Second Edition

Effective Leadership in Adventure Programming

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The cover of *Time* magazine for August 29, 1983, displayed a picture of "Daredevil Ben Colli" with the caption, "Wheeeeeeee! Chasing Thrills and Adventure." The subject of the photograph was known for his high-speed rappelling descents from atop skyscrapers. The cover story, titled "Risking It All," contained stories of bungee jumpers, mountain climbers, swimmers, runners, paddlers, parachutists, pilots, and sailors. The author (Skow, 1983) wrote: "There have always been adventurers, footloose and sometimes screwloose, and their 'Why not' has always stirred alarming and delicious fears in settled souls whose timid question is 'Why?'" (p. 52).

To deliver your adventure program more effectively, it helps to understand individual behavior during adventure experiences. In this chapter, we explain some of the social psychology theories that have contributed to the present body of knowledge of human motivation in times of risk and adventure. To show you real-life applications of these theories, we include examples of common outdoor activities.

PHYSIOLOGICAL AND PSYCHOPHYSIOLOGICAL FACTORS

The uninitiated public often asks, "Why? Why would anyone in their right mind climb a mountain, paddle a river, descend a ski slope, or jump out of an airplane?" Mallory's historic answer, "Because it's there," made in reference to his plan to ascend Everest in 1924, sheds little light on what motivates people to take risks. The idea that some people are "adrenaline junkies" who are addicted to thrill seeking may seem somewhat humorous. On inspection, however, physiological studies suggest that thrill addiction may be closer to the truth than experts or laypeople originally suspected.

Endorphin High

Endorphins are hormone-like chemicals released into the bloodstream during times of stress. Their chemical structure resembles narcotic compounds such as opium, and they similarly affect the nervous system without producing the negative side effects that often accompany illicit drugs. The well-known "runner's high" that dulls pain and gives feelings of limitless strength or endurance to marathoners is just one positive example of endorphins in action.

We humans need a certain amount of stress in our lives to maintain the level of endorphin secretion we have come to expect. Some people experience enough stress in their daily lives. Others have greater needs and often fulfill their desires by consciously seeking stimulation through risk-taking adventures (Bunting, 1987; Schreyer, White, & McCool, 1978; Selye, 1974; Zuckerman, 1979). While this explanation of motivation is based in human physiology, other theories examining the social psychology of adventure (Garst, Scheider, & Baker, 2001) are presented in this chapter.

Optimal Arousal

In *Why People Play*, Ellis (1973) discusses his **optimal arousal theory of play**, asserting that the human brain is a continually active organ in need of ongoing stimulation. Deprived of external stimulation, for example, as it is during sleep, the brain manufactures its own arousal in the form of dreams. Optimal behavior is easily observed in children (most of Ellis' work was conducted in the children's play laboratories), who when without external stimulation from a parent or friend seek their own arousal in the form of imagined or other independent play. Since adventure is seen by some as a form of adult play (Carpenter & Priest, 1989), the optimal arousal theory of play may apply to adults as well.

The brain's level of arousal depends on the amount of information the brain is receiving. The more information received in a period of time, the higher the arousal; the less information coming in, the lower the arousal. People may be over- or underaroused by the conditions around them, and levels of arousal in the same situation differ for various people. These principles suggest that a unique level of optimal arousal exists for each individual. Ellis believed this was the point at which performance is at its maximum. Figure 4.1
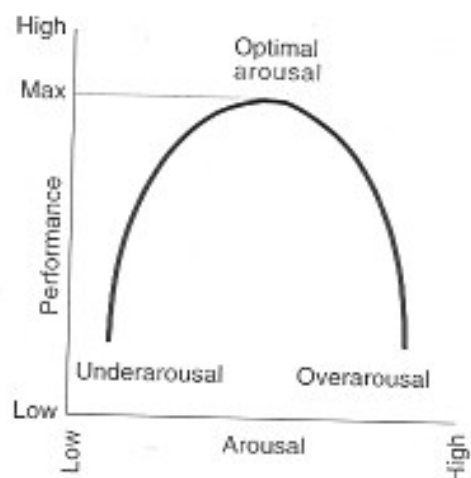
Figure 4.1   A graphic representation of optimal arousal theory.

Individuals seek out adventure for many reasons.

diagrams the relationship between performance and arousal.

For example, a mountaineer climbing an easy route may be underaroused to the extent that performance drops off. The mountaineer may also climb a difficult route, become overaroused, and experience a similar decrease in performance. Most mountaineers usually seek that particular level of difficulty that is optimally arousing, leading to the best climbing performance. The unique point to Ellis' theory is that people like to perform their best and purposefully seek out conditions that produce a state of optimal arousal. Since adventure is considered adult play, theories such as Zuckerman's (1979) identification of **sensation seeking** have been adopted as possible reasons why people test and push their limits by taking risks.

Flow State

M. Csikszentmihalyi (1975) wrote a book titled *Beyond Boredom and Anxiety* in which he observed and interviewed a wide cross section of the public, including chess players, poets, dancers, surgeons, and rock climbers. All subjects of his study experienced a similar state of being when fully involved in their chosen activity, which he later termed **flow**. "Flow describes a state of experience that is engrossing, intrinsically rewarding and outside the parameters of worry and boredom" (M. Csikszentmihalyi & I.S. Csikszentmihalyi, 1991, p. 150). Studies on flow suggest that people are motivated to participate in adventure experiences because of the intrinsic feelings of enjoyment, well-being, and personal competence they achieve. These positive effects are the reasons people return to adventure programming to recapture the feelings.

M. Csikszentmihalyi and I.S. Csikszentmihalyi (1991) outlined six characteristics that make the flow-producing experience worthy of repetition:

1. People experiencing flow clearly know the goals they are trying to achieve and receive **immediate feedback** about how they are doing.

2. **Action and awareness merge** as they see themselves fully engrossed in the activity with pure, uninterrupted concentration.

3. This merging is made possible by their centering on a **limited stimulus field** in which they consciously screen out potential interruptions and unimportant information.

4. They experience self-forgetfulness by losing touch with physical reality or by gaining a **heightened awareness** of their inner workings.

5. They enjoy a **feeling of control** over personal actions and the environment during

which an awareness of control may be present or a worry over lack of control may be absent.

6. The flow experience is **autotelic**: so enjoyable and meaningful that participants desire to repeat the activities in hopes of reproducing such a state, regardless of their reasons for first trying the activity.

Participants can only experience flow when the opportunity to take action is balanced with the individual's capacity to act. Figure 4.2 illustrates this point.

For example, an expert paddler has a high capacity to act, while a novice paddler has a low capacity. Flatwater offers little opportunity to act, while difficult white water gives plenty of opportunity. If you place the expert paddler on flatwater, she experiences boredom, or underarousal, since her capacity for action exceeds opportunity. If you place the novice on white water, she experiences anxiety, or overarousal, since the opportunity for action far outweighs the capacity to act. M. Csikszentmihalyi (1975) asserted that states of flow exist between boredom and anxiety where opportunity and capacity achieve a synergistic balance. In this example, the novice paddler on flatwater and the expert in white water could each experience flow if their capacities matched their opportunities.
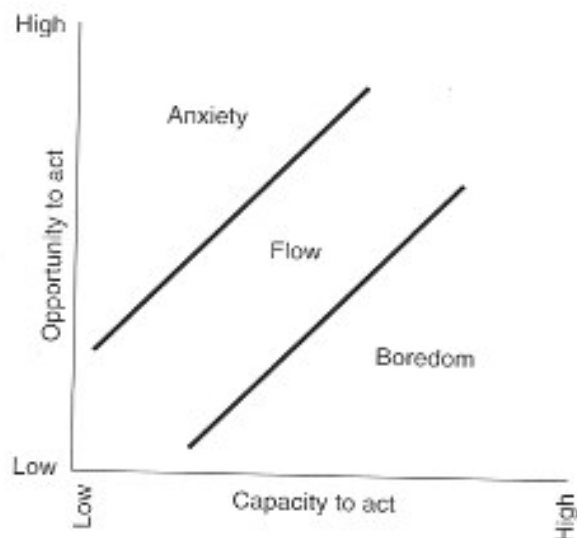

Figure 4.2   A graphic representation of flow theory.

Antecedents of Adventure

Mitchell (1983) noted the lack of important conditions or antecedents in Csikszentmihalyi's flow theory. He proposed adding several conditions that "constitute and potentiate [augment] the flow experience" (p. 154) to enhance M. Csikszentmihalyi's theory. These antecedents included freedom of choice, state of mind, intrinsic motivation, outcome uncertainty, and competence engagement.

First, Mitchell suggested that in order for an adventure to create the experience of flow, it must be completely voluntary, meaning individuals choose their level of involvement. One way leaders meet this condition in adventure programs is by implementing Rohnke's (1989) axiom of challenge by choice, under which no one is coerced into taking risks.

Second, adventures are individually specific because each person brings his own level of competence to the experience. Moreover, adventures are situation specific because each setting has a different level of inherent risk. As a result, adventures are experienced differently by different people: an adventure is a state of mind.

Third, people initially engage in adventure for a variety of reasons. But those motivated by intrinsic reasons (joy, happiness, independence, self-development) generally continue to participate year after year. Most people do not seek extrinsic rewards, such as status or money, in adventure experiences.

Fourth, Mitchell defined adventures as undertakings with uncertainty of outcome. Too much uncertainty is overarousing; too little is underarousing. Thus, unattainable goals can cause a participant to panic due to anxiety and goals too easily achieved can lead to complacency due to boredom. Neither of these situations results in flow or a positive learning experience; rather, they could create dangerous conditions. To make the best of an adventure, participants should feel challenged, yet in control of the situation. If a facilitator or friend gives away answers or rescues a participant by providing solutions, the amount of uncertainty changes, altering the experience (Goffman, 1981). Except in situations of safety, ethical adventure leaders avoid helping participants too much.

Fifth and last, the client must be actively engaged in her adventure with the opportunity to influence the outcome and resolve the uncertainty

Stages of Adventure

After 20 years of observing and interviewing participants in outdoor adventures, Mortlock (1984) proposed that there are four stages people can experience in any outdoor journey: play, adventure, frontier adventure, and misadventure. According to Mortlock, participants can be in any stage at any time, whether they are novice or expert, depending on the amount of fear present in the activity.

► Play is characterized by the absence of fear. We can describe play as pleasant or fun and as boring or a waste of time.

► Adventure is characterized by the presence of some fear. Participants are in total control of the situation but are being challenged.

► Frontier adventure involves a high degree of fear. Participants experience the risk of physical harm and no longer feel in complete control.

► Misadventure encompasses too much fear and often results in failure. The outcome of misadventure may be as simple as personal dissatisfaction or as serious as physical or psychological damage. Participants may experience a bruised ego, scrapes, and splinters, which we consider acceptable and recoverable outcomes, or may suffer fractures, emotional breakdown, or even death, which we consider unacceptable and unrecoverable outcomes.

Mortlock reserved play as the stage to learn new skills in. He felt that the outdoor experience must strive for adventure and especially frontier adventure, as they make life worth living. Last, the condition of misadventure was where people learned best from their mistakes, provided they were not permanently injured.

We cannot overstate the role of fear. Fear is the human response to risk and, as such, you should consider it a healthy and necessary reaction. Nonetheless, there are times when you must help participants deal with their fears of risky situations. Ewert (1989) suggested several strategies for coping with fear: desensitization, which is gradual exposure by building up to big risk through progressively riskier activities; flooding, which is careful and prolonged exposure to the risk once encountered; modeling, which is the observation of the techniques others use to manage their fear; and rehearsal, which is applying those techniques with repeated practice.

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by applying personal competence to the risky situation. The approach some adventure programs use, in which leaders care for the client, removing him from the experience—as if in an amusement park—can negate the empowering effect of an adventure. The individual cannot learn unless she has an active role in the experience, including receiving the benefits and consequences of her actions. Of course, as a leader, you must intercede in truly dangerous situations.

Adventure Experience Paradigm

Martin and Priest (1986) combined ideas from previous works to develop their own model: the **adventure experience paradigm.** The adventure experience paradigm explains participants' behaviors using the variables of risk and competence. We can define risk as the potential to lose some-thing of value and competence as the capability of individuals to deal with the demands placed on them by their environment.

In this model, the interaction of risk and competence creates the challenge. Challenge cannot exist without both situational risk and personal competence engaged in an effort to resolve uncertainty. Depending on the amount of risk and degree of competence interacting together in an adventure experience, five conditions of challenge are possible: exploration and experimentation, adventure, peak adventure, misadventure, devastation, and disaster (Priest & Baillie, 1987). Figure 4.3 diagrams this relationship between risk and competence.

This diagram illustrates that when a competent person performs a low-risk activity, the result is a condition of exploration and experimentation similar to Mortlock's (1984) play stage during which new skills are learned, tested, and honed. As com-
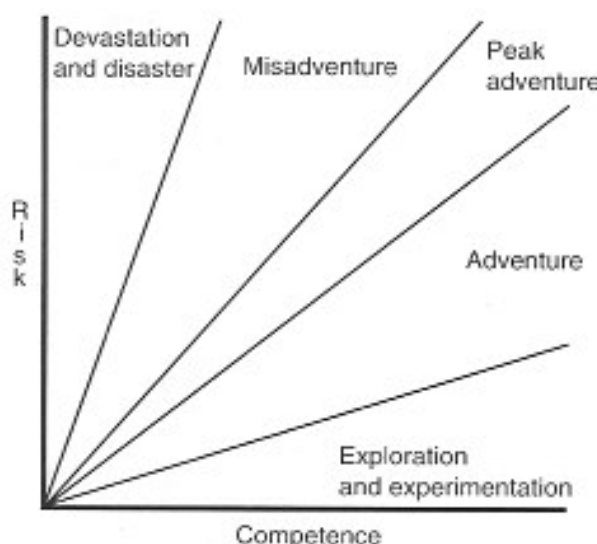
Figure 4.3 A graphic representation of the adventure experience paradigm.

petence decreases or risk increases or both, the participant moves into the adventure. When the two components are balanced and matched, peak adventure results, similar to M. Csikszentmihalyi's (1975) state of flow. As risk exceeds competence, the potential for misadventure arises; when risk becomes very high and competence is very low, devastation and disaster may occur.

Consider average skiers at the start of the ski season. They begin on the gentle bunny hills where the risk of falling is minimal and their skiing competence is maximal. This exercise is exploration and experimentation: the skiers can practice their turns and stops to gain confidence. When ready, they move to green (easy and beginner) runs where the risk of falling increases and their skiing competence may decrease. This is adventure, in which participants work harder at skiing and feel more challenged. On the blue square (moderate and intermediate) runs, they find peak adventure, at which their competence perfectly balances the risk of falling, and they feel "on the razor's edge" as they descend the slope, uncertain whether they will succeed, but confident they will ski their best. The black diamond (difficult and expert) runs provide a little misadventure for these average skiers, because the risk of falling outweighs their competence to ski at this advanced level. When they fall, they consider it to be a minor mishap from which they can recover. They may be bruised, embarrassed, and covered by snow, but they will not suffer permanent damage. Devastation and disaster would come in the out-of-bounds areas,

or the back gullies and avalanche slopes where a fall means a broken limb—or worse—death! Ethical adventure programs deal with the conditions up to and including misadventure (because people learn well from their mistakes), but devastation and disaster are not a purposeful part of ethical adventure programs.

Martin and Priest (1986) proposed that the goal of an outdoor adventure experience for an individual is to reach peak adventure (similar to Ellis' [1973] concept of seeking optimal arousal), since this is the realm that provides flow and the most positive benefits of adventure experiences. However, the "key to application of the adventure experience paradigm lies in the perceptions of the individual" (p. 19). Individuals can misperceive both the real risk and their actual competence and, as a result, overshoot or fall short of the goal of peak adventure.

By integrating the concept of misperception in their model, Martin and Priest identified nine types of individuals (see figure 4.4). Let's look closely at three of these: the astute, the timid and fearful, and the arrogant and fearless individuals.

The **astute** individual correctly perceives the level of risk as well as her competence to perform the activity and so possesses a high probability of experiencing peak adventure. The **timid and fearful** individual misperceives adventure in two ways: she overestimates the risk of the activity and underestimates her competence to perform the activity. The timid and fearful individual falls short of peak adventure and perhaps drops into exploration and experimentation, because the real risk is actually lower and the real competence is actually higher than perceived. In contrast, the **arrogant and fearless** individual misperceives adventure in ways opposite the timid and fearful individual: she underestimates the risk and overestimates her competence. The arrogant and fearless individual overshoots peak adventure and perhaps experiences devastation and disaster, because the real risk is actually higher and the real competence is actually lower than perceived. Figures 4.5 and 4.6 portray these latter two profiles.

Adaptive Dissonance

When a person has two different and conflicting thoughts, a cognitive, affective, or psychomotor condition known as **adaptive dissonance** results (Festinger, 1957; Walsh & Golins, 1976). A common example in outdoor activities occurs when participants look at a ropes course and focus on the

Competence

	Over-perceived	Correctly perceived	Under-perceived
Under-perceived	Fearless and arrogant	Bold	Naive and innocent
Correctly perceived	Assured	Astute	Insecure
Over-perceived	Carefree and exaggerated	Overawed	Timid and fearful

Risk (label on left axis)

Figure 4.4 The nine types of individuals, based on perceptions of risk and competence.
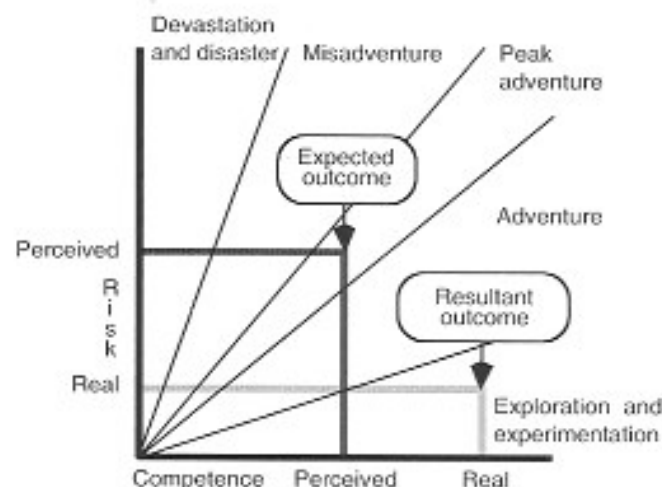

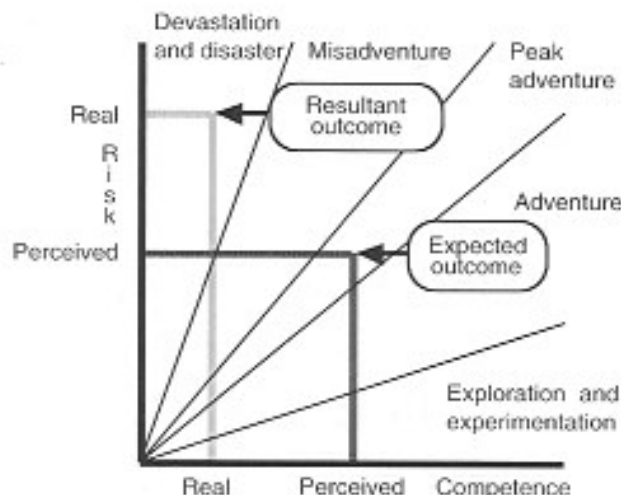**Figure 4.5** An adventure experience profile for the timid and fearful individual.

Figure 4.6 An adventure experience profile for the arrogant and fearless individual.

danger and difficulty while you as the outdoor leader explain the safety of the belay ropes and the ease of balancing when not looking down. In this instance, the participants are struck by the paradox of opposing views. Both seem sensible and correct, but the participants are unwilling to accept both as true and so are motivated to resolve the dissonance, perhaps by testing either view through an attempt to complete one element of the ropes course. The strength of their motivation to attempt the ropes course is partially a function of how big a gap exists between their expectations and your comments. We discuss other motivational influences later in this chapter. For now, let's focus on the role of adaptive dissonance.

Priest and Baillie (1987) have discussed the application of the adventure experience paradigm to facilitated outdoor learning. The purpose of their model is to help you lead timid and fearful or arrogant and fearless participants toward becoming astute. According to their model, the way to elicit astute behavior is to create situations with strong adaptive dissonance. In practice, this means presenting tasks that appear difficult to the timid and fearful, knowing that success is highly probable, and that appear easy to the arrogant and fearless, while carefully setting them up for failure. In essence, dissonance between client perceptions and the reality of the adventure increases the likelihood of a peak experience.

Adaptive Dissonance and Personality Types

For timid and fearful individuals, adaptive dissonance lies between their anticipated failure and your encouragement that success is imminent. The timid and fearful individual expects misadventure, while you as the leader must structure and control his experiences so that adventure results (see figure 4.7).

During the debriefing, you can ask participants about their initial perceptions of risk and competence. They might typically respond with comments like "It wasn't as dangerous as I had first thought" and "Maybe I can perform better than I give myself credit for!" Following these guided discussions, participants often shift their perceptions toward reality for the next experience. Overall, the adaptive dissonance is reduced (see figure 4.8).

In time, repeated and varied experiences coupled with subsequent debriefings help the perceptions of the timid and fearful participants merge with reality, and the participants become astute. Once they become astute, you should encourage them to review the overall process of change in light of how their new learning about themselves might apply to their real lives.

To illustrate, consider a timid and fearful man on a high ropes traverse. The facilitator has structured an experience in which she asks this man to walk across a tightrope 50 ft above the ground with only a rope strung from the far tree for balance and support. In his perception he is expecting a misadventure or, even worse, devastation and disaster! The real outcomes are quite different, since he is belayed. After considerable coaxing and assistance from the facilitator, he completes the traverse and feels elated. The facilitator helps him reflect on his adventure, and after some thought and discussion, he recognizes that the task was not so dangerous and that he was capable enough to complete it. This learning may later transfer to daily living, in which the man expresses timid and fearful behaviors when meeting new people. In the future, he may be able to take on new friendships with his newly learned confidence.

For arrogant and fearless individuals, adaptive dissonance lies between their apparent sureness and the leader's expression that success is doubtful for the activity. The arrogant and fearless expect adventure, but since the leader has structured or controlled the experience for gentle failure, misadventure results (see figure 4.9).

Occasionally, arrogant and fearless individuals' behavior results from repeated failures in life, and their demeanors are a coping mechanism
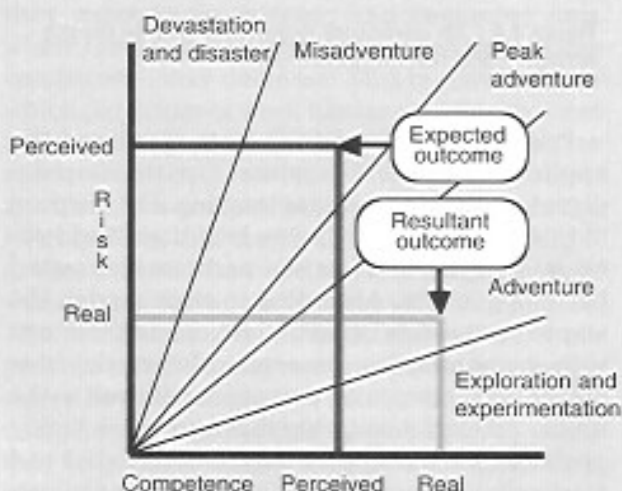

Figure 4.7 Adaptive dissonance between expected and resultant (leader-predicted) outcomes.
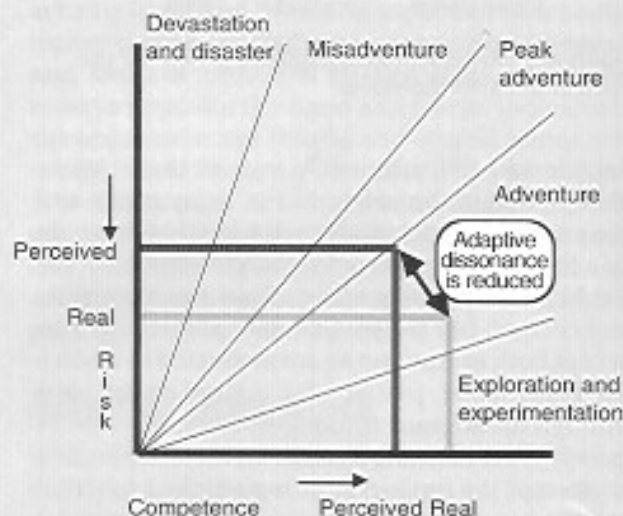

Figure 4.8 After the experience, timid and fearful perceptions shift toward reality.

for dealing with failure. Hence, you must be very careful not to further embarrass these individuals in front of others and reinforce this personality trait. If such a concern exists, the best approach may be to conduct the activity away from the group, debriefing the individuals separately and in advance of the shared group discussions. In this way, the arrogant and fearless may respond to questions about risk and competence with answers such as "It may be that that was more difficult than I first thought," and "Maybe I'm not as good as I think!" From these reflections, the arrogant and fearless participants can shift their perceptions toward reality for the next experience. Once again, adaptive dissonance is reduced (see figure 4.10).

With further experience and debriefing, the arrogant and fearless participants become astute as their perceptions merge with reality. In the unlikely instance that they convert to being timid and fearful from experiencing overwhelming failure, you can simply structure an easier task for the next activity. Once again,

after repeated activities, you can debrief the learning in relation to real life.

Let's consider an arrogant and fearless woman on a rock climb. The facilitator has structured an experience asking her to climb a particularly difficult route, which has previously been the topic of some bragging on her part. In her perception, she expects exploration and experimentation or, at best, mere adventure! In actuality, the real outcomes of her top roped experience are quite different because of the extreme difficulty of the climb. After considerable effort, she has fallen off the crux of the climb repeatedly and is exhausted. The facilitator now helps her reflect on her misadventure. After some thought and discussion, she recognizes that the task was indeed more difficult than she expected and that she really was not as good as she was saying. This reversal may later transfer to daily living, in which the woman expresses arrogant and fearless behaviors when working on projects as part of a small group. Perhaps next time, she will be more agreeable.
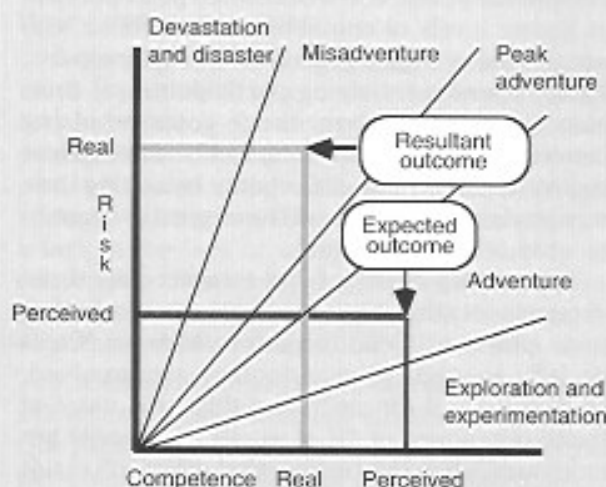

Figure 4.9 Adaptive dissonance between resultant (leader-predicted) and expected outcomes.
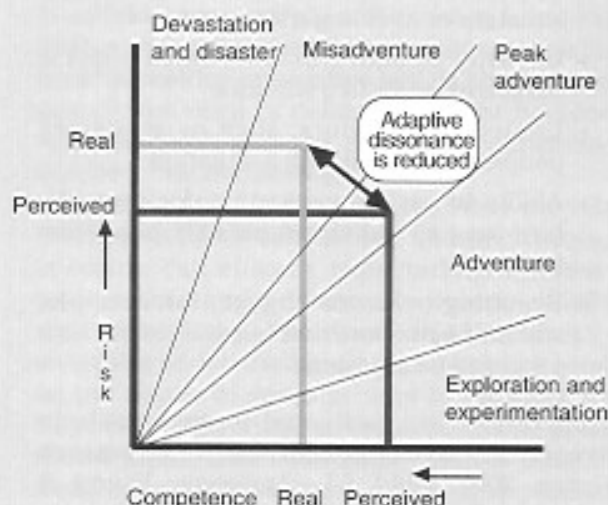
Figure 4.10 After the experience, arrogant and fearless perceptions move toward reality.

Ethical adventure programs debrief individuals' experiences, perhaps privately and then within a group. The debriefing helps participants reflect on past experiences, encouraging them to reassess their perceptions of risk and competence from their previous attempts. As they come to

identify, accept, and change their shortcomings, their perceptions move closer to reality, and the individuals eventually become astute (Carpenter & Priest, 1989). With astuteness often comes improved self-concept and socialization (Garst, Scheider, & Baker, 2001). Indeed, interpersonal

and intrapersonal relationships benefit from such facilitated experiences.

One caution regarding the facilitated adventure experience is that you must structure, control, and supervise the activity. The activity is structured, since you customize the level of challenge to the individual, and is controlled, because you manipulate the risks so perceived values are high while real values are low. As the leader, you are the key to the operation and must be sufficiently experienced and astute to accurately perceive the risks and the participants' competencies.

THEORIES AND MODELS OF MOTIVATION

Motivation comes from the Latin word *movere*, meaning "to move." In this sense, motivation is about why and how individuals move or don't move from one state of being to another. Factors influencing motivation include the following (Sage, 1977; Weinberg & Gould, 1995):

- Direction of effort, such as confronting a situation or avoiding a situation
- Intensity of effort, or how much effort a person expends in a situation
- Choice of behaviors, such as strategies people use to deal with a situation
- Ability to sustain motivation, for example, how long an individual persists in a situation
- Resulting behavior change, for example, whether behaviors that result from the situation will be sustained

Individuals are motivated to participate in adventure experiences for a variety of reasons (Festeu, 2002; Todd, S.L., Anderson, Young, & Anderson, D., 2002). In this section we present several theories and models addressing how motivation principles affect participants in adventure programming and enhance your ability to motivate clients toward their goals. Specifically, we discuss (1) goal theory, or how a person's commitment to a goal influences his actions; (2) expectancy theory, or how a person's expectations about achieving a goal influences his actions; (3) self-efficacy, or how a person's belief of whether or not she can accomplish a task affects motivation, and how you can implement various strategies to enhance clients' success; (4) attribution theory and locus of control, or how individuals explain their successes and failures and the influence these attributions have on future actions and emotions; and (5) effectiveness and competence motivation, or how the effectiveness of completing tasks influences feelings of competence as well as how social and interpersonal factors are influenced—and were influenced—by these feelings. A final model combines all of the models presented in this chapter into one that outlines risk taking and competence effectiveness and how you can use the accuracy of participants' beliefs to influence success or failure in adventure experiences.

Goal and Expectancy Theories

As the facilitator, your ability to manipulate the risk and competence variables depends heavily on clients' personal commitments to attaining goals as well as on their expectations about being successful. **Goal theory** states that performance is determined by a participant's commitment to goals. These goals may be established by the individual or dictated by others. Participants who commit to specific and well-defined goals perform at higher levels of competence than those who set general or vague goals (Katzell & Thompson, 1990). Therefore, helping participants set their own goals, particularly those goals requiring concentrated effort to attain, can be an excellent motivational technique. Certainly, by setting their own goals, participants will have greater commitment to achieving the task.

Expectancy theory takes into account three determinants that motivate people: first, whether their efforts will lead to performance, or "Can I do it?"; second, what outcomes are involved, or "What's in it for me?"; and third, the value of those outcomes, or "Is it worth it?" People are motivated when they expect that effort will result in good performance, which will in turn be useful in attaining desired outcomes (Katzell & Thompson, 1990). Expectancy theory has useful application to outdoor programs as it helps define exactly how you can motivate individuals to experience peak adventures. Participants provided with sufficient training, emotional support, proper resources, and understanding of benefits will feel more confident about accomplishing a task. This confidence reduces their anxieties and enhances perceived competence, empowering them to tackle greater risks.

Self-Efficacy

Bandura's (1977) social learning theory defines **self-efficacy** as the certainty of an individual's belief under risk that she can successfully accomplish a task that tests ability. It is more than mere self-confidence; it is the individual's belief that he can successfully execute the behaviors necessary for accomplishing the "anticipated and desired" tasks (p. 192).

Self-efficacy expectations vary in at least three ways: magnitude, strength, and generality.

1. **Magnitude** refers to the degree of certainty associated with success and is heavily influenced by perceptions of risk and difficulty. For example, when working with clients who were afraid of snakes, Bandura offered three ways to confront the fear: looking at pictures of snakes, being in the same room with snakes, and actually touching snakes. Clients varied widely in magnitude, as some were 100% certain of being able to deal with the less risky task of looking at pictures, and others were only 10% certain of accomplishing the more risky task of actually touching snakes. Thus, although any two people may expect success for a given task, they may differ in the magnitude of their certainty of success.

2. **Strength** refers to how long a person holds on to expectations of success despite contradictory information. For example, a person with low strength may lose her belief that she can accomplish a task after a single failure. A person with high strength will be more likely to continue to attempt a task in the face of many failures. A history of succeeding after multiple unsuccessful attempts plays an important role in building up the strength of an individual's expectations.

3. **Generality** refers to the degree of transfer of self-efficacy beliefs from one situation to another. One person may limit efficacy expectations to the performance of identical or closely related tasks, while another may generalize these expectations for success to a wide range of situations. This transfer is more easily accomplished if the individual can see the connections among tasks (see Ewert, 1985, 1991, 1993).

Self-efficacy is based on information interpreted and derived from four internal and external sources: past performance accomplishments, vicarious experiences, verbal persuasion, and physiological arousal. Researchers believe that information gained through success is the most influential and stable because it is based on actual experience (Paxton & McAvoy, 1998). Failures early in learning tend to be more influential than later failures. Moreover, failures that are overcome by increased effort can strengthen self-efficacy more than failures overcome by chance. Hence the importance of second tries at certain tasks.

Seeing or hearing someone else's vicarious pursuit of mastering a skill or overcoming a problem without negative repercussions can also enhance an observer's efficacy expectations. Observing others of similar competence and hearing stories of others' experiences are two positive means for directly enhancing clients' feelings of self-efficacy.

Although gathering efficacy expectations from verbal information is not as strong as acquiring expectations from actual experience, it can serve as a powerful mobilizing factor when combined with the manipulation of adaptive dissonance. Indeed, encouragement—without coercion—from you can enhance a participant's self-efficacy.

Since over- or underarousal usually interferes with performance, people experiencing high anxiety or boredom might have certain expectations. In addition, expectations of success or failure can further alter arousal levels, since anticipation can confirm positive or negative beliefs about performance. You need to defuse anxiety or boredom associated with setbacks, especially if either emotion becomes debilitating.

Bandura (1977) also suggested that the relationship between self-efficacy and performance is reciprocal: efficacy expectations influence performance and performance outcomes influence self-efficacy. The direction of reciprocity, increasing or decreasing self-efficacy, also depends on the degree of stress present in the situation. Selye (1974) described stress as occurring in one of two forms, either **eustress**, which is pleasant and desirable, or **distress**, which is unpleasant and undesirable, depending on the effect—in the form of emotions and feelings—exhibited by the person under stress.

Attribution, or Locus of Control

According to Weiner (1972), individuals attribute their performance outcomes to a variety of causes, including ability, effort, luck, task characteristics, and attention. Weiner classified these attributions according to a two-dimensional scale. The first dimension, **causality**, ranged from internally to

externally attributed causes. The second dimension, **stability,** ranged from stable to unstable causes. As an example, Weiner classified ability as an internal and stable attribute and defined luck as external and unstable.

Later on, Weiner (1979) added a third dimension to his model: **controllability,** or the degree to which the individual perceives that the attribution is under his **locus of control.** This new dimension differentiated attributions, for example, defining effort as internally controllable and fatigue as externally uncontrollable. The way an individual perceives a specific attribution is far more important than how the attribution is generally classified (Russell, 1982).

Weiner, Russell, and Lerman (1978, 1979) found that causality plays an important role in differentiating various effects. Under success conditions, an **internal locus of control** was found to be associated with pride, confidence, competence, and satisfaction. Gratefulness and thankfulness were linked to an **external locus of control** under similar conditions. Under failure conditions, guilt was associated with internal control, while anger and surprise were linked to external control.

Using this research, Weiner (1985) developed his theory of achievement motivation and emotion. According to his theory, a person experienced an emotional reaction immediately after an achievement. This reaction could be either positive (e.g., happy) or negative (e.g., sad), and it was based on the individual's perception of success or failure. Weiner described these initial reactions as "outcome-dependent" since they were a function of outcome success or failure rather than a function of attributed cause and control. He found that following the general reaction, an individual carefully thought through the reasons that might explain the outcome cause and control. Once the individual established causality and control, she experienced secondary, specific emotions that were "attribute-dependent." This unique combination of general effects based on outcomes and specific effects based on attributions influenced future motivation and risk taking (Newberry & Lindsay, 2000).

By way of illustration, the downhill skier who performs poorly in the moguls feels nonspecific, or general, negative emotions such as sadness, which are outcome-dependent effects. In trying to figure out why performance was so poor (or causality), the skier attributes failure to a lack of skiing ability, which is internal attribution, and decides that this ability will not improve due to a strong belief that she cannot change equipment, conditions, and body type, which is external attribution: fixed, stable, and uncontrollable. Thus the skier experiences specific emotions, such as frustration and defeat, which are attribute-dependent effects, and may decide to give up on the sport, which is a behavioral consequence. This example demonstrates the power of attribution to have a destructive, instead of a constructive, impact on motivation.

Effectance Motivation

In his theory of **effectance motivation,** White (1959) felt that individuals were intrinsically motivated to positively influence their environment. If people can successfully meet the demands of the environment through mastery attempts or performance tries, they experience feelings of "effectance," or positive effects and emotions. These positive effects, in turn, encourage future mastery attempts under similar environmental conditions. Figure 4.11 presents this model.

As seen in this model, behavior results from an urge to gain competence and affect the environment. Individuals try a task and, if successful, equate the success with improved competence at that task. This result makes them feel good (joy, pleasure, efficacy) and in control of their environment. In turn, these positive effects motivate them to try again. A very simple model, White's theory did not account for a number of extraneous influ-
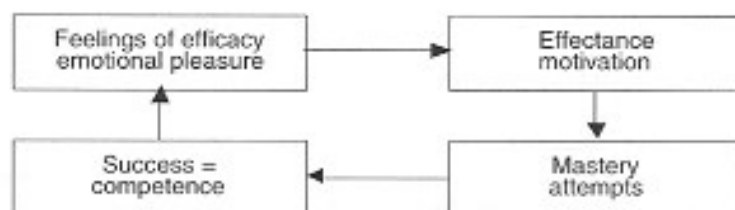

Figure 4.11   Effectance motivation (White, 1959).

ences, such as the opinions of significant others or the attribution of success, and did not consider the negative side of failure.

About 20 years later, Harter (1978) built White's framework into a theory of **competence motivation.** She expanded his model to include the effects of social and interpersonal factors as well as the effects of positive and negative experiences. She further hypothesized that the motivational process revolved around perceived competence. Subsequently, Harter (1986) suggested that perceived competence was influenced by many factors: success or failure after mastery attempts, perceptions of control, motivational orientation, positive or negative reinforcement from significant others, and characteristics of the task. Figure 4.12 presents her model.

But how does this model apply to real life? Suppose a kayaker decides to run a new set of rapids for the first time. If the route difficulty matches the kayaker's skill, then we can describe the task as optimally challenging. Achieving optimally challenging tasks has a greater impact on an individual's perception of himself. If the kayaker succeeds in the attempt, he will experience positive effects such as enjoyment or intrinsic pleasure. Moreover, his success can increase perceived paddling competence as well as enhance the likelihood that he will develop internal perceptions of greater control (see also locus of control discussion in previous section). In other words, the kayaker attributes success to internal sources, such as effort and ability. This successful attempt can also receive positive reinforcement and approval from signifi-

cant others, such as paddling friends. In this case, this information also results in internalized reinforcement, further enhancing internal attribution of feelings. Specifically, the kayaker develops an intrinsic motivational orientation, meaning that he chooses activities that provide personal satisfaction and meet personal standards of performance. In turn, an intrinsic motivational orientation further enhances perceived competence and internal locus of control. These positive perceptions of self augment affective reactions such as pleasure, and the combination of positive effects and perceptions of self increases motivational levels. Thus, the kayaker is likely to attempt the task again.

In contrast, failure to run the rapids can diminish motivational levels as the kayaker experiences negative effects and perceptions of self. Repeated failure eventually reduces perceived paddling competence levels, possibly leading to external perceptions of control. In other words, the kayaker may attribute the failure to external reasons such as the difficulty of the route or faulty equipment. In addition, the lack of reinforcement and approval from significant others may result in extrinsic motivational orientation. The kayaker may begin to choose routes that meet other peoples' expectations, striving to meet their external standards of performance. In turn, an extrinsic orientation tends to decrease perceived competence levels, thereby enhancing an external locus of control. Decreasing perceptions of self or negative effects, such as anxiety, further decrease effectance motivation. Thus, the kayaker may not attempt that route or similar ones ever again.
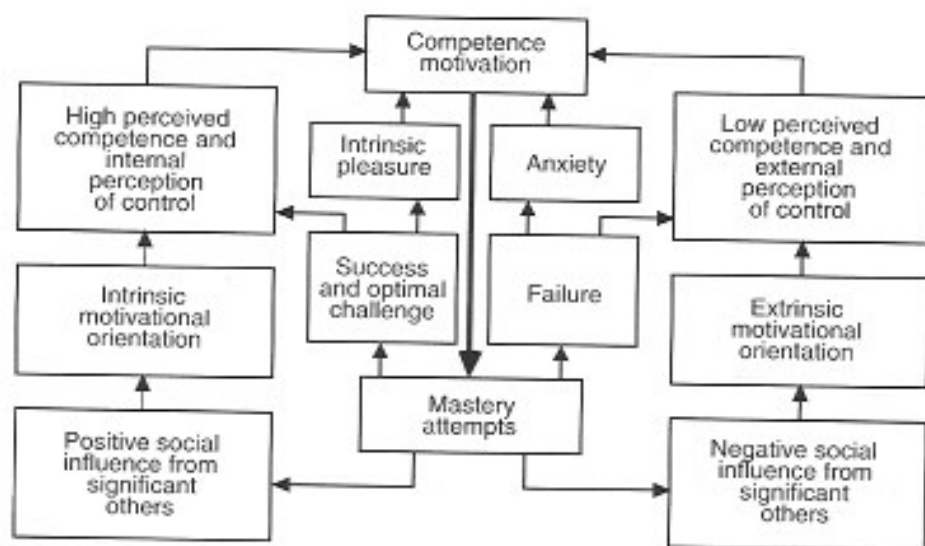

Figure 4.12   Competence motivation (Harter, 1978).

Risk Taking and Competence Effectance

Priest and Klint (Priest, 1993) have combined all the frameworks we've discussed so far into one theoretical model partially founded on research and partially rooted in experience. The model revolves around using **competence effectance** (the belief in one's personal competence if correctly perceived) to increase a client's chance of success in an adventure experience as well as to enhance the experience's possible ramifications.

The model is a series of loops connecting key constructs such as perceived risk, perceived competence, competence motivation, competence performance, arousal, intrinsic feelings, extrinsic influence, self-efficacy, attribution, and locus of control. The model is composed of three parts designated as neutral, positive, and negative feedback loops. Figure 4.13 shows the neutral loop.

The left side of the loop describes the three levels of risk that participants can select on the basis of their efficacy expectations. If people are feeling less competent, they are likely to select a lower level of risk; if they are feeling more competent, they are likely to select a higher level of risk;

and on rare occasions, they may select a level of situational risk that perfectly matches their personal competence. This latter condition results in peak adventure, optimal arousal, state of flow, or what is commonly expressed as "living on the razor's edge!"

Regardless of the level of risk they choose, people can either perform sufficiently or insufficiently. This evaluation is usually a subjective assessment of personal performance. If participants believe they have performed sufficiently for the level of risk chosen, then challenging conditions of adventure result (e.g., exploration and experimentation). If participants think their performances were insufficient to meet the risk, then the challenging conditions of misadventure, perhaps even devastation and disaster, are possible.

Following this decision, participants begin to attribute, or justify, the way things turned out. Obviously, your role in helping people correctly attribute their adventure outcomes is extremely important. If people attribute their successes or failures to external sources, that is, to something other than themselves, they may reevaluate their performances and possibly change their minds
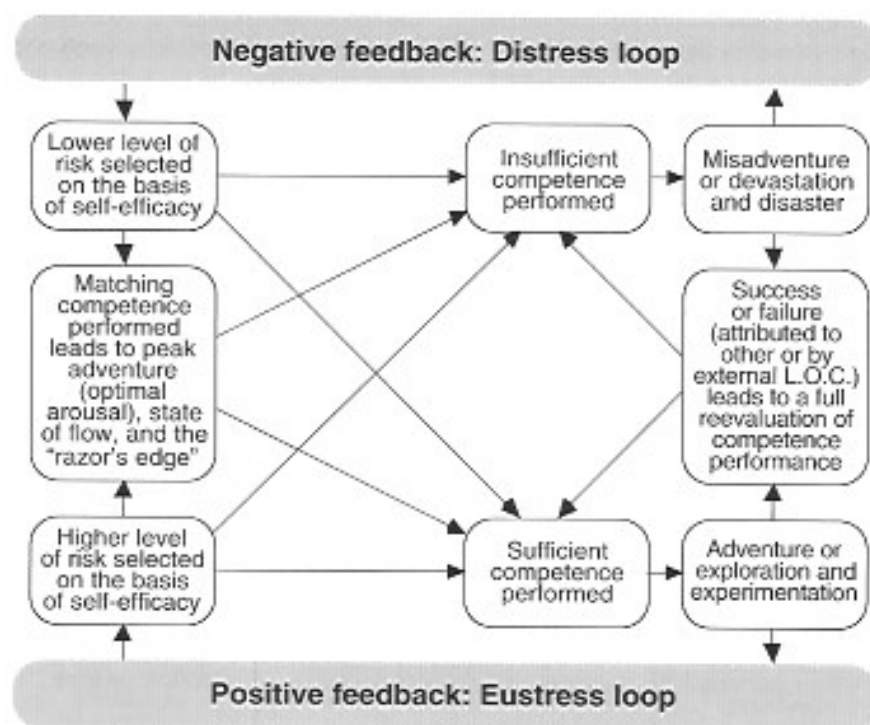

Figure 4.13 The neutral feedback loop of the risk taking and competence effectance model.

about whether they performed sufficiently or not. If they own their successes or failures by attributing them to internal sources, then they may enter into either of the other two loops. If people experience misadventure or devastation and disaster, they enter into the negative feedback loop, or distress. And if the challenge is one of adventure or exploration and experimentation, they enter into the positive feedback loop, or eustress. Figures 4.14 and 4.15 detail these two loops to help you better understand the model.

The negative loop of distress (see figure 4.14) begins with a perception of failure that results from misadventure and is attributed to internal sources such as personal performance. The fail-

ure can cause direct, negative intrinsic responses, such as feeling bad about yourself, or cause indirect, negative extrinsic responses, such as disappointment from significant others. Through a decrease in perceived competence, these negative responses can lower feelings of competence motivation. For example, people who believe they cannot accomplish a task experience anxiety when facing the same level of risk. Because of this, when emerging from the negative feedback loop, such participants tend to select a lower level of risk in the neutral loop.

The positive loop of eustress (see figure 4.15) follows a similar pattern, but, naturally, the effect on competence motivation is the reverse of the
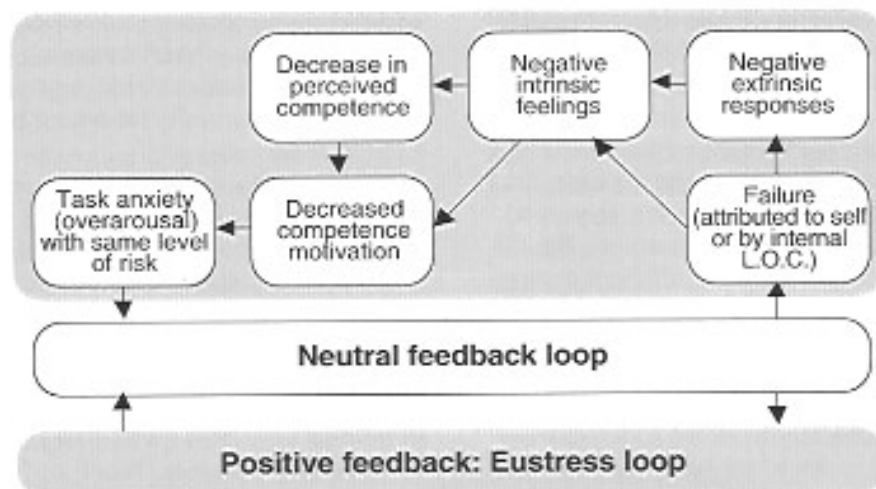

Figure 4.14   The negative feedback loop of the risk taking and competence effectance model.
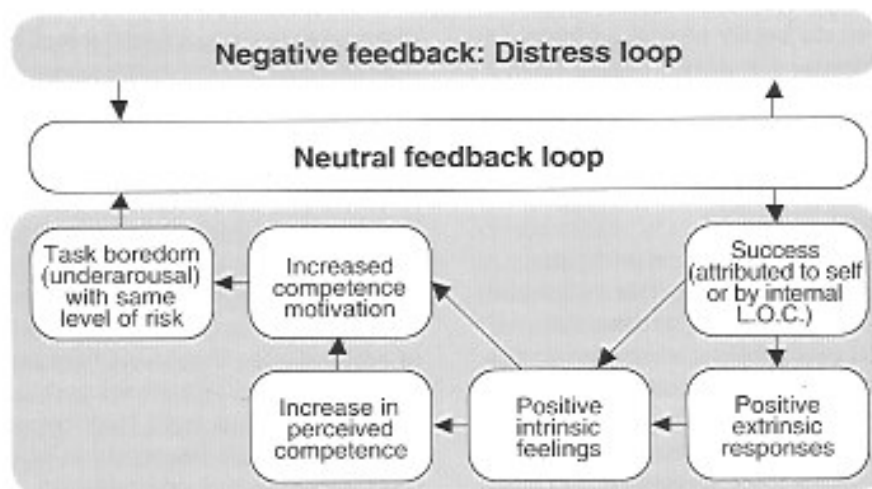

Figure 4.15   The positive feedback loop of the risk taking and competence effectance model.

negative loop. The positive loop begins with an internally attributed perception of success resulting from adventure. This success leads to direct, positive intrinsic responses, such as feeling good about yourself, and to positive extrinsic responses, such as approval from significant others, indirectly building on the good feelings. Through an increased perception of competence, these positive feelings generally increase competence motivation. For example, people who believe they can accomplish the task will experience boredom with the same level of risk. Because of this, when emerging from the positive feedback loop, such participants tend to select a higher level of risk in the neutral loop.

Consider a participant in an adventure experience who is timid and fears what lies ahead. The first task you, the facilitator, set for this individual is an easy rock climb that the participant initially views as unattainable. The discrepancy between the actual task and the client's perception of competence creates adaptive dissonance, or mental argument, within the participant's mind. Resolving this dissonance and attempting the task requires encouragement, rather than coercion, from you.

Assume that the individual overcomes the difficulty of a climb, performs with sufficient competence, experiences an adventure in the exploration and experimentation realm, and considers the experience successful. If the individual attributes the success internally to personal effort, then she enters into a positive feedback loop, or eustress. She experiences positive, intrinsic feelings and receives praise and congratulations from others, or a positive extrinsic response. This leads her to believe that her personal capability has improved as her perceived competence increases; thus, she is likely to desire to do better next time because competence motivation has increased. Since repeating the same climb would be underarousing for similar levels of risk, the individual will likely select a higher level of risk due to the self-efficacy belief that success is achievable where failure initially seems evident.

For this new level of risk, three performance scenarios are now possible. First, the individual may perform sufficiently and return to eustress—if an internal locus of control is in effect and if success is attributed to self. Second, competence may perfectly match the new risk, leading to the condition of peak adventure. In this case, the individual will attempt to maintain the condition for as long as possible, eventually falling off to one side or the other. The third possible scenario is that the individual may perform insufficiently and cross over to distress, or to misadventure, or even to devastation and disaster.

Consider the latter scenario. Insufficient competence performance for the new risk leads to misadventure—or worse, devastation and disaster—and the feeling of failure. If the individual attributes failure to himself, then he enters the negative feedback loop of distress. He has negative intrinsic feelings and may even receive sarcasm and blame from others, or negative extrinsic responses. This leads to the belief that personal capability has dropped, that is, his perceived competence decreases, and the desire to stop trying arises, that is, his competence motivation decreases. Since repeating the same climb would create anxiety, or would be overarousing for similar levels of risk, the individual will likely select a lower level of risk next time due to the self-efficacy belief that he may again fail at an activity for which he had originally expected success.

Say that this individual chooses a new level of lower risk. Once again, three performance scenarios are now possible. First, the individual may perform insufficiently and remain in distress, especially if he continues to attribute his failure to internal causes. Second, a perfect match of competence with the new level of risk may lead to the condition of peak adventure. As before, the individual may attempt to maintain this condition for as long as possible. Third, and more likely with the help of a competent facilitator, the individual may perform sufficiently and cross back to the positive side of eustress.

If the individual attributes success or failure to external sources such as the facilitator (which can happen if the participant is coerced or encouraged too much) or to sources such as equipment, luck, or weather (which are frequent complaints from novices), then personal contribution to the task must be reevaluated. This needs to be done so that the individual may recognize that he actually may have experienced a different type of challenge with potentially different outcomes. This change of mind may determine which loop is entered. With or without a facilitator, humans are likely to follow a sequence vacillating back and forth between the looped pathways until they become fully astute: accurate in their perceptions of both situational risks and personal competence.

◄ EFFECTIVE OUTDOOR LEADERS ►

- ► Vigilantly monitor group members' arousal levels, are aware of the effect of over- or underarousal on performances, and ensure that clients are optimally aroused whenever appropriate and desirable.

- ► Help participants balance opportunities to act with personal capacity for action so that they experience states of flow and the related benefits.

- ► Ensure the antecedents of an adventure exist within each experience: freedom of choice, state of mind, intrinsic motivation, outcome uncertainty, and competence engagement.

- ► Understand the role fear plays in an adventure and help participants cope with their concerns through desensitization, flooding, modeling, or rehearsal.

- ► Understand the varying conditions of challenge that can arise from the interaction of risk and competence and help participants recognize these conditions in relation to the level of risk and competence present in an adventure.

- ► Understand the role of adaptive dissonance and structure and control adventure experiences to create healthy adaptive dissonance in clients.

- ► Help participants set their own goals to enable greater commitment, as well as provide sufficient training, emotional support, resources, and benefit comprehension to increase motivation.

- ► Are aware of the impact that past performance or physiological arousal can have on self-efficacy and share vicarious experiences or use verbal persuasion, but not coercion, to encourage participation.

- ► Monitor how participants attribute success or failure and assist them with proper attribution to either internal or external loci of control.

- ► Guide participants' reflection on their levels of competence and performance relative to their emotions and motivation to complete tasks.

- ► Note the impact of successful or failed attempts at mastery on participants' perceived competence and how this impact affects their motivation.

- ► Are aware of the impact that perceived competence and motivation have on participants' feelings of self-efficacy and on their selection of risk in an adventure experience.

SUMMARY

Ellis' play theory of optimal arousal suggests a reason for human engagement in adventure: people purposefully seek conditions of optimal arousal that permit maximal performance. M. Csikszentmihalyi's model of states of flow details what people can experience in an adventure: goal clarity, immediate feedback, merging of action and awareness, concentration on a limited stimulus field, self-forgetfulness, heightened self-awareness, personal control, and autotelic enjoyment. Mitchell lists the necessary antecedents of adventure as freedom of choice, state of mind, intrinsic motivation, outcome uncertainty, and competence engagement. Mortlock presents the stages in an outdoor journey based on the level of fear present: play (no fear), adventure (some fear), frontier adventure (great fear), and misadventure (too much fear).

Martin and Priest's adventure experience paradigm combines the work of Ellis, M. Csikszentmihalyi, Mitchell, and Mortlock into a graphic representation of the relationship between risk and competence. Their paradigm explores how the combination of risk and participant competence in an adventure experience creates 1 of 5 conditions of challenge: exploration and experimentation, adventure, peak adventure, misadventure, and devastation and disaster. Priest and Baillie describe how adaptive dissonance can be used to create astute individuals within the adventure experience paradigm. Adaptive dissonance occurs when clients experience tasks they are unsure that

they can accomplish. Accomplishing foreboding tasks generates a strong sense of mastery, leading to astute learners.

Motivation refers to why and how individuals move or don't move from one state of being to another. Factors influencing motivation include the direction of effort, intensity of effort, choice of behaviors, ability to sustain motivation, and resulting behavior change. Important motivation theories include goal theory, or how a person's commitment to a goal influences actions; expectancy theory, or how a person's expectations about achieving a goal influence actions; self-efficacy, or how the belief of whether or not a person can accomplish a task affects motivation and how you as an outdoor leader can enhance a client's ability to be successful; attribution theory and locus of control, or how individuals explain their successes and failures and the influence these attributions have on future actions and emotions; and effectance and competence motivation, or how effectiveness of attempts to complete tasks influences feelings of competence as well as how social and interpersonal factors influence—and were influenced by—these feelings. A final model from Klint and Priest combines all of these frameworks into one outlining risk taking and competence effectance, and how the accuracy of participants' beliefs influences the probability of success or failure in adventure experiences. The model uses Selye's concepts of distress and eustress to theorize how people change perceptions on the basis of experience and how astuteness develops through adventure experiences.

QUESTIONS TO THINK ABOUT

1. Can you recall a time when you experienced M. Csikszentmihalyi's flow state on an adventure experience? If so, describe what was happening and why it was occurring. How might you as an outdoor leader replicate such an experience for others?

2. Discuss the similarities between M. Csikszentmihalyi's six characteristics of flow and Mitchell's five antecedents of adventure. Create a list of conditions you would foster in adventure experiences to enhance the likelihood that your clients reach their goals.

3. Define and differentiate between the four sources of self-efficacy. Select an adventure activity (e.g., rock climbing, challenge

course) and use it to provide examples of methods for increasing self-efficacy in clients.

4. What does motivation mean to you? Choose one of the theories of motivation and use it to explain how you would create conditions to motivate a client.

5. Recall a time when you led a group on an adventure. Explain individual behaviors within the group by applying the adventure experience paradigm and competence effectance theory.

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