his colleagues (Maier, Seligman, |_2 Solomon, 1969) were the first to demonstrate that dogs denied opportunities to avoid shocks while in an experimental chamber called a shuttle-box later failed to learn to take advantage of avenues of escape or avoidance when such opportunities were made available. If dogs had such escape and avoidance possibilities from the beginning, they easily learned to avoid their shock presentations by jumping over a low barrier between themselves and the safe (no shock) portion of the shuttle box. But those who had, from the beginning, no avenue of escape never learned to jump to the safe side even when escape or avoidance was subsequently possible. Seligman went on to use this "learned helplessness" as a model for interpreting human depression, where little effort to exert counter-control over the negative events is a person's life is apparent.

Those who have participated in what has been called the "cognitive revolution" against behavioral interpretations, and thus have taken a cognitive perspective on understanding behavior, focus not on observable responses but on the inferred mental processes involved in learning. Stimuli in the environment serve as signals and the prediction of what follows, and this is an essential mental activity. Some cognitive psychologists believe that learning occurs through information processing activity that is exclusively mental, while others focus on the roles of mental representations in the learning process. Theorists who conduct cognitive research look to discover and identify the mental processes that occur when an organism is behaving and learning.

Cognitive theories of learning and behavior have practical applications, especially in therapy. Systematic desensitization was discussed in the section on classical conditioning, but cognitive psychologists have added their own procedures to this approach by using visual imagery rather than physical stimuli. Albert Ellis' rational

emotive therapy (Ellis, 1973; 1993) is also a clinical application of cognitive principles blended with behavioral principles. This cognitive-behavioral therapy rests on the idea that inappropriate and self-defeating beliefs are the root of psychological disorders. Aaron Beck, another cognitive psychotherapist, has a similar view on therapy based on the belief that anxiety promoting patterns of thinking are what cause anxiety and depressive disorders (Beck, 1976; 1993).

Early Cognitive Ideas: Associations and Insight

The associationistic philosophers of 17th and 18th century Britain were some of the first philosophers to take a cognitive perspective on learning and behavior. John Locke, George Berkely and David Hume were such associationists and they rejected the then-prevalent notion of innate ideas. Instead, they theorized that humans form individual personalities through mental associations made through experiences with the environment. Locke (1690/1959) proposed that we are all born as a tabula rasa or "blank slate". Through experience, we form mental relations between contiguous (close in time and/or space) events and their effects on us. For example, a person who has a suspicious nature has become that way, perhaps, because when they began to trust someone, they were soon after deceived. These philosophers were known collectively as the British Empiricists as well as the Associationists and they believed that we make mental representations and process information in our minds as we grow and gain experience. The ideas and principles generated by the associationists form a foundation of modern cognitive theory.

One psychologist who later helped to define the early cognitive perspective was Wolfgang Kohler. Kohler is perhaps best known for his studies of problem-solving behavior in chimpanzees (Kohler, 1925). Originally trained as a Gestalt psychologist in Germany, Kohler proposed a very cognitive explanation of a chimp's behavior. In his research, Kohler would set up puzzles for the chimps to solve. One of the most famous was to tie a bunch of bananas to a string and then to tie the string to the ceiling of a large enclosure, thus placing the bananas out of reach of the chimps. There were, however, a large box and a long stick inside the enclosure. Kolher observed the chimps in this situation and found that the chimps made few false trials or errors. They would simply jump at the fruit a couple of times, pace around the enclosure, move the box under the bananas, get a hold of the stick and then knock them down. Kohler labeled this solution to a problem that had suddenly emerged "insight".

Kohler began studying the chimps because he was dissatisfied with Thorndike's theory of trial and error learning (Thorndike, 1898). Kohler's observation of his chimps in problem solving situations strengthened his conviction that his departure from the law of effect was a more accurate interpretation of how learning worked. Kohler believed that the solution came to the chimps as a mental representation of what would be successful. This is the process of insight and Kohler (1959) believed that animals as well as humans could overcome obstacles in this fashion rather than by Thorndike's trial and error. Mental representation is a key concept in Kohler's theory, although today many psychologists disagree with the notion that insight is as simple as a solution that just "comes to mind."

A good illustration of this more modern interpretation is Epstein's rather well-known demonstration that pigeons could be shaped using operant conditioning procedures to push small boxes from one place to another, and also to pick up and wield small sticks. When Epstein (1981) then gave these pigeons such objects in a replication of Kohler's earlier experiments where the box had to be moved under a reinforcer that could only be "knocked down" with a stick, pigeons with these prior experimental histories quickly did just as Kohler's chimps had done. Epstein points out that this "generative" process, as he called it, of generalizing prior training to slightly modified situations was simply just that: response generalization and multiple-response combinations to generate what appear to be novel behaviors but really aren't novel at all.

Place Learning and Latent Learning

A psychologist operating from the cognitive perspective during the middle 20th century was Edward Tolman. Dissatisfied with operant explanations of learning, Tolman (1930a) focused his studies on how rats learn to navigate through mazes. Behavioral psychologists who emphasized operant conditioning and its stress of reinforcement believed that rats learn to get through mazes because of reinforcing consequences resulting from winding their way through such mazes, learning turn by turn as discriminative cues. Tolman rejected the necessity of reinforcement (Tolman |_2 Honzik, 1930b) and developed many original research designs to test his theories emphasizing what he called place learning and latent learning. Tolman believed that learning occurred (in animals as well as humans) through mental activity such as insight and the formation of mental representations of the environment he referred to as cognitive maps. Tolman thus believed that animals learn more about "place" rather than how to engage in "habits" (Tolman, 1948).

To test his cognitive theory of place learning, Tolman created a maze with three different routes. One route was a straight path to the goal box where a reward of food was present. The second route was to the left of the first and was slightly longer because it had a small "c" shape in the beginning portion. The third route was to the left of the first and was the longest of the three as it had a half-square shape to it.

With experience in the maze, the rats came to prefer the first route and would regularly take it when placed in the maze. Tolman then blocked route one, and left only two and three as options. When the rats came to the blockade, they immediately turned around and took route two (the second shortest) with absolutely no training to do so. When Tolman blocked routes one and two, the rats would come to the blockade of route two and immediately take route three to get to the reward. From these results, Tolman concluded that, with experience, rats form mental representations or models of the maze in the form of cognitive maps. Tolman believed that the rats' movements in the mazes were not directed by discriminative stimuli, but guided instead by cognitive maps the rats had formed (Tolman, 1948).

Cognitive maps, or mental representations of the spatial layout of the environment, form the critical element in Tolman's theory of place learning. You probably have a cognitive map of how to get to your favorite restaurant. You do not get there driving "landmark-to-landmark" once you have learned the route. The only time you think about the route "landmark-to-landmark" is when you are telling someone who has

never been to this restaurant how to get there. With experience, and through the reinforcement of enjoying a favorite meal, you now have a cognitive map of where other buildings and landmarks are in relation to it. You can automatically follow the route you have in this map to get to your restaurant instead of always reading a map or having to travel step by step.

While Tolman's theory of place learning is essentially cognitive, it has an ecological application to it. Many scientists working from Tolman's research have applied place learning in understanding how animals navigate their environment and remember important features, such as where to find food, where predators often hide, etc. They also apply this theory to understand how birds that nest in a community know how to find their "home nest" amongst many other nests that are in close proximity and look very similar.

Taking the cognitive concept of place learning a step further, Tolman wanted to show that animals could learn to navigate their environment without receiving any reinforcement. Tolman used a complex maze and three groups of rats in what he referred to as latent learning research. The first group had one trial in the maze per day for 11 days. These rats received no reward for navigating the maze. The second group also had one trial in the maze per day for 11 days, but these rats were rewarded for navigating the maze. The rats in the final group went 11 days (at one trial per day) with no reward, but were then rewarded on the trial of the 12th day.

The results supported Tolman's theory. Rats who never received rewards for completing the maze improved only slightly (improvement was measured in number of errors) over the course of 11 days. The rats that were consistently rewarded improved quickly until they reached a maximum efficiency toward the end of the study. The results of the third group of rats (those that had been rewarded only on the 12th day) were the most striking. After the initial rewarded trial, these rats were just as efficient at completing the maze as those rats that had been rewarded the entire time (Tolman |_2 Honzik, 1930b)!

Tolman explained these results as latent learning. The rats had learned to navigate their environment all along, but this learning did not emerge until it was reinforced. It took only one reinforcement for the rats to reach maximum efficiency. The learning was latent or hidden from view until reinforcement brought it out. It did not take reinforcement to learn the behavior; the behavior was simply observed and strengthened with reinforcement. This phenomenon sometimes explains how a small child will divulge knowledge on how to do something only when the time is appropriate, leaving the parent or teacher to ask, "Where did you learn that?" The child may have learned the information from TV or some other source and will only display the knowledge when it is appropriate or when they will be reinforced by praise and/or attention.

Observational Learning

Albert Bandura (1977) is a cognitive theorist who contributed throughout the latter half of the 20th century and continues as a strong force in cognitive psychology. He especially does not agree with Skinner's ideas about shaping and reinforcement as the primary way that new behaviors are acquired. Bandura often asked how it could be possible for people to imitate others and thus learn from mere observation (Bandura,

Ross, |_2 Ross, 1961; 1963) if shaping and direct contact with reinforcement or punishment is necessary. Using this problem as a springboard, Bandura conducted many studies and identified the phenomenon of observational learning, or learning new responses by observing and modeling the behavior of others (Bandura, 1965). Bandura's studies demonstrated how humans, and eventually animals as well, can learn by watching others behave, and how mere observation of, not physical contact with, behavioral consequences in the form of reinforcement and/or punishment is sufficient for learning to occur.

An illustration of Bandura's concept of observational learning is one of his studies he conducted using kindergarten aged children. All the children in one study watched a film portraying an adult engaged in aggressive behavior (Bandura, Ross, |_2 Ross, 1963). The adult served as a simple model for such behavior, in that this adult was in a room full of toys and was seen verbally insulting, hitting, kicking, throwing and hammering a large plastic inflatable bobo doll. For one group of children, the model was reinforced for the assaults with candy and soda. For a second group, the model was punished verbally and then received a "spanking." The third group of children viewed the aggressive model where no consequences were given. The results demonstrated that humans could learn by simply witnessing the consequences of others.

When left in the room alone with a similar bobo doll, those children in the first group, (where the model was rewarded for aggression) displayed many aggressive behaviors by imitating what the model had done as well as showing novel aggressive actions. Those in the group witnessing the model being punished for aggressive behavior were much more gentle with the doll and displayed few, if any, aggressive acts toward it. Children in the group who witnessed the model receiving no consequences for aggression where more ambiguous in their behavior, showing some aggressive and some gentle behaviors.

Bandura emphasized the role of observation, attention, imitation and expectation in this process. First, an individual must observe and pay attention to another person (serving as a model illustrating the behavior). You cannot learn from someone else if you are daydreaming or paying attention elsewhere. You simply will not be able to see or remember their behavior. The next requirement is a physical ability to imitate the observed behavior – an individual must be able to imitate the behavior of the model. We'd love to learn to fly by watching an eagle, but this simply can't work. Someone suffering from paralysis cannot learn to walk by watching someone else. Finally, there needs to be some type of expectation of consequences. If someone witnesses their friend being reinforced for volunteer work, that person is likely to imitate this and try serving their community as well. Behavior can still be imitated and initiated if there are no consequences, but observational learning is much more efficient if the model's behavior results in some type of consequence; whether punishment or reinforcement.

According to Bandura, behaviors can be learned simply by observing a model being reinforced for a behavior, and then by imitating that model's behavior. So the question becomes, do children who watch violence on TV learn to commit crimes and become violent criminals? The answer is yes and no. It is true, as clearly seen in Bandura's studies, that children can learn to be aggressive and to perform acts of violence by watching and imitating others. They may even try these behaviors as a means to acquire what they want. If, however, children are consistently punished for violent

behavior while simultaneously reinforced and praised for appropriate behavior, they may not become violent individuals. In this case, the child learns that violence is not the means to get what one desires. If the child does obtain reinforcement (perhaps by gaining attention) for using violence, then yes, they may very well develop aggressive and violent behaviors and may become much more likely to be involved in crime. While anyone can learn behaviors through imitation and observation (Bandura, 1977), operant conditioning can still have effect whether those behaviors become frequent or not. The converse is also true as an individual can learn a behavior through operant conditioning, but their behavior frequency can be affected by the observation of others being reinforced or punished by a particular behavior.

Learned Helplessness

Learned helplessness is a phenomenon Martin Seligman and his colleagues (Maier, Seligman, |_2 Solomon, 1969) identified in his studies of negative reinforcement and punishment. Seligman negatively reinforced one group of dogs for jumping over a barrier in an apparatus called a shuttle box. This apparatus is little more than a cage divided into two separate sections by a barrier wall that, usually, may be jumped over to escape from one side of the box or the other.

Seligman's procedures involved trials that began by turning on a warning stimulus. This warning was quickly followed by a brief presentation of electrical shock delivered to a dog through the floor of one compartment of the shuttle box. Only one side of the two-compartment shuttle box was ever electrified at a given time, and this was always the side the animal was standing in when a trial began. If the dog jumped over the low barrier wall to get to the other chamber of the shuttle box, it escaped the shock. Soon this negative reinforcement resulted in the animal jumping the barrier as soon as the warning stimulus comes on, thereby avoiding the shock altogether. Thus this group of dogs showed no ill effects of the procedures and quickly learned to jump as an avoidance response as soon as the shock began.

Another group of dogs experienced the same trials of warning stimulus followed by shock, but the barrier in their case was too high to jump over. Thus, no matter what they did they could not escape nor avoid the shock. Seligman subsequently lowered the barrier in these dogs' shuttle box to the same height as used for the group of dogs who easily learned escape-avoidance, and set the experiment so they could escape the shock. But Seligman (Seligman |_2 Maier, 1967) found that these dogs did nothing to attempt to escape their shocks! They would just cower in their cages, whimpering and taking the shocks. He referred to this failure to learn the escape-avoidance that normal dogs easily learned as a form of an acquired cognitive state of "helplessness" and thus these dogs had learned to "give up trying."

These "helpless" dogs became very inactive, lethargic and would sometimes stop eating when they were not in the experimental conditions. Seligman labeled this state as learned helplessness (also sometimes referred to as conditioned helplessness) and concluded that it occurs in humans as a form of depression. Many people become overly dependent or depressed because all of their attempts to escape or avoid negative situations have failed. Eventually, people give up and an attitude of learned helplessness develops.

Applications of Cognitive Learning Theories

The cognitive perspective on learning has many applications that go beyond TV violence, especially in therapeutic situations. Therapists specializing in systematic desensitization sometimes apply cognitive principles, such as visual imagery and mental representation, to the counter-conditioning process. Ellis' rational-emotive therapy (Ellis, 1973; 1993) works to change a patient's beliefs about a certain situation in order to alter perceptions of negative consequences and hence, negative feelings. Beck's (1976; 1993) cognitive therapy, which is similar in many ways to rational-emotive therapy, leads patients to understand their patterns of inaccurate and anxiety provoking patterns of thinking. Beck believes that by changing these patterns, patients can overcome feelings of depression and anxiety.

Outside of the therapeutic environment, cognitive research in learning is often applied to the computer sciences as guides to developments in various forms of artificial intelligence. For example, artificial intelligence research on informational input includes pattern recognition problems, such as interpreting hand writing and spoken language inputs so that they may be translated into computer codes to make them useful as control commands or text production (e.g., dictation input programs). On the processing side, artificial intelligence includes neural network simulations, programs that can learn based on user feedback, problem solving and simulation algorithms, and even programs that can play world-class chess against human competitors. On the output side, artificial intelligence research includes the development of fabrication "printers" that can manufacture objects directly from digital blueprint images, robotic and neurally controlled prosthetics for amputees, and even attempts at spoken conversational language where the computer participates as a "social" entity.

The concept of systematic desensitization is discussed in detail in the applications of classical conditioning section. While desensitization is very much a behavioral therapy, therapists who take a more cognitive perspective on learning often add visual imagery or mental representation in the desensitization process. For example, instead of presenting either a real snake or even a picture of a snake to a patient who fears snakes, a therapist might begin with instructions to imagine seeing a snake at a distance, then to also imagine gradually walking nearer to it while staying very relaxed. This application of cognitive psychology's emphasis on mental activity is a way for patients to practice desensitization without coming into contact with the actual feared stimulus or even a physical representation of it.

Visual imagery also allows patients to learn how to react to a feared stimulus by imagining what they might do if they were to abruptly come into contact with it. For example, a person with arachnophobia can go home after training in a therapy session and practice by imagining what it would be like to encounter a large spider. They can imagine spiders and experience the emotions at a more acceptable or manageable level as well as mentally formulating a plan of action without having to actually be in contact with a real stimulus.

This visual imagery also works well for those with a phobia of flying. It is impractical for the therapist to continually go on therapeutic flights with the patient. So during therapy sessions, before an actual flight is set up, the patient "practices" by

visually imagining being on an airplane; letting themselves feel the emotions they will experience while they plan appropriate ways to react to those emotions.

Cognitive Applications in Therapies

Cognitive approaches to therapy emerged from relevant research on learning and problem solving . The most common psychological disorders that are treated from a cognitive perspective include depression and anxiety. Cognitive explanations for these conditions emphasize a person's negative beliefs and irrational interpretations of situations. One of the most prominent of such an approach is Ellis' Rational-Emotive Therapy (Ellis, 1973; 1993). Beck's approach to cognitive therapy also emphasizes negative patterns of thought (Beck, 1976; 1993). Research has found that both therapies are effective in treating many disorders including depression and anxiety.

Ellis' rational-emotive therapy is designed to change maladaptive behavior by changing irrational interpretations that individuals make in certain situations. The skeleton of rational-emotive therapy is Ellis' ABC (Activating event, Belief, Consequence) model of psychological disorders. As a cognitive perspective on therapy, this model uses the concepts of mental belief, interpretations and emotions. The therapist must break into the ABC model and change these beliefs before the patient's emotions and behavior can be altered.

Ellis feels that if you alter an individual's irrational belief about some event you also change the consequences of such beliefs, which take the form of negative emotions. With these negative emotions gone the maladaptive behaviors should also disappear. Ellis emphasizes that a therapist's job in rational-emotive therapy is to illuminate the maladaptive mental processes that occur in a patient and then to teach alternate ways of looking at a situation. Under this therapeutic approach, the therapist demonstrates to patients how negative their beliefs are and helps them to change their beliefs so they no longer feel such negative emotions, and thus they no longer exhibit maladaptive behaviors.

An activating event, (representing the A in Ellis' ABC model of psychological disorder) is any event or situation in the life of a patient that causes that patient to develop a negative belief or irrational interpretation. This belief, in turn, leads to negative emotions and maladaptive behavior. Activating events can be virtually anything in the life of the patient from missing a bus to a death in the family. These events can sometimes be under the control of the patient, but sometimes they are beyond anyone's control. The therapist's job is to change the beliefs that correspond to these events; it is not the therapist's place to interfere with the events themselves.

The B in Ellis' ABC Model in rational-emotive therapy stands for the beliefs that patients form as a result of their experiences with activating events. These beliefs are the key to understanding the nature of the patient's problem and are the starting point of therapy. Such beliefs often take the form of irrational interpretations of certain situations in the patient's life. It is only when the therapist leads the patient to understand and change these beliefs that the patient can begin to reduce the negative emotions and alter the maladaptive behaviors he or she experiences.

The C in Ellis' ABC model represents the consequences a patient experiences because of the negative beliefs he or she holds regarding a specific activating event. In

Ellis' cognitive model, consequences are often in the form of negative emotions experienced by someone suffering the psychological disorder brought about by these negative beliefs. A therapist using rational-emotive therapy reduces or eliminates these consequences indirectly by changing the patient's beliefs about the events in his or her life.

Aaron Beck's therapy (Beck, 1993) is also an example of a cognitive approach to therapy that is quite similar to Ellis' rational emotive therapy. Beck's cognitive therapy rests on the premise that the difficulties and disorders that people experience are due to anxiety-promoting patterns of thinking. Beck believes that individuals who suffer from psychological disorders, such as anxiety and depression (depression being the original disorder the therapy was designed for), are constantly thinking about themselves and events in their lives in very negative ways. These negative thoughts, according to Beck, are the source of the problem rather than any physical event or flaw.

Therapists using Beck's cognitive therapy are taught to use Socratic questioning; a method of questioning that leads patients to identify these negative thought patterns. Once the patient identifies their anxiety promoting thought patterns, they are taught how to alter this and begin to see themselves and events for what they truly are. Minimizing the positive events in one's life is a major form of this negative thinking. For example, a person suffering from depression might be given a birthday party. When asked about it he or she may say, "They just did it because they feel bad for me. I could tell no one really wanted to be there." This individual is minimizing a very positive event in their life. A therapist using Beck's cognitive therapy would then, through Socratic questioning, illuminate this pattern of thinking for the patient and help to change it.

Another form of an anxiety-promoting pattern of thinking is maximizing the negative events that occur in one's life. In Beck's cognitive therapy this is highly maladaptive and can lead to psychological disorders. An example of maximizing the negative may be a patient in cognitive therapy who states, "I had an argument with my best friend. I am no good to anyone and I will never have any more friends."

Mis-attributing fault to oneself is another common anxiety-promoting pattern of thinking that, according to Beck, can lead to psychological disorders. Someone who tries to accept blame for a friend losing his or her job, when the individual had absolutely nothing to do with the decision is mis-attributing fault to the self. As with other faulty thoughts, Socratic questioning illuminates this pattern of thinking for the patient and helps to change mis-attributing fault.