

Psychology in the News

Ohio Girl, 14, Wins National Spelling Bee with “Stromuhr”

WASHINGTON, DC, June 4, 2010. Anamika Veeramani, 14, from North Royalton, Ohio, has won the 2010 Scripps National Spelling Bee by correctly spelling the medical term *stromuhr*. Indian Americans have won the trophy eight times in the past 12 years. Anamika's father, Alagaiya Veeramani, said he had no idea why Indian Americans do so well at the competition, but perhaps it has to do with a hard-work ethic, emphasis on education, and love of language. “This has been her dream for a very, very long time. It's been a family dream, too,” he added, noting that his daughter studied as many as 16 hours on some days. Anamika hopes to attend Harvard University and become a cardiovascular surgeon.



Anamika Veeramani with her trophy.

New Website Features Love Story of Tortoise and Hippo

NEW YORK, March 1, 2010. A giant 130-year-old tortoise and a baby hippo who became fast friends after a devastating 2004 tsunami in the Indian Ocean now have their own website so that fans can check on how they are doing. Mzee, the tortoise, bonded with Owen, the hippo, after Owen was washed out to sea, rescued by Kenyan villagers, and taken to a wildlife park where Mzee lived. Owen was frightened and aggressive at first, but Mzee soon calmed him down. The hippo and the tortoise played,

ate, and slept together, and used sounds, nods, and gentle shoves to communicate. Alas, this love story was not to last; since 2007, Owen has been living with Cleo, a female hippo. But people throughout the world continue to be inspired by the unlikely attachment between the tortoise and the hippo, perhaps reasoning that if two such different species can get along, so might human beings.



Owen and Mzee in happier days.

Soda Tax Signed into Law

DENVER, February 25, 2010. Colorado Governor Bill Ritter has signed a bill removing a 3 percent sales tax exemption for candy and soda. The state senate narrowly passed the bill recently after days of debate. More than 30 states now have either passed a soda tax or have removed an existing sales tax exemption in hopes of bringing in much-needed revenue and possibly reducing obesity as well.

Celebrity Designer Sentenced for Sexual Assault, Rape

LOS ANGELES, CA, August 31, 2009. Fashion designer Anand Jon Alexander has been sentenced to serve 59 years to life in prison after his conviction for sexually assaulting six women and raping another. The victims, some of them aspiring models who testified that they were lured to his Beverly Hills apartment by promises of jobs, ranged in age from 14 to 21. Anand Jon, as he was known professionally, graduated from Parsons, the prestigious art and design college of The New School in New York. He appeared on the TV show *America's Next Top Model* and was profiled by *Newsweek* as an emerging star in the fashion industry.

The Hungry Animal:
Motives to Eat

The Social Animal:
Motives to Love

The Erotic Animal:
Motives for Sex

The Competent Animal:
Motives to Achieve

Motives, Values, and the
Pursuit of Happiness

Psychology in the News,
Revisited

Taking Psychology with You:
How to Attain Your Goals

The Major Motives of Life: Food, Love, Sex, and Work

What motivates people like Anamika Veeramani to pursue their dreams, even as young children, when so many others either give up or have no dream to pursue? How does the attachment between Mzee and Owen differ from love and friendship among humans? Why in the world would successful, wealthy men like Anand Jon Alexander resort to sexual coercion and rape? Will taxing sugary or fatty foods help to curb people's appetite for them and halt the epidemic of obesity?

The word *motivation*, like the word *emotion*, comes from the Latin root meaning “to move,” and the psychology of motivation is indeed the study of what moves us, why we do what we do. To psychologists, **motivation** refers to a process within a person or animal that causes that organism to move toward a goal or away from an unpleasant situation. The motive may be to satisfy a psychological goal, say, by getting a great job or avoiding loss of the one you have; it may be to satisfy a biological need, say, by eating a sandwich to reduce hunger; or it may be to fulfill a personal ambition, say, by performing in a Broadway musical or being the youngest person to sail around the world.

For many decades, the study of motivation was dominated by a focus on biological *drives*, such as those to acquire food and water, to have sex, to seek novelty, and to avoid cold and pain. But drive theories do not account for the full complexity of human motivation, because people are conscious creatures who think and plan ahead, set goals for themselves, and plot strategies to reach those goals. People may have a drive to eat, for instance, but that doesn't tell us why some individuals will go on hunger strikes to protest injustice.

In this chapter, we will examine four central areas of human motivation: food, love, sex, and achievement. We will see how happiness and well-being are affected by the kinds of goals we set for ourselves, and by whether we are spurred to reach them because of **intrinsic motivation**, the desire to do something for its own sake and the pleasure it brings, or **extrinsic motivation**, the desire to do something for external rewards.



motivation An inferred process within a person or animal that causes movement either toward a goal or away from an unpleasant situation.

intrinsic motivation The pursuit of an activity for its own sake.

extrinsic motivation The pursuit of an activity for external rewards, such as money or fame.

set point The genetically influenced weight range for an individual; it is maintained by biological mechanisms that regulate food intake, fat reserves, and metabolism.

Body weight and shape are strongly affected by genetic factors. Set-point theory helps explain why the Pimas of the American Southwest gain weight easily but lose it slowly, whereas the Bororo nomads of Nigeria can eat a lot of food yet remain slender.



YOU are about to learn...

- the biological mechanisms that make it difficult for obese people to lose weight and keep it off.
- how notions of the ideal male and female body change over time and across cultures.
- why people all over the world are getting fatter.
- the major forms of eating disorders, and why they are increasing among both sexes.

The Hungry Animal: Motives to Eat

Some people are skinny; others are plump. Some are shaped like string beans; others look more like pears. Some can eat anything they want without gaining an ounce; others struggle unsuccessfully their whole lives to shed pounds. Some hate being fat; others think that fat is fine. How much do genes, psychology, and environment affect our motivation to eat or not to eat?

The Biology of Weight

At one time, most psychologists thought that being overweight was a sign of emotional disturbance. If you were fat, it was because you hated your mother, feared intimacy, or were trying to fill an emotional hole in your psyche by loading up on rich desserts. The evidence for psychological theories of overweight, however, came mainly from self-reports and from flawed studies that lacked control groups or objective measures of how much people were actually eating. When researchers did controlled studies, they learned that fat people, on

average, are no more and no less emotionally disturbed than average-weight people. Even more surprising, they found that heaviness is not always caused by overeating (Stunkard, 1980). Many heavy people do eat large quantities of food, but so do some thin people. In one early experiment, in which volunteers gorged themselves for months, it was as hard for slender people to gain weight as it is for most heavy people to lose weight. The minute the study was over, the slender people lost weight as fast as dieters gained it back (Sims, 1974).

Thinking Critically about "Overeating" and Weight



Genetic Influences on Weight and Body Shape

The explanation that emerged from such findings was that a biological mechanism keeps your body weight at a genetically influenced **set point**, the weight you stay at—plus or minus 10 percent—when you are not trying to gain or lose (Lissner et al., 1991). Set-point theory generated much research on how the body regulates appetite, eating, and weight. Everyone has a genetically programmed *basal metabolism rate*, the rate at which the body burns calories for energy, and a fixed number



of fat cells, which store fat for energy and can change in size. Obese people have about twice the number of fat cells as do adults of normal weight, and their fat cells are bigger (Spalding et al., 2008). When people lose weight, they don't lose the fat cells; the cells just get thinner, and easily plump up again.

A complex interaction of metabolism, fat cells, and hormones keeps people at the weight their bodies are designed to be, much in the way that a thermostat keeps a house at a constant temperature. When a heavy person diets, the body's metabolism slows down to conserve energy and fat reserves (Ravussin et al., 1988). When a thin person overeats, metabolism speeds up, burning energy. In one study, in which 16 slender volunteers ate 1,000 extra calories every day for eight weeks, their metabolisms sped up to burn the excess calories. They were like hummingbirds, in constant movement: fidgeting, pacing, changing their positions frequently while seated, and so on (Levine, Eberhardt, & Jensen, 1999).

What sets the set point? Genes, to start with. Pairs of adult identical twins who grow up in different families are just as similar in body weight and shape as twins raised together. And when identical twins gain weight, they gain it in the same place: Some pairs store extra pounds around their waists, others on their hips and thighs (Bouchard et al., 1990; Comuzzie & Allison, 1998). Genes also determine how much "brown fat" a person has in addition to the usual white fat. Brown fat is an energy-burning type of fat that seems important in regulating body weight and blood sugar. It is lacking in obese people, and may be one reason that people who have excess fat can't burn all the calories they consume (Cypess et al., 2009).

When there is a mutation in the genes that regulate normal eating and weight control, the result may be obesity. One gene, called *obese*, or *ob* for short, causes fat cells to secrete a protein, which researchers have named *leptin* (from the Greek *leptos*, "slender"). Leptin travels through the blood to the brain's hypothalamus, which is involved in the regulation of appetite. When leptin levels are normal, people eat just enough to maintain their weight. When a mutation of the *ob* gene causes leptin levels to be too low, however, the hypothalamus thinks the body lacks fat reserves and signals the individual to overeat. Injecting leptin into leptin-deficient mice reduces the animals' appetites, speeds up their metabolisms, and makes them more active; as a result, the animals shed weight. For this reason, researchers initially thought that leptin might be the answer to dieters' prayers: Take leptin, lose weight!

For a minority of obese people who have a congenital leptin deficiency, that is true (Farooqi et al., 2007). Alas, for most of them, and for people who are merely overweight, taking leptin does not produce much weight loss (Comuzzie & Allison, 1998).

Studies of mice suggest that leptin plays its most crucial role early in life, by altering the brain chemistry that influences how much an animal or a person later eats. More specifically, leptin helps regulate body weight by strengthening neural circuits in the hypothalamus that reduce appetite and by weakening circuits that stimulate it (Elmqvist & Flier, 2004). During a critical period in infancy, leptin influences the formation of those neural connections, and the set point is, well, set (Bouret, Draper, & Simerly, 2004). Some researchers speculate that because of this early neural plasticity, overfeeding infants while the hypothalamus is developing may later produce childhood obesity.

Numerous other genes and body chemicals are linked to appetite, metabolism, and being overweight or obese (Farooqi & O'Rahilly, 2004; Frayling et al., 2007; Herbert et al., 2006; Stice et al., 2008). You have receptors in your nose and mouth that keep urging you to eat more ("The food is right there! It's good! Eat!"), receptors in your gut telling you to quit ("You've had enough already!"), and leptin and other chemicals telling you that you have stored enough fat or not enough. One hormone makes you hungry and eager to eat more, and another turns off your appetite after a meal, making you eat less.

As if all this weren't enough, your brain will get high on sugary foods even if your tongue can't taste them or enjoy their texture. Sweets increase pleasure-inducing dopamine levels in the brain, making you crave more rich food (de Araujo et al., 2008). (Forget about trying to fool your brain with artificial sweeteners; they just make you want the real thing.) Some obese individuals may have underactive reward circuitry, which leads them to overeat to boost their dopamine levels (Stice et al., 2008). When heavy people lament that they are "addicted" to food, they may be right. **Explore**

The complexity of the mechanisms governing appetite and weight explains why appetite-suppressing drugs and diets inevitably fail in the long run: They target only one of the many factors that



Both of these mice have a mutation in the *ob* gene, which usually makes mice chubby, like the one on the left. But when leptin is injected daily, the mice eat less and burn more calories, becoming slim, like his friendly pal. Unfortunately, leptin injections have not had the same results in most human beings.

Explore
The Effects of the Hypothalamus on Eating Behavior on myspsychlab.com



Obesity is a global problem. Children around the world are eating too much food and too much fast food.

conspire to keep you the weight you are.

The Overweight Debate

More than half of all American adults, and at least 25 percent of all children and teenagers, are now overweight or obese. Increases in obesity rates have occurred in both sexes, all social classes, and all age groups, and in many other countries (Popkin, 2009). The United Nations, accustomed to dealing with problems of starvation and malnutrition, has announced that “obesity is the dominant unmet global health issue,” especially in the United States, Mexico, Egypt, North Africa, Canada, Great

Britain, Japan, and Australia, and even coastal China and Southeast Asia. Many health researchers are worried about this trend because obesity is considered a leading risk factor in diabetes, high blood pressure, heart disease, stroke, cancer, infertility, sleep apnea, and many other disorders. If genes and all the chemical factors and fat cells they regulate are so strongly implicated in weight and body shape, why are so many people, all over the world, getting fatter?

Environmental Influences on Weight

The leading culprits causing the worldwide rise in weight have to do with five sweeping changes in the environment (Critser, 2002; Popkin, 2009; Taubes, 2008):

1 The increased abundance of fast food and processed foods that are inexpensive, readily available, and high in sugar, starch, fat, and carbohydrates (Taubes, 2008). Human beings are genetically predisposed to gain weight when rich food is abundant because, in our species’ evolutionary past, starvation was often a real possibility. Therefore, a tendency to store calories in the form of fat provided a definite survival advantage. Unfortunately, evolution did not produce a comparable mechanism to prevent people who do not have hummingbird metabolisms from gaining weight when food is easily available, tasty, rich, varied, and cheap.

That, of course, is precisely the situation today, surrounded as we are by three-quarter-pound burgers, fries, chips, tacos, candy bars, pizzas, and sodas.

One research team documented the direct effects of the proximity of fast-food outlets on obesity. They followed thousands of ninth-grade schoolchildren, before and after a new fast-food restaurant opened near their schools. The children whose schools were within a block of a burger or pizza outlet were more likely to become obese in the next year than students whose schools were a quarter of a mile or more away (Currie et al., 2010). Proximity to fast food seems to be a major cause of the “freshman 15” as well. In a study at two different American universities, one in the Midwest and the other in the East, more than 70 percent of all freshmen gained significant amounts of weight in their first year (Lloyd-Richardson et al., 2009).

2 The widespread consumption of high-sugar, high-calorie soft drinks. Throughout most of human history, the proportion of calories consumed in beverages (milk, wine, fruit juice, and the like) was very low, and thus the human body did not evolve a mechanism that would compensate for fluid intake by lowering food intake. Then, 50 years ago, soft drinks, which are loaded with sugar and calories, began spreading across the globe. Putting sweeteners into drinks has led to a weight gain of up to 14 pounds per person in those who drink two to three sodas a day (Popkin, 2009).

3 The sharp decline in exercise and other expenditures of energy because of remote controls, a preference for sedentary activities such as watching videos and television, sitting at a computer or working on a laptop all day, and the speed and convenience of driving rather than walking or biking.

4 The increased portion sizes of food and drink. Servings of food and drink have become supersized, double or triple what they were only one generation ago. Even babies and toddlers up to 2 years of age are being fed as much as 30 percent more calories than they need (Fox et al., 2004). In France, people eat rich food but much less of it than Americans do. Their notion of what a proper portion is—for yogurt, soda, a salad, a sandwich, anything—is way lower than in the United States (Rozin et al., 2003).

5 The abundance of highly varied foods. When diets are predictable and routine, people habituate to what they are eating and eat less of it. That is why all diets that restrict people to eating only a

Get Involved! What's Controlling How Much You Eat?

Many people believe that what they eat and how much they eat is regulated by how hungry they feel. But the motivation to eat is complicated. Here are some invisible external influences on your eating habits (Wansink, 2006):

- **Package size:** People eat more from a large container (say, of popcorn) than a small one.
- **Plate size:** People eat more when they serve themselves on large plates rather than small ones.
- **Cues of how much has been eaten:** People eat more from a buffet when waiters quickly replace their dirty dishes, thereby eliminating telltale signs of how much food has already been consumed.
- **Kitchen and table layouts:** People eat more when food and snacks are displayed prominently, are varied, and are easily accessible.
- **Distraction:** People eat more when they are being distracted by friends and the environment.

The next time you are out with friends, note how much everyone is eating (including yourself), and notice whether any of the above influences are at work. If you are trying to lose weight, how can you alter your own environment to correct for these influences?

few kinds of foods are successful at first. As soon as food becomes more varied, however, people eat more and gain more weight (Remick, Polivy, & Pliner, 2009).

Cultural Influences on Weight and the Ideal Body

Eating habits and activity levels, in turn, are shaped by a culture's customs and standards of what the ideal body should look like: fat or thin, muscular or soft. In many places around the world, especially where famine and crop failures are common, fat is taken as a sign of health, affluence in men, and sexual desirability in women (Stearns, 1997). Among the Calabari of Nigeria, brides are put in special fattening huts where they do nothing but eat, so as to become fat enough to please their husbands.

Cultural influences on obesity can also be observed among white farm families. Farmers originally ate large amounts of food for *intrinsic* reasons: When you do hard, labor-intensive work, you need a lot of calories. But today, many farm families eat for *extrinsic* motives: to be sociable and conform to family tradition. In the farm belt states of the American Midwest, people are expected to eat huge, hearty meals and plenty of sweet desserts. If you don't join in, you are being antisocial, insulting your hosts and rejecting your kin (Angier, 2000).

Ironically, although people of all ethnicities and social classes have been getting fatter, the cultural ideal for women and men in the United States,

Canada, and Europe has been getting thinner. The plump, curvy female body, with ample hips and breasts, was fashionable in eras that celebrated women's role as mothers, such as after World War II, when women were encouraged to give up their wartime jobs and have many children (Stearns, 1997). Today's big-breasted but otherwise skinny female ideal may reflect today's norm: Women are supposed to be both professionally competent *and* maternal. For men too, the ideal body has changed. When most heavily muscled men were laborers and farmers, being physically strong and muscular was considered unattractive, a sign of being working class. Today, having a strong, muscular body is a sign of affluence rather than poverty. It means a man has the money and the time to join a gym and work out (Bordo, 2000).

You can see why many people, especially women, find themselves caught in a battle between their biology and their culture. Evolution has designed women to store fat, which is necessary for the onset of menstruation, for pregnancy and nursing, and, after menopause, for the production of estrogen. In cultures that think women should be very thin, therefore, many women become obsessed with weight and are continually dieting, forever fighting their bodies' need for a little healthy roundness.

The Body as Battleground: Eating Disorders

Some people lose the battle between the body they have and the body they want, developing serious



Should a woman be voluptuous and curvy or slim as a reed? Should a man be thin and smooth or strong and buff? What explains cultural changes in attitudes toward the ideal body? During the 1950s, actresses like Jayne Mansfield embodied the postwar ideal: soft, curvy, buxom, and “womanly.” Today, when women are expected to work and have families, the ideal is to be thin *and* have prominent breasts, like actress Salma Hayek. Men, too, have been caught up in body-image changes. In the 1960s, the ideal was the soft and scrawny hippie; today’s ideal man looks like actor Hugh Jackman, tough and muscular.

eating disorders that reflect an irrational terror of being fat. In **bulimia nervosa**, the person binges (eats vast quantities of rich food, sometimes everything that is in the kitchen) and then purges by inducing vomiting or abusing laxatives. In **anorexia nervosa**, the person eats hardly anything and therefore becomes dangerously thin; people with anorexia typically have severely distorted body images, thinking they are fat even when they are emaciated. Anorexia has the highest mortality rate of all mental disorders; many of its sufferers die of heart or kidney failure or complications of osteoporosis. Their weakened bones simply collapse.

Bulimia and anorexia are the most well-known eating disorders, and occur most often among young white women. But more than 40 percent of all cases of eating disorders occur among men, the elderly, ethnic minority groups, young children, and athletes, and do not fit the diagnostic criteria for bulimia or anorexia (Thomas, Vartanian, & Brownell, 2009). People with *binge-eating disorder* binge without purging; others chew whatever food they want but spit it out without swallowing; others are normal weight but take no joy in eating because they worry obsessively about gaining a pound; some develop phobias about eating certain kinds of food. All of these disorders involve an unhealthy attitude toward food, weight, and the body.

Genes play a role in the development of anorexia nervosa, which has been found across

cultures and throughout history (Striegel-Moore & Bulik, 2007). But most disorders are generated by psychological factors, including depression and anxiety, low self-esteem, perfectionism, and a distorted body image (Presnell, Bearman, & Stice, 2004; Sherry & Hall, 2009). Cultural factors can also generate dissatisfaction with one’s body. As we note in Chapter 11, bulimia is rare to nonexistent in non-Western cultures and has only become a significant problem in Western cultures with the rise of the thin ideal for women (Keel & Klump, 2003). A meta-analysis of experimental and correlational studies found that women’s exposure to the media ideal of impossibly thin women fosters the belief that “thin is beautiful” and increases the risk of disordered eating among women of all ethnicities who buy into it (Grabe & Hyde, 2006; Grabe, Ward, & Hyde, 2008). American culture is also rife with “body snarking,” the relentlessly critical and snide appraisals of other people’s bodies that get posted on blogs, YouTube, Facebook, and Twitter, and are constant topics for entertainment magazines and talk shows.


Eating disorders and body image distortions among boys and men are increasing too, though they take different forms. Just as anorexic women see their gaunt bodies as being too fat, some men have the delusion that their muscular bodies are too puny, so they abuse steroids and exercise or pump iron compulsively (Thompson & Cafri, 2007). Men

bulimia nervosa An eating disorder characterized by episodes of excessive eating (bingeing) followed by forced vomiting or use of laxatives (purging).


anorexia nervosa An eating disorder characterized by fear of being fat, a distorted body image, radically reduced consumption of food, and emaciation.



What is the difference between being slender and being too thin? Does the fashion model on the left look good to you or does she look emaciated? Likewise, what is the difference between being “pleasantly plump” and being fat? Nikki Blonsky, the exuberant star of the movie *Hairspray*, is overweight but physically fit. Does she look good to you or does she look too heavy?

in cultures that do not think the heavily muscled male body is desirable or attractive, as in Taiwan and Kenya, have fewer body image disorders than American men do (Campbell, Pope, & Filaault, 2005; Yang, Gray, & Pope, 2005).  **Watch**

In sum, within a given environment, genetic predispositions for a certain body weight and metabolism interact with psychological needs, cultural norms, and individual habits to shape, in this case quite literally, who we are.

 **Watch the Video Eating Disorders on mypsychlab.com**

Quick Quiz

Is all this information about eating making you hungry for knowledge?

1. *True or false:* Most fat people are heavy because their emotional problems cause them to overeat.
2. What theory seems to explain why thin people rarely become fat and fat people have so much trouble losing weight?
3. Which hormone helps regulate appetite by telling the hypothalamus that the body has stored enough fat?
4. What are five major environmental reasons for the rising number of overweight people?
5. Bill, who is thin, reads in the newspaper that genes set the range of body weight and shape. “Oh, good,” he exclaims, “now I can eat all the junk food I want; I was born to be skinny.” What’s wrong with Bill’s conclusion?

Answers:

1. false 2. set-point theory 3. leptin 4. increased consumption of fast, high-calorie foods; increased consumption of sweetened sodas and other drinks; a decline in exercise; increased sizes of food and drink portions; increased variety of food 5. Bill is right to recognize that there may be limits to how heavy he can become, but he is oversimplifying and jumping to conclusions. Many people who have a set point for leanness will gain considerable weight on rich food and sugary drinks, especially if they don’t exercise. Also, junk food is unhealthy for reasons that have nothing to do with becoming overweight.

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YOU are about to learn...

- how biology affects attachment and love.
- some key psychological influences on whom and how you love.
- the three basic styles of attachment and how they affect relationships.
- how economic concerns influence love and marriage.

The Social Animal: Motives to Love

In 1875, a teenager named Annie Oakley defeated Frank Butler, the star of the Buffalo Bill Wild West Show, in a sharpshooting competition. “The next day I came back to see the little girl who had beaten me,” wrote Butler many years later, “and it was not long until we married.” He became her manager, and for the next 50 years, they traveled together across Europe and America, where her skills with a gun made her the toast of both continents. They remained devoted until their deaths in 1926 (Kreps, 1990).

What kept Annie Oakley and Frank Butler in love for 50 years, when so many other romantic passions die in five years, five weeks, or five hours? What *is* love, anyway—the crazy, heart-palpitating feeling of longing for another person, or the steady, stable feeling of deep and abiding attachment?

The Biology of Love

Psychologists who study love (a tough job, but someone has to do it) distinguish *passionate (romantic) love*, characterized by a whirlwind of intense emotions and sexual passion, from *companionate love*, characterized by affection and trust. Passionate love is the stuff of crushes, infatuations, “love at

first sight,” and the early stage of love affairs. It may burn out completely or evolve into companionate love. Passionate love is known in all cultures and has a long and passionate history. Wars and duels have been fought because of it, people have committed suicide because of it, great love affairs have begun, and been torn apart, because of it. Yet, although the experience of romantic love is universal, many cultures have not regarded it as the proper basis for anything serious, such as marriage (Hatfield & Rapson, 2008).

In this era of fMRIs and biotechnical advances, it was inevitable that researchers would seek to explain passionate love by rummaging around in the brain. And if you think that what scientists are finding about diet and weight is complicated, their efforts to tease apart the links between romantic passion, sexual yearning, and long-term love make the problem of obesity seem, well, a piece of cake. There are olfactory cues in a potential partner’s scent that can turn you on (or off). There are physical cues in a potential partner’s voice and body shape, and even in how similar his or her face is to yours. There is the dopamine jolt of reward, from the same dopamine that makes anticipation of a fabulous meal or an addictive drug so pleasurable, and there are the arousal and excitement that adrenaline provides (Aron et al., 2005; Cozolino, 2006). And then there are key hormones that turn that first phase of exhilaration into the longer-lasting phase of attachment and bonding.

The neurological origins of passionate love may begin in infancy, in the baby’s attachment to the mother. In the view of evolutionary psychologists, maternal and romantic love, the deepest of human attachments, share a common evolutionary purpose—preserving the species—and so they share common neural mechanisms, the ones that make attachment and pair-bonding feel good. And, in fact, certain key neurotransmitters and hormones



Adult romantic love, with its exchange of loving gazes and depth of passionate attachment, may have its origins in the biology of the baby–mother bond.

that are involved in pleasure and reward are activated in the mother–baby pair-bond and again later in the pair-bond of adult lovers (Bartels & Zeki, 2004; Diamond, 2004).

Two of the most important hormones for social bonding are *vasopressin* and *oxytocin*, which influence feelings and expressions of love, caring, and trust between mothers and babies, between friends, and between lovers (Walum et al., 2008; Taylor et al., 2000b). In one study, volunteers who inhaled oxytocin in a nasal spray were later more likely than control subjects to trust one another in various risky interactions (Kosfeld et al., 2005). In another study, couples given oxytocin increased their non-verbal expressions of love for one another—gazing, smiling, and fondling—compared to couples given a placebo (Gonzaga et al., 2006). Conversely, when prairie voles, a monogamous species, are given a drug that blocks oxytocin, they continue to mate, but they don't get attached to their partners (Ross et al., 2009).

Studies of animals also find that the feelings and actions characteristic of attachment are mediated by the pleasure–reward circuits in the brain, stimulated by the release of *endorphins*, the brain's natural opiates (see Chapter 4). When baby mice and other animals are separated from their mothers, they cry out in distress, and the mother's touch (or lick) releases endorphins that soothe the infant. But when puppies, guinea pigs, and chicks are injected with low doses of either morphine or endorphins, the animals show much less distress than usual when separated from their mothers; the chemicals seem to be a biological replacement for mom (Panksepp et al., 1980). These findings suggest that endorphin-stimulated euphoria may be a child's initial motive for seeking affection and cuddling—that, in effect, a child attached to a parent is a child addicted to love. The addictive quality of adult passionate love, including the physical and emotional distress that lovers feel when they are apart, may involve the same biochemistry (Diamond, 2004).


Using fMRI, neuroscientists have found other neurological similarities between infant–mother love and adult romantic love. Certain parts of the brain light up when people look at images of their sweethearts, in contrast to other parts that are activated when they see pictures of friends or furniture. And these are the same areas that are activated when mothers see images of their own children as opposed to pictures of other children (Bartels & Zeki, 2004).

Clearly, then, the bonds of attachment are biologically based. Yet, as always, it is important to avoid the oversimplified conclusion that “love is all


in our hormones” or “love occurs in this corner of the brain but not that one.” Human love affairs involve many other factors that affect whom we choose, how we get along with that person, and whether we stay with a partner over the years.

The Psychology of Love

Many romantics believe that only one true love awaits them. Considering that there are 6.8 billion people on the planet, the odds of finding said person are a bit daunting. What if you're in Omaha or Winnipeg and your true love is in Dubrovnik or Kankakee? You could wander for years and never cross paths.

Fortunately, evolution has made it possible to form deep and lasting attachments without traveling the world. In fact, the first major predictor of whom we love is plain *proximity*: We choose our friends and lovers from the set of people who live close by, or who study or work near us. The people who are nearest to you are most likely to be dearest to you, too. The second major predictor is *similarity*—in looks, attitudes, beliefs, values, personality, and interests (Berscheid & Reis, 1998). Although it is commonly believed that opposites attract, the fact is that we tend to choose friends and loved ones who are most like us. Many students use Facebook to find romantic prospects who share their love of poker and vampire movies, their religious beliefs, or anything else they care about.  **Watch**

The Internet has made matching possible on all kinds of dimensions. There are nearly 1,000 dating websites in the U.S., matching couples by age, political attitudes, religion or secularism, sexual orientation, pet ownership, and many other criteria.

 **Watch the Video**
Dating and
Finding a Mate -
Ralf 33 on
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Internet services capitalize on the fact that like attracts like. “What type turns you on?” asks this ad. Usually, the type that is similar to you!

Some prominent matchmaking sites administer questionnaires and personality inventories, claiming to use scientific principles to pair up potential soul mates (Sprecher et al., 2008). These efforts vary in effectiveness. Can you think why? One reason is that many people think they know exactly what they “must have” in a partner, and then they meet someone who has few of those qualities but a whole bunch of others that suddenly become “essential.” Another reason, though, is that the premises of some of these sciency-sounding matchmaking sites may be faulty, especially those based on unvalidated “biological matches” and anecdotal testimonials (King, Austin-Oden, & Lohr, 2009). Yet one underlying premise of most Internet matching sites is basically correct: Like attracts like.



“My preference is for someone who’s afraid of closeness, like me.”

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The Attachment Theory of Love Once you find someone to love, *how* do you love? According to Phillip Shaver and Cindy Hazan (1993), adults, just like babies, can be *secure*, *anxious*, or *avoidant* in their attachments (see Chapter 3). Securely attached lovers are rarely jealous or worried about being abandoned. They are more compassionate and helpful than insecurely attached people and are quicker to understand and forgive their partners if the partner does something thoughtless or annoying (Mikulincer et al., 2005; Mikulincer & Shaver, 2007). Anxious lovers are always agitated about their relationships; they want to be close but worry that their partners will leave them. Other people often describe them as clingy, which may be why they are more likely than secure lovers to suffer from unrequited love. Avoidant people distrust and avoid intimate attachments.

Where do these differences come from? According to the *attachment theory of love*, people’s attachment styles as adults derive in large part from how their parents cared for them (Dinero et al., 2008; Mikulincer & Shaver, 2007). Children form internal “working models” of relationships: Can I trust others? Am I worthy of being loved? Will my parents leave me? If a child’s parents are cold and rejecting and provide little or no emotional and physical comfort, the child learns to expect other relationships to be the same. When children form secure attachments to trusted parents, they become more trusting of others, expecting to form other secure attachments with friends and lovers in adulthood (Feeney & Cassidy, 2003).

Indeed, when asked to tell about their parents, securely attached adults report having had warm, close relationships. Although they recognize their parents’ flaws, they describe their parents as having

been more loving and kind than insecurely attached people do. Anxious people feel more ambivalence toward their parents, especially their mothers, and also describe their parents ambivalently, as having been both harsh and kind. And people with an avoidant attachment style describe their parents in almost entirely negative terms. These individuals are most likely to report having had cold, rejecting parents, extended periods of separation from their mothers, or childhood environments that prevented them from forging close ties with others (Hazan & Shaver, 1994; Klohnen & Bera, 1998).

Keep in mind, though, that a child’s own temperament and genetic predispositions could also help account for the consistency of attachment styles from childhood to adulthood, as well as for the working models of relationships that are formed during childhood (Gillath et al., 2008). A child who is temperamentally fearful or difficult, or whose reward circuits do not function normally, may reject even the kindest parent’s efforts to console and cuddle (see Chapter 3). That child may therefore come to feel anxious or ambivalent in his or her adult relationships.

Interestingly, some leading attachment researchers believe that insecure attachment may be as evolutionarily beneficial as secure attachment. Social groups containing people with different attachment patterns may have been more likely to survive, because insecurely attached individuals, not having partners inducing them to remain cozily at home, might have been more likely to behave independently in ways that could benefit the group, as well as to take risks and face dangers in the environment that were threatening the group’s safety (Ein-Dor et al., 2010).

The Ingredients of Love When people are asked to define the key ingredients of love, most agree that love is a mix of passion, intimacy, and commitment (Lemieux & Hale, 2000). Intimacy is based on deep knowledge of the other person, which accumulates gradually, but passion is based on emotion, which is generated by novelty and change. That is why passion is usually highest at the beginning of a relationship, when two people begin to disclose things about themselves to each other, and lowest when knowledge of the other person's beliefs and habits is at its maximum, when it seems that there is nothing left to learn about the beloved.

Nonetheless, according to an analysis of a large number of adult couples and a meta-analysis of 25 studies of couples in long- and short-term relationships, romantic love can persist for many years and is strongly associated with a couple's happiness. What diminishes among these happy couples is that part of romantic love we might call *obsessiveness*, constant thinking and worrying about the loved one and the relationship (Acevedo & Aron, 2009).

Biological factors such as the brain's opiate system may contribute to early passion, as we noted, but most psychologists believe that the ability to sustain a long and intimate love relationship has more to do with a couple's attitudes, values, and balance of power than with genes or hormones. One of the most important psychological predictors of satisfaction in long-term relationships is the perception, by both partners, that the relationship is fair, rewarding, and balanced. Partners who feel over-benefited (getting more than they are giving) tend to feel guilty; those who feel under-benefited (not getting what they feel they deserve) tend to feel resentful and angry (Pillemer, Hatfield, & Sprecher, 2008). A couple may tootle along comfortably until a stressful event—such as the arrival of children, serious illness, unemployment, or retirement—evokes simmering displeasure over issues of “what’s fair.”

Another key psychological factor in couples' ability to sustain love is the nature of their primary motivation to maintain the relationship: Is it positive (to enjoy affection and intimacy) or negative (to avoid feeling insecure and lonely)? Couples motivated by the former goal tend to report more satisfaction with their partners (Gable & Poore, 2008). We will see that this difference in motivation—positive or negative—affects happiness and satisfaction in many different domains of life.

The critical-thinking guideline “define your terms” may never be more important than in matters of love. The way we define love deeply affects our satisfaction with relationships and whether or not our relationships last. If you believe that the only real love is the kind defined by obsession and sexual passion, then you may decide you are out of love when the initial phase of attraction fades, as it eventually must—and you will be repeatedly disappointed. Robert Solomon (1994) argued that “We conceive of [love] falsely. . . . We expect an explosion at the beginning powerful enough to fuel love through all of its ups and downs instead of viewing love as a process over which we have control, a process that tends to increase with time rather than wane.”

Some psychologists themselves have made this mistake. They have tended to define “falling in love” as a romantic thunderbolt: You are standing there, minding your own business, when Perfect Person strolls by and you are smitten at first sight; you “fall”; your brain lights up. However, people fall in love in different ways: Some couples do so gradually, over time, after “falling in friendship” first; couples in arranged marriages may come to love each other long after the wedding (Aron et al., 2008). All the fMRIs in the world can't capture that.

Thinking Critically
about Defining
Love



Passionate love starts relationships, but companionate love keeps them going.

Gender, Culture, and Love

Which sex is more romantic? Which sex truly understands true love? Which sex falls in love but won't commit? Pop-psych books are full of answers, along with advice for dealing with all those love-challenged fools who love you and leave you. But all stereotypes oversimplify. Neither sex loves more than the other in terms of love at first sight, passionate love, or companionate love over the long haul (Dion & Dion, 1993; Hatfield & Rapson, 1996/2005). Men and women are equally likely to suffer the heart-crushing torments of unrequited love. They are equally likely to be securely or insecurely attached (Feeney & Cassidy, 2003). Both sexes suffer mightily when a love relationship ends, assuming they did not want it to.



Economic and social changes are transforming gender roles in all developed nations. But marriage for financial security is still the only option for many women from impoverished nations—like this bride, whose husband chose her from a mail-order catalog.

However, women and men do differ, on average, in how they *express* the fundamental motives for love and intimacy. Males in many cultures learn early that revelations of emotion can be construed as evidence of vulnerability and weakness, which are considered unmasculine (see Chapter 13). Thus, men in such cultures often develop ways of revealing love that are based on actions rather than words: doing things for the partner, supporting the family financially, or just sharing the same activity, such as watching TV or a football game together (Shields, 2002).

These gender differences reflect gender roles, which are in turn shaped by social, economic, and cultural forces. For many years, Western men were

more romantic than women in their choice of partner, and women in turn were far more pragmatic than men. One reason was that a woman did not just marry a man; she married a standard of living. Therefore, she could not afford to marry someone unsuitable or waste her time in a relationship that was not going anywhere, even if she loved the guy. She married, in short, for extrinsic reasons rather than intrinsic ones. In the 1960s, two-thirds of a sample of college men said they would not marry someone they did not love, but only one-fourth of the women ruled out the possibility (Kephart, 1967).

As women entered the workforce and as two incomes became necessary in most families, the gender difference in romantic love faded, and so did economic motivations to marry, all over the world. Nowadays, in every developed nation, people marry for intrinsic motives, for the pleasure of being with the partner they chose. Only tiny numbers of women and men would consider marrying someone they did not love, even if the person had all the right qualities. Pragmatic (extrinsic) reasons for marriage, with romantic love being a remote luxury, persist only in countries where the extended family still controls female sexuality and the financial terms of marriage (Hatfield & Rapson, 1996/2005). Yet even in these countries, such as India and Pakistan, the tight rules governing marriage choices are loosening. So are the rules forbidding divorce, even in extremely traditional nations such as Japan, China, and South Korea.

As you can see, our motivations to love may start with biology and the workings of the brain, but they are shaped and directed by our early experiences with parents, the culture we live in, the historical era that shapes us, and something as utterly unromantic as economic dependency or self-sufficiency.

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Quick Quiz

Are you passionately committed to quizzes yet?

1. How are adult passionate love and infant–mother love biologically similar?
2. The two major predictors of whom we love are _____ and _____.
3. Tiffany is wildly in love with Timothy, and he with her, but she can't stop worrying about his fidelity and doubting his love. She wants to be with him constantly, but she pushes him away whenever she feels jealous, which is often. According to the attachment theory of love, which style of attachment does Tiffany have?
4. *True or false:* Until recently, men in Western societies were more likely than women to marry for love.

Answers:

1. Both involve the release of neurotransmitters, vasopressin and oxytocin, and endorphins that make attachment literally feel good, by activating the pleasure–reward circuits in the brain. 2. proximity and similarity 3. anxiously 4. true



YOU are about to learn...

- which part of the anatomy is the “sexiest sex organ.”
- why pleasure is only one of many motives for having sex.
- how culture affects sexual practices.
- the puzzling origins of sexual orientation.

The Erotic Animal: Motives for Sex

Most people believe that sex is a biological drive, merely a matter of doing what comes naturally. “What’s there to discuss about sexual motivation?” they say. “Isn’t it all inborn, inevitable, and inherently pleasurable?”

It is certainly true that in most other species, sexual behavior is genetically programmed. Without instruction, a male stickleback fish knows exactly what to do with a female stickleback, and a whooping crane knows when to whoop. But as sex researcher and therapist Leonore Tiefer (2004) has observed, “sex is not a natural act” for human beings. Sex, she says, is more like dancing than digestion, something you learn and can be motivated to improve rather than a simple physiological process. For one thing, the activities that one culture considers “natural”—such as mouth-to-mouth kissing or oral sex—are often considered unnatural in another culture or historical time. Second, people have to learn from experience and culture what they are supposed to do with their sexual desires and how they are expected to behave. And third, people’s motivations for sexual activity are by no means always and only for intrinsic pleasure. Human sexuality is influenced by a blend of biological, psychological, and cultural factors.



Desire and sensuality are lifelong pleasures.

The Biology of Desire

Physiological research has dispelled a lot of nonsense about sexuality, such as the once-common notions that men must have intercourse once they are aroused or they will get “blue balls”; that “good” women don’t have orgasms at all; or that mature women should have the “right kind” of orgasm (Ehrenreich, 1978).

The first modern attack on these beliefs came from Alfred Kinsey and his associates (1948, 1953) in their pioneering books on male and female sexuality. Kinsey’s team surveyed thousands of Americans about their sexual attitudes and behavior, and they also reviewed the existing research on sexual physiology. In *Sexual Behavior in the Human Female*, they observed that “males would be better prepared to understand females, and females to understand males, if they realized that they are alike in their basic anatomy and physiology.” For example, the penis and the clitoris develop from the same embryonic tissues; they differ in size, of course, but not in sensitivity. At that time, many people believed that women were not as sexually motivated as men and that women cared more about affection than sexual satisfaction, notions soundly refuted by Kinsey’s interviews.

The idea that men and women are sexually similar in any way, let alone that women were sexual at all, was extremely shocking in 1953, and Kinsey was attacked not only for his findings, but also for even daring to ask people (especially female people) about their sexual lives. The national hysteria that accompanied the Kinsey Reports seems hard to believe today. Yet it is still difficult for social scientists to conduct serious, methodologically sound research on the development of human sexuality. As John Bancroft, the current head of the Kinsey Institute, has observed, because many American adults need to believe that young children have no sexual feelings, they interpret any evidence of normal sexual expression in childhood (such as masturbation or “playing doctor”) as a symptom of sexual abuse. And because many adults are uncomfortable about sexual activity among teenagers, they try to restrict or eliminate it by prohibiting sex education and promoting abstinence; then they reject research showing that such prohibitions either have no effect at all or actually increase the behavior they consider taboo (Bancroft, 2006; Levine, 2003; Santelli et al., 2006). Some conservative organizations also try to block research on sexual behavior they believe the Bible disapproves of, such as masturbation, homosexuality, and any form of sexual behavior outside of marriage.



The “Kinsey Report” on women, officially titled *Sexual Behavior in the Human Female*, was not exactly greeted with praise and acceptance, let alone clear thinking. Some critics were so emotionally upset by the book’s message (that many women were enjoying sex and had had premarital sex) that they chose to attack the messenger.

Following Kinsey, the next wave of sex research began in the 1960s, with the laboratory research of physician William Masters and his associate Virginia Johnson (1966). Masters and Johnson’s research helped to sweep away cobwebs of superstition and ignorance about how the body works. In studies of physiological changes during sexual arousal and orgasm, they confirmed that male and female orgasms are indeed remarkably similar and that all orgasms are physiologically the same, regardless of the source of stimulation. Masters and Johnson concluded that the sexes differ in just one major way: Women’s capacity for sexual response “infinitely surpasses that of men,” they said, because women, unlike most men, are able to have repeated orgasms (until, presumably, exhaustion or a ringing doorbell makes them stop).

If you have ever taken a sex-ed class, you may have had to memorize Masters and Johnson’s description of the “four stages of the sexual response cycle”: desire, arousal (excitement), orgasm, resolution. Unfortunately, the impulse to oversimplify—treating these four stages as if they were akin to the invariable cycles of a washing machine—led to a mistaken inference of universality. It later turned out that not everyone has an orgasm even following great excitement, and that in many women, desire follows arousal (Laan & Both, 2008). Masters and Johnson’s research was limited by the selection of a sample consisting only of men and women who were easily orgasmic, and they did not investigate

how people’s physiological responses might vary according to their age, experience, and culture (Tiefer, 2004). Sex researchers have since learned much more about individual variation in sexual physiology. People vary not only in their propensity for sexual excitation and responsiveness, but also in their ability to inhibit and control that excitement (Bancroft et al., 2009). That is, some people are all accelerator and no brakes, and others are slow to accelerate but quick to brake.

Hormones and Sexual Response One biological factor that promotes sexual desire in both sexes is the hormone testosterone, an androgen (masculinizing hormone). This fact has created a market for the legal and illegal use of androgens. The assumption is that if the goal is to reduce sexual desire, as in sex offenders, testosterone should be lowered, say through chemical castration; if the goal is to increase sexual desire in women and men who complain of low libido, testosterone should be increased, like adding fuel to your gas tank. Yet these efforts often fail to produce the expected results (Berlin, 2003; Anderson, 2005). Why?

One reason is that in primates, unlike other mammals, sexual motivation requires more than hormones; it is also affected by social experience and context (Wallen, 2001). That is why desire can persist in sex offenders who have lost testosterone, and why desire might remain low in people who have been given testosterone. Indeed, artificially administered testosterone does not do much more than a placebo to increase sexual satisfaction in healthy people, nor does a drop in testosterone invariably cause a loss of sexual motivation or enjoyment. In studies of women who had had their uteruses or ovaries surgically removed or who were going through menopause, use of a testosterone patch increased their sexual activity to only one more time a month over the placebo group (Buster et al., 2005).

There are also three significant medical problems with the use of testosterone to enhance sexual desire: (1) There is no consensus on the difference between normally low and abnormally deficient levels. (2) It is easy to misdiagnose the symptoms of androgen deficiency (low libido, fatigue, lack of well-being) because those are also symptoms of depression and relationship problems. (3) The side effects of androgen can range from unpleasant to harmful (International Consensus Conference, 2002), and side effects are unlikely to increase desire.

Sex and the “Sex Drive” The question of whether men and women are alike or different in some underlying, biologically based sex drive

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continues to provoke lively debate. Although women on average are certainly as capable as men of sexual pleasure, men do have higher rates of almost every kind of sexual behavior, including masturbation, erotic fantasies and pornography use, and casual sex (Oliver & Hyde, 1993; Petersen & Hyde, 2010; Peplau, 2003). These sex differences occur even when men are forbidden by cultural or religious rules to engage in sex at all; Catholic priests have more of these sexual experiences than Catholic nuns

do (Baumeister, Catanese, & Vohs, 2001). Men are also more likely than women to admit to having sex because “I was slumming” or “The opportunity presented itself” (Meston & Buss, 2007).

Biological psychologists argue that these differences occur universally because the hormones and brain circuits involved in sexual behavior differ for men and women. They maintain that, for men, the wiring for sex overlaps with that for dominance and aggression, which is why sex and aggression are more likely to be linked in men than women. For women, the circuits and hormones governing sexuality and nurturance seem to overlap, which is why sex and love are more likely to be linked in women than in men (Diamond, 2008).

Other psychologists, however, believe that most gender differences in sexual behavior reflect women’s and men’s different roles and experiences in life and have little or nothing to do with biologically based drives or brain circuits (Eagly & Wood, 1999; Tiefer, 2008). A middle view is that men’s sexual behavior is more biologically influenced than is women’s, whereas women’s sexual desires and responsiveness are more affected by circumstances, the specific relationship, and cultural norms (Baumeister, 2000).

Evolution and Sexual Strategies Evolutionary psychologists believe that differences between women and men in sex drive and courtship and mating practices evolved in response to species’ survival needs (Buss, 1994). In this view, it was evolutionarily adaptive for males to compete with other males for access to young and fertile females,



This Kenyan man has 40 wives and 349 children. He is unusual even in his own culture, but around the world, it is more common for men than women to have multiple sexual partners. Evolutionary psychologists think the reason is that men have evolved to sow as many wild oats as they can, whereas women have evolved to be happy with just a few grains.

and to try to win and then inseminate as many females as possible. The more females a male mates with, the more genes he can pass along. The human record in this regard was achieved by a man who fathered 899 children (Daly & Wilson, 1983). What else he did with his time is unknown.

Females, according to many evolutionary psychologists, need to shop for the best genetic deal, as it were, because they can conceive and bear only a limited number of offspring. Having such a large biological investment in each pregnancy, females must choose partners more carefully than males do. Besides, mating with a lot of different males would produce no more offspring than staying with just one. So females try to attach themselves to dominant males who have resources and status and are likely to have superior genes.

The result of these two opposite sexual strategies, in this view, is that males generally want sex more often than females do; males are often fickle and promiscuous, whereas females are usually devoted and faithful; males are drawn to sexual novelty and even rape, whereas females want stability and security; males are relatively indiscriminating in their choice of sexual partners, whereas females are cautious and choosy; and males are competitive and concerned about dominance, whereas females are less so.

In human beings, some of these sex differences do appear to be universal or at least very common. In one massive project, 50 scientists studied 10,000 people in 37 cultures located on six continents and five islands (Buss, 1994; Schmitt, 2003). Around the world, they found, men are more violent than women and more socially dominant. They are more interested in the youth and beauty of their sexual partners, presumably because youth is associated with fertility. According to their responses on questionnaires, they are more sexually jealous and possessive, presumably because if a man's mate had sex with other men, he could never be 100 percent sure that her children were genetically his. They are more promiscuous than women, presumably so that their sperm will be distributed as widely as possible. Women are more sexually cautious than men; they tend to emphasize the financial resources or prospects of a potential mate, his status, and his willingness to commit to a relationship (Bailey et al., 1994; Buss, 2000; Buunk et al., 1996; Daly & Wilson, 1983; Mealey, 2000).

Evolution, Culture, and Sex Evolutionary views of sex differences have become enormously popular. Many academics and laypeople are persuaded that there are indeed evolutionary

advantages for males of sowing their seeds far and wide and evolutionary advantages for females of finding a man with a good paycheck. But critics, including some prominent evolutionary theorists, have challenged this conclusion on conceptual and methodological grounds.

Thinking Critically
about Evolutionary
Theories of Sex



1 Stereotypes versus actual behavior. The behavior of humans and other animals often fails to conform to the stereotyped images of sexually promiscuous males and coy, choosy females (Barash & Lipton, 2001; Birkhead, 2001; Fausto-Sterling, 1997; Hrdy, 1994; Roughgarden, 2004). In many species of birds, fish, and mammals, including human beings, females are sexually ardent and often have many male partners. They have sex when they are not ovulating and even when they are already pregnant. And in many species, from penguins to primates, males do not just mate and run. They stick around, feeding the infants, carrying them on their backs, and protecting them against predators (Hrdy, 1988; Snowdon, 1997).

In human beings, national and ethnic groups that value greater equality between the sexes have smaller gender differences in sexual behavior than do cultures that promote gender inequality. In America today, differences in sexual behaviors and attitudes are not as large as the evolutionary stereotype suggests: Men and women have become more alike than different (Petersen & Hyde, 2010).

2 Cultural variation. Human sexual behavior is amazingly varied and changeable across time and place. Cultures range from those in which women have many children to those in which they have very few, from those in which men are intimately involved in child rearing to those in which they take no part at all, from those in which women may have many lovers to those in which women may be killed for having sex outside of marriage. In many places, the chastity of a potential mate is much more important to men than to women, but in other places, it is important to both sexes—or to neither one. (See Figure 14.1.) In some places, just as evolutionary theory predicts, a relatively few men—those with the greatest wealth and power—have a far greater number of offspring than other men do; but in many societies, including some polygamous ones, powerful men do not have more children than men who are poor or who are low in status (Brown, Laland, & Mulder, 2009).



Ah, father love! Evolutionary approaches to sex assume that males across species have only a minimal investment in caring for offspring. But there are many exceptions, including these male snow monkeys and lions, who are doting dads.

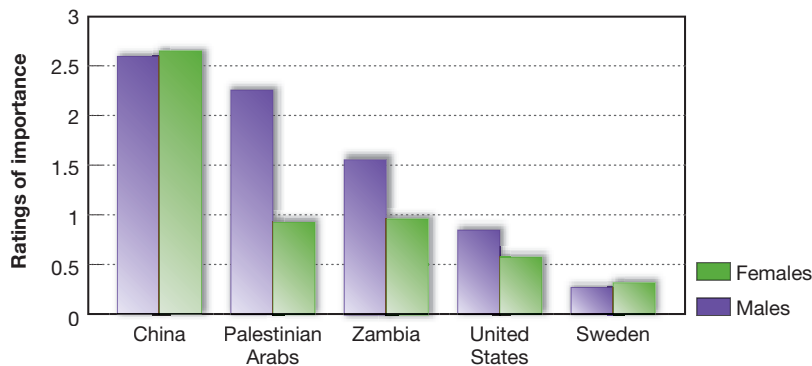


FIGURE 14.1
Attitudes toward Chastity

In many places, men care more about a partner's chastity than women do, as evolutionary psychologists would predict. But culture has a powerful impact on these attitudes, as this graph shows. Notice that in China, both sexes prefer a partner who has not yet had intercourse, whereas in Sweden, chastity is a nonissue (in Buss, 1995).

People's attitudes and sexual practices can change rapidly within a culture, too. In America, young people's sexual attitudes and behavior changed dramatically between 1943 and 1999, with the largest changes occurring among girls and young women. Approval of premarital sex leapt from 12 percent to 73 percent among young women, and from 40 percent to 79 percent among young men (Wells & Twenge, 2005). Behavior changed accordingly.

3 What people say versus what they do. Evolutionary psychologists have tended to rely on data from questionnaires and interviews, but people's responses can be a poor guide to their actual choices and actions. When people are asked to rank the traits they most value in a sexual partner or someone they'd like to go out with, sex differences appear, just as evolutionary theory would predict: People *say* they want a partner who is rich or beautiful (or both) (Kenrick et al., 2001). But the factors that predict whom people *actually* choose for mating and dating tell another story. As we saw in discussing love, most people choose partners based on their similarity and proximity. That's why people who are plain, pudgy, smart, foolish, rich, poor, gorgeous, or goofy all usually manage to find partners much like them.

This finding makes good evolutionary sense, because our prehistoric ancestors, unlike undergraduates filling out questionnaires about their ideal mates, did not have 5,000 fellow students to choose from. They lived in small bands, and if they were lucky they might get to choose between Urp and Ork, and that's about it. They could not hold out for some beauty or hunk down the road, even if there had been roads back then (Hazan & Diamond, 2000).

All of this evidence argues against a universal, genetically determined sexual strategy. What evolution *has* bestowed on us, however, is an amazingly flexible brain. Biology influences sexual

behavior but it is only one influence among many, as we shall see next.

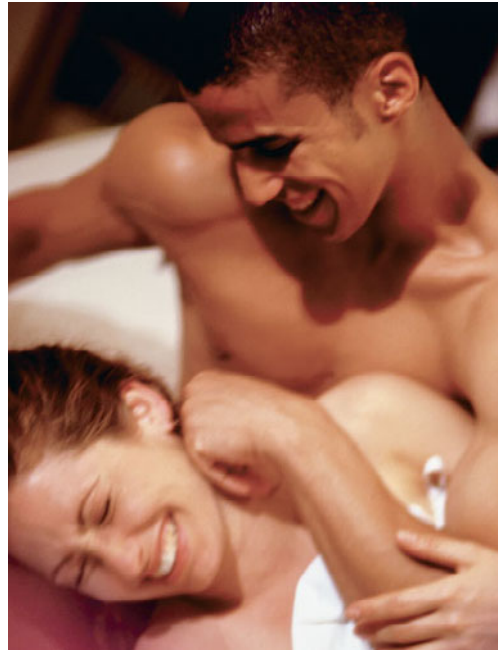
The Psychology of Desire

Psychologists are fond of observing that the sexiest sex organ is the brain, where perceptions begin. People's values, fantasies, and beliefs profoundly affect their sexual desire and behavior. That is why a touch on the knee by an exciting new date feels terrifically sexy, but the same touch by a creepy stranger on a bus feels disgusting. It is why a worried thought can kill sexual arousal in a second, and why a fantasy can be more erotic than reality.

The Many Motives for Sex To most people, the primary motives for sex are pretty obvious: to enjoy the pleasure of it, to express love and intimacy, or to make babies. But there are other motives too, not all of them so positive, including money or perks, duty or feelings of obligation, rebellion, power over the partner, and submission to the partner to avoid anger or rejection.

One survey of nearly 2,000 people yielded 237 motives for having sex, and nearly every one of them was rated as the most important motive for someone. Most men and women listed the same top ten, including attraction to the partner, love, fun, and physical pleasure. But some said, "I wanted to feel closer to God," "I was drunk," "to get rid of a headache" (that was #173), "to help me fall asleep," "to make my partner feel powerful," "to return a favor," "because someone dared me"; or to hurt an enemy or a rival ("I wanted to make him pay so I slept with his girlfriend"; "I wanted someone else to suffer from herpes as I do"). Men were more likely than women to say they use sex to gain status, enhance their reputation (e.g., because the partner was normally "out of my league"), or get things (such as a promotion) (Meston & Buss, 2007).

The many motivations for sex range from sex for profit to sex for fun.



Across the many studies of motives for sex, there appear to be several major categories (Cooper, Shapiro, & Powers, 1998; Meston & Buss, 2007):

- *Pleasure*: the satisfaction and physical pleasure of sex
- *Intimacy*: emotional closeness with the partner, spiritual transcendence
- *Insecurity*: reassurance that you are attractive or desirable
- *Partner approval*: the desire to please or appease the partner; the desire to avoid the partner's anger or rejection
- *Peer approval*: the wish to impress friends, be part of the group, and conform to what everyone else seems to be doing
- *Attaining a goal*: to get status, money, revenge, or "even the score"

People's motives for having sex affect many aspects of their sexual behavior, including whether they engage in sex in the first place, whether they enjoy it, whether they have unprotected or otherwise risky sex, and whether they have few or many partners (Browning et al., 2000; Impett & Tolman, 2006). Extrinsic motives, such as having sex to gain approval from others or get some tangible benefit, are most strongly associated with risky sexual behavior, including having many partners, not using birth control, and pressuring a partner into sex (Hamby & Koss, 2003).

Unfortunately, significant numbers of women and men are having sex for extrinsic rather than

intrinsic motives. In a study in which college students in dating relationships kept a daily diary of their sexual experiences, half of the women and a fourth of the men reported consenting on occasion to unwanted sexual activity (O'Sullivan & Allgeier, 1998). Men typically did so because of peer pressure, inexperience, a desire for popularity, or a fear of seeming homosexual or unmasculine. Women typically did so because they did not want to lose the relationship; because they felt obligated once the partner had spent time and money on them; because the partner made them feel guilty; or because they wanted to satisfy the partner and avoid conflict (Impett, Gable, & Peplau, 2005).

When one partner is feeling insecure about the relationship, he or she is also more likely to consent to unwanted sex. In a study of 125 college women, one-half to two-thirds of the Asian-American, white, and Latina women had consented to having sex when they didn't really want to, and all of the African-American women said they had. Do you remember the attachment theory of love discussed earlier? Anxiously attached women were the most willing to consent to unwanted sex, especially if they feared their partners were less committed than they were. They reported that they often had sex out of feelings of obligation and to prevent the partner from leaving. Securely attached women also occasionally had unwanted sex, but their reasons were different: to gain sexual experience, to satisfy their curiosity, or to actively please their partners and further the intimacy between them (Impett, Gable, & Peplau, 2005).

Sexual Coercion and Rape One of the most persistent differences in the sexual experiences of women and men has to do with their perceptions of, and experiences with, sexual coercion. In a nationally representative survey of more than 3,000 Americans ages 18 to 59, nearly one-fourth of the women said that a man, usually a husband or boyfriend, had forced them to do something sexually that they did not want to do (Laumann et al., 1994). But only about 3 percent of the men said they had ever forced a woman into a sexual act. Obviously, what many women regard as coercion is not always seen as coercive by men (Hamby & Koss, 2003). On the other hand, about half of all women who report a sexual assault that meets the legal definition of rape—being forced to engage in sexual acts against their will—do not label it as rape (McMullin & White, 2006). College women tend to define rape as being forced into intercourse by an acquaintance or stranger, or as having been molested as a child. They are least likely to call their experience rape if they were sexually assaulted by a boyfriend, were drunk or otherwise drugged, or were forced to have oral or digital sex (Kahn, 2004).

What causes some men to rape? Sociobiologists often answer by analogy with other animals: Because males of some species, such as ducks and scorpion flies, force themselves on females, human rape must have the same evolutionary origins and reproductive purposes: for the male to fertilize as many females as possible (Thornhill & Palmer, 2000). But among human beings, rape is often committed by high-status men, including sports heroes and other celebrities, who could easily find consenting sexual partners. All too frequently its victims are children or the elderly, who do not reproduce, or, in wartime, civilian women who are then murdered by the soldiers who raped them. And sadistic rapists also injure or kill their victims, hardly a way to perpetuate their genes. The human motives for rape thus appear to be primarily psychological:

- *Narcissism and hostility toward women.* Sexually aggressive males often are narcissistic, are unable to empathize with women, and feel entitled to have sexual relations with whatever woman they choose. They misperceive women's behavior in social situations, equate feelings of power with sexuality, and accuse women of provoking them (Bushman et al., 2003; Malamuth et al., 1995; Zurbriggen, 2000). One interesting study compared men who had forcibly raped a woman with men who used manipulative techniques to have sex and with men who had had consensual sex only. The rapists were more likely to have grown up in violent households, were more ac-

cepting of male violence, and were less likely to endorse love as a motive for sex than were men in the manipulation and consent groups (Lyden, White, & Kadlec, 2007).

- *A desire to dominate, humiliate, or punish the victim.* This motive is apparent among soldiers who rape captive women during war and then often kill them (Olujic, 1998). Similarly, reports of the systematic rapes of female cadets at the U.S. Air Force Academy suggest that the rapists' motives were to humiliate the women and get women to leave the Academy. Aggressive motives also occur in the rape of men by other men, usually by anal penetration (King & Woollett, 1997). This form of rape typically occurs in youth gangs, where the intention is to humiliate rival gang members, and in prison, where again the motive is to conquer and degrade the victim.
- *Sadism.* A minority of rapists are violent criminals who get pleasure out of inflicting pain on their victims and who often murder them in planned, grotesque ways (Turvey, 2008).

You can see that the answer to the question “Why do people have sex?” is not at all obvious. It is not a simple matter of “doing what's natural.” In addition to the intrinsic motives of intimacy, pleasure, procreation, and love, extrinsic motives include intimidation, dominance, insecurity, appeasing the partner, approval from peers, and the wish to prove oneself a real man or a desirable woman.

The Culture of Desire

Think about kissing. Westerners like to think about kissing, and to do it, too. But if you think kissing is natural, try to remember your first serious kiss and all you had to learn about noses, breathing, and the position of teeth and tongue. The sexual kiss is so complicated that some cultures have never gotten around to it. They think that kissing another person's mouth—the very place that food enters!—is disgusting (Tiefer, 2004). Others have elevated the sexual kiss to high art; why do you suppose one version is called French kissing?

As the kiss illustrates, having the physical equipment to perform a sexual act is not all there is

Kissing is a learned skill—one that some people start practicing earlier than others.



sexual scripts Sets of implicit rules that specify proper sexual behavior for a person in a given situation, varying with the person's gender, age, religion, social status, and peer group.

to sexual motivation. People have to learn what is supposed to turn them on (or off), which parts of the body and what activities are erotic (or repulsive), and even how to have pleasurable sexual relations. In some cultures, oral sex is regarded as a bizarre sexual deviation; in others, it is considered not only normal but also supremely desirable. In many cultures, men believe that women who have experienced sexual pleasure of any kind will become unfaithful, so sexual relations are limited to quick intercourse; in other cultures, men's satisfaction and pride depend on knowing the woman is sexually satisfied too. In some cultures, sex itself is seen as something joyful and beautiful, a skill to be cultivated as one might cultivate the skill of gourmet cooking. In others, it is considered ugly and dirty, something to be gotten through as rapidly as possible.

Sexual Scripts How do cultures transmit their rules and requirements about sex to their members? During childhood and adolescence, people learn their culture's *gender roles*, collections of rules that determine the proper attitudes and behavior for men and women (see Chapter 10). Like any actor in a play, a person following a gender role relies on a **sexual script** that provides instructions on how to behave in sexual situations (Gagnon & Simon, 1973; Laumann & Gagnon, 1995). If you are a teenage girl, are you supposed to be sexually adventurous and assertive or sexually modest and passive? What if you are a teenage boy? What if you are an older woman or man? The answers differ from culture to culture, as members act in accordance with the sexual scripts for their gender, age, religion, social status, and peer group.

In many parts of the world, boys acquire their attitudes about sex in a competitive atmosphere where the goal is to impress other males, and they talk and joke with their friends about masturbation and other sexual experiences. Although their traditional sexual scripts are encouraging them to value physical sex, traditional scripts are teaching girls to value relationships and make themselves attractive, putting their own sexual pleasures and preferences secondary to their partner's. Needless to say, modern scripts for both sexes are changing. What do you think are the sexual scripts that describe appropriate behavior for *your* gender, religion, ethnicity, sexual orientation, social class, and age? Do they differ from those of your friends, male and female?

The answer is important, because scripts can be powerful determinants of behavior. For example, because African-American women now account for more than half of reported AIDS cases among women in the United States, researchers have sought to understand how sexual scripts might be reducing their likelihood of practicing safe sex. In interviews with 14 black women ages 22 to 39, researchers found that the women's behavior was governed by scripts fostering these beliefs: *Men control relationships; women sustain relationships; male infidelity is normal; men control sexual activity; women want to use condoms, but men control condom use* (Bowleg, Lucas, & Tschann, 2004). As one woman summarized, "The ball was always in his court." These scripts, the researchers noted, are rooted in African-American history and the recurring scarcity of men available for long-term commitments. The scripts originated to preserve the stability of the family, but today they encourage some women to maintain sexual relationships at the expense of their own needs and safety.



These teenagers are following the sexual scripts for their gender and culture—the boys, by ogling and making sexual remarks about girls to impress their peers, and the girls, by preening and wearing makeup to look good for boys.

When gender roles change because of social and economic shifts in society, so do sexual scripts. Thus, whenever women have needed marriage to ensure their social and financial security, they have regarded sex as a bargaining chip, an asset to be rationed rather than an activity to be enjoyed for its own sake (Hatfield & Rapson, 1996/2005). A woman with no economic resources of her own cannot afford to casually seek sexual pleasure if that means risking an unwanted pregnancy, the security of marriage, her reputation in society, her physical safety, or, in some cultures, her very life. When women become self-supporting and able to control their own fertility, however, they are more likely to want sex for pleasure rather than as a means to another goal.

The Riddle of Sexual Orientation

Why is it that most people become heterosexual, some homosexual, and others bisexual? Many psychological explanations for homosexuality have been proposed over the years, but none of them has been supported. Homosexuality is not a result of having a smothering mother, an absent father, or emotional problems. It is not caused by seduction by an older adult (Rind, Tromovich, & Bauserman, 1998). It is not caused by parental practices or role models. Most gay men recall that they rejected the typical boy role and boys' toys and games from an early age, in spite of enormous pressures from their parents and peers to conform to the traditional male role (Bailey & Zucker, 1995). Conversely, the overwhelming majority of children of gay parents do not become gay, as a learning explanation would predict, although they are more likely than the children of straight parents to be open-minded about homosexuality and gender roles (Bailey et al., 1995; Patterson, 2006).

Many researchers, therefore, have turned to biological explanations of sexual orientation. One line of supporting evidence is that homosexual behavior—including courtship displays, sexual activity, and rearing of young by two males or two females—has been documented in some 450 species, including bottlenose dolphins, penguins, albatrosses, and primates (Bagemihl, 1999). Sexual orientation also seems to be moderately heritable, particularly in men (Bailey, Dunne, & Martin, 2000; Rahman & Wilson, 2003). But the large majority of gay men and lesbians do not have a close gay relative, and their siblings, including twins, are overwhelmingly likely to be heterosexual (Peplau et al., 2000).

Prenatal exposure to androgens might affect brain organization and partner preference (McFadden, 2008; Rahman & Wilson, 2003).

Female babies accidentally exposed in the womb to masculinizing hormones are more likely than other girls to become bisexual or lesbian and to prefer typical boys' toys and activities (Collaer & Hines, 1995). However, most androgenized girls do not become lesbians, and most lesbians were not exposed in the womb to atypical prenatal hormones (Peplau et al., 2000).

Other prenatal events might predispose a child toward a same-sex orientation. More than a dozen studies have found that the probability of a man's becoming gay rises significantly according to the number of older brothers he has—gay or not—when these brothers are born of the same mother. (The percentage of males who become exclusively homosexual is nonetheless very low.) A study of 944 homosexual and heterosexual men suggests that this “brother effect” has nothing to do with family environment, but rather with conditions within the womb before birth (Bogaert, 2006). The only factor that predicted sexual orientation was having older biological brothers; growing up with older stepbrothers or adoptive brothers (or sisters) had no



Nicole Bengiveno/The New York Times

The assumption that homosexuality is rare or “unnatural” is contradicted by the ample evidence of same-sex sexual activity in more than 450 nonhuman species. These young male penguins, Squawk and Milou, entwine their necks, kiss, call to each other, have sex, and firmly reject females. Another male pair in the same zoo, Silo and Roy, seemed so desperate to incubate an egg together that they put a rock in their nest and sat on it. Their human keeper was so touched that he gave them a fertile egg to hatch. Silo and Roy sat on it for the necessary 34 days until their chick, Tango, was born, and then they raised Tango beautifully. “They did a great job,” said the zookeeper.

influence at all. The increased chance of homosexuality occurred even when men had older brothers born to the same mother but raised in a different home. No one yet has any idea, however, what prenatal influence might account for these results.

Several other intriguing biological findings are also associated with sexual orientation. A team of Swedish scientists exposed people to two odors: a testosterone derivative found in men's sweat and an estrogen-like compound found in women's urine. It appears that when a hormone is from the sex you are *not* turned on by, the olfactory system registers it, but the hypothalamus, which regulates sexual arousal and response, does not. Thus, the brain activity of homosexual women in response to the odors was similar to that of heterosexual men, and the brain activity of gay men was similar to that of heterosexual women (Berglund, Lindström, & Savic, 2006; Savic, Berglund, & Lindström, 2005). But the researchers wisely noted that their study could not answer questions of cause and effect. "We can't say whether the differences are because of pre-existing differences in their brains, or if past sexual experiences have conditioned their brains to respond differently," said one.

The basic problem with trying to find a single origin of sexual orientation is that sexual identity and behavior take different forms, and they don't correlate strongly (Savin-Williams, 2006). Some people are heterosexual in behavior but have homosexual fantasies and even define themselves as gay or lesbian. Some men, such as prisoners, are homosexual in behavior because they lack opportunities for heterosexual sex, but they do not define themselves as gay and prefer women as sexual partners. In some cultures, teenage boys go through a homosexual phase that they do not define as homosexual and that does not affect their future relations

with women (Herdt, 1984). Similarly, in Lesotho, in South Africa, women have intimate relations with other women, including passionate kissing and oral sex, but they do not define these acts as sexual, as they do when a man is the partner (Kendall, 1999). Some gay men are feminine in interests and manner, but many are not; some lesbians are masculine in interests and manner, but most are not (Singh et al., 1999).

Moreover, although some lesbians have an exclusively same-sex orientation their whole lives, the majority have more fluid sexual orientations. A researcher interviewed 100 lesbian and bisexual women over a ten-year span, and found that only one-third reported consistent attraction only to other women; two-thirds also felt attracted to men. For many of these women, love was truly blind as far as gender was concerned; their sexual behavior depended on whether they loved the partner, not what sex he or she was (Diamond, 2008). Similarly, when men and women watch erotic films, men are more influenced than women are by the sex of the people having sex, whereas women are more influenced than men are by the context in which the sex occurs. Thus, most straight men are turned off by watching gay male couples coupling, most gay men are turned off by watching heterosexual couples, and most straight and lesbian women are turned on by watching anyone of either sex, as long as the context is erotic (Rupp & Wallen, 2008).

Biological factors cannot account for this diversity of sexual responses, cultural customs, or experience among gay men and lesbians. At present, therefore, we must tolerate uncertainty about the origins of sexual orientation. Perhaps the origins will turn out to differ, on average, for males and females, and also differ among individuals, whatever their primary orientation.

Phyllis Lyon and Del Martin (left) lived together for 56 years. In 2008, two months after they were finally legally allowed to marry, Del Martin died. Tom Howard (right) is shown with the three children he is raising with his partner. Howard left his job as a professor to be a stay-at-home dad. Why does the issue of legalizing gay and lesbian marriage evoke so much emotion and controversy?



Quick Quiz

Were you motivated to learn about sexual motivation?

1. Biological research finds that (a) homosexual behavior is found in hundreds of animal species, (b) male and female sexual responses are physiologically very different, (c) all women can have multiple orgasms, (d) women have a stronger sex drive than men do.
2. Research on the motives of rapists finds that rape is usually a result of (a) thwarted sexual desire, (b) hostility or a need for peer approval, (c) crossed signals, (d) female provocation.
3. Under what conditions are women most likely to use sex as a “bargaining chip”? (a) when they are employed and thus have their own money to bargain with, (b) when they don't know how to play poker, (c) when they are using birth control, (d) when they are financially dependent
4. *True or false*: Exclusively psychological theories of the origins of homosexuality have never been supported.

Answers:

1. a 2. b 3. d 4. true

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YOU are about to learn...

- the three kinds of goals most likely to improve the motivation to succeed.
- the important difference between mastery goals and performance goals.
- how the *desire* to achieve is affected by the *opportunity* to achieve.
- which aspects of a job are more important than money in increasing satisfaction with work.

The Competent Animal: Motives to Achieve

Almost every adult works. Students work at studying. Homemakers work, often more hours than salaried employees, at running a household. Artists, poets, and actors work, even if they are paid erratically (or not at all). Most people are motivated to work in order to meet the needs for food and shelter. Yet survival does not explain why some people want to do their work well and others want just to get it done. And it does not explain why some people work to make a living and then put their passion for achievement into unpaid activities, such as learning to become an accomplished trail rider or traveling to Madagascar to catch sight of a rare bird.

Psychologists, particularly those in the field of *industrial/organizational psychology*, have measured the psychological qualities that spur achievement and success and also the environmental conditions that influence productivity and satisfaction.

The Effects of Motivation on Work

In the early 1950s, David McClelland and his associates (1953) speculated that some people have an inner drive to achieve that motivates them as much as hunger motivates people to eat. To measure the strength of this motive, McClelland used a variation of the **Thematic Apperception Test (TAT)**, which requires the test taker to make up a story about a set of ambiguous pictures, such as a young man sitting at a desk. The strength of the achievement motive, said McClelland (1961), is captured in the fantasies the test taker reveals. High achievers tell stories of challenge and success; lower achievers tell stories of idyllic vacations at the beach. ✨ **Explore**

The TAT has modest empirical support for measuring achievement motivation, but it does not have strong test–retest reliability, meaning that people's responses are easily influenced by what is going on at that moment in their lives (Lilienfeld, Wood, & Garb, 2000). Some people might tell stories of

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“Finish it? Why would I want to finish it?”

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Thematic Apperception Test (TAT)

A projective test that asks respondents to interpret a series of drawings showing scenes of people; usually scored for unconscious motives, such as the need for achievement, power, or affiliation.

approach goals

Goals framed in terms of desired outcomes or experiences, such as learning to scuba dive.

avoidance goals

Goals framed in terms of avoiding unpleasant experiences, such as trying not to look foolish in public.

achieving against all odds, not because they are determined to do so themselves, but because they are idly daydreaming about dazzling the world on *American Idol*. But the method launched investigations into the question of why some people seem determined to make it no matter what, and others drift along.

The Importance of Goals Today the predominant approach to understanding achievement motivation emphasizes goals rather than inner drives: What you accomplish depends on the goals you set for yourself and the reasons you pursue them (Dweck & Grant, 2008). Not just any old goals will promote achievement, though. A goal is most likely to improve your motivation and performance when three conditions are met (Locke & Latham, 2002, 2006):

- *The goal is specific.* Defining a goal vaguely, such as “doing your best,” is as ineffective as having no goal at all. You need to be specific about what you

are going to do and when you are going to do it: “I will write four pages of this paper today.”

- *The goal is challenging but achievable.* You are apt to work hardest for tough but realistic goals. The highest, most difficult goals produce the highest levels of motivation and performance, unless, of course, you choose impossible goals that you can never attain.
- *The goal is framed in terms of getting what you want rather than avoiding what you do not want.* **Approach goals** are positive experiences that you seek directly, such as getting a better grade or learning to scuba dive. **Avoidance goals** involve the effort to avoid unpleasant experiences, such as trying not to make a fool of yourself at parties or trying to avoid being dependent.

All of the motives discussed in this chapter are affected by approach versus avoidance goals.

The Many Motives of Accomplishment

**IMMORTALITY**

William Faulkner
(1897–1962)
Novelist

“Really the writer doesn’t want success . . . He wants to leave a scratch on that wall [of oblivion]—Kilroy was here—that somebody a hundred or a thousand years later will see.”

**JUSTICE**

Martin Luther King, Jr.
(1929–1968)
Civil rights activist

“I have a dream . . . that my four little children will one day live in a nation where they will not be judged by the color of their skin but the content of their character.”

KNOWLEDGE

Helen Keller
(1880–1968)
Blind/deaf author and lecturer

“Knowledge is happiness, because to have knowledge—broad, deep knowledge—is to know true ends from false, and lofty things from low.”

**AUTONOMY**

Georgia O’Keeffe
(1887–1986)
Artist

“[I] found myself saying to myself—I can’t live where I want to, go where I want to, do what I want to . . . I decided I was a very stupid fool not to at least paint as I wanted to.”



People who frame their goals in specific, achievable approach terms (e.g., “I’m going to lose weight by jogging three times a week”) feel better about themselves, feel more competent, are more optimistic, and are less depressed than people who frame the same goals in avoidance terms (e.g., “I’m going to lose weight by cutting out rich foods”) (Coats, Janoff-Bulman, & Alpert, 1996; Updegraff, Gable, & Taylor, 2004). Similarly, people who have sex for approach motives—to enjoy their own physical pleasure, to promote a partner’s happiness, or to seek intimacy—tend to have happier and less conflicted relationships than those who have sex to *avoid* a partner’s loss of interest or quarrels with the partner (Impett & Tolman, 2006). Can you guess why approach goals produce better results than avoidance goals? Approach goals allow you to focus on what you can actively do to accomplish them and on the intrinsic pleasure of the activity.

Avoidance goals make you focus on what you have to give up.

In the case of work, defining your goals will move you along the road to success, but what happens when you hit a pothole? Some people give up when a goal becomes difficult or they are faced with a setback, whereas others become even more determined to succeed. The crucial difference between them is *why* they are working for that goal: to show off in front of others or learn the task for the satisfaction of it?

People who are motivated by **performance goals** are concerned primarily with being judged favorably and avoiding criticism. Those who are motivated by **mastery (learning) goals** are concerned with increasing their competence and skills and finding intrinsic pleasure in what they are learning (Grant & Dweck, 2003; Senko, Durik, & Harackiewicz, 2008). When people who are motivated by performance goals do

performance goals Goals framed in terms of performing well in front of others, being judged favorably, and avoiding criticism.

mastery (learning) goals Goals framed in terms of increasing one’s competence and skills.

DUTY

Eleanor Roosevelt
(1884–1962)
Humanitarian, lecturer, stateswoman

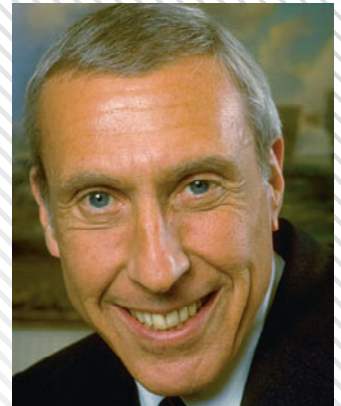
“As for accomplishments, I just did what I had to do as things came along.”



GREED

Ivan Boesky (b. 1937)
Financier, convicted of insider trading violations

“Greed is all right . . . I think greed is healthy. You can be greedy and still feel good about yourself.”



POWER

Henry Kissinger
(b. 1923)
Former Secretary of State

“Power is the ultimate aphrodisiac.”



EXCELLENCE

Florence Griffith Joyner
(1959–1998)
Olympic gold medalist

“When you’ve been second best for so long, you can either accept it, or try to become the best. I made the decision to try and be the best.”



Get Involved! (Re)framing Your Goals

As the text discusses, people sometimes frame their goals in vague, unrealistic, or negative ways. Think of two goals you would like to accomplish. You might consider goals related to studying more efficiently, improving communication with a family member, solving problems in a relationship, or becoming more physically fit. Now phrase each of your two goals in a way that makes it (1) specific, (2) challenging but achievable, and (3) something to be approached rather than avoided. How can framing your goals in this way improve your motivation to reach them?

poorly, they will often decide the fault is theirs and stop trying to improve. Because their goal is to demonstrate their abilities, they set themselves up for grief when they temporarily fail, as all of us must if we are to learn anything new. In contrast, people who are motivated to master new skills will generally regard failure and criticism as sources of useful information that will help them improve. They know that learning takes time.

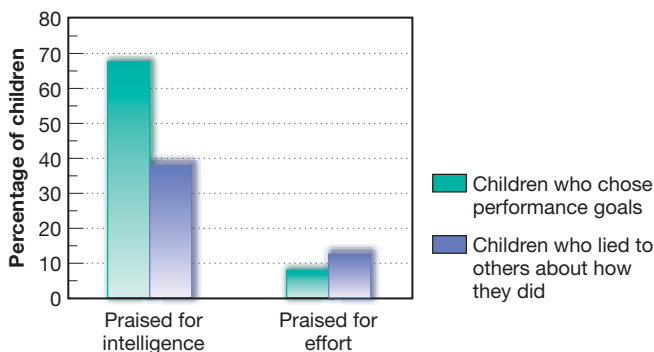


FIGURE 14.2
Mastery and Motivation

Children praised for “being smart” rather than for “working hard” tend to lose the pleasure of learning and focus on how well they are doing. Nearly 70 percent of fifth graders who were praised for intelligence (green bars) later chose performance goals rather than learning goals, compared to fewer than 10 percent of the children who were praised for their efforts (Mueller & Dweck, 1998). Notice also (purple bars) that the children praised for intelligence were much more likely to lie to others about how well they had done—since their goal was showing off, not learning.

Why do some children choose performance goals and others choose mastery goals? In a study of 128 fifth graders, the children worked independently on sets of puzzle problems (Mueller & Dweck, 1998). The experimenter scored their results, told them all they had done well, and gave them one of two additional types of feedback: She praised some of them for their ability (“You must be smart at these problems!”) and others for their effort (“You must have worked hard at these problems!”). The children then worked on a more difficult set of problems, but this time the experimenter told them they had done a lot worse. Finally, the children described which goals they preferred to work for: performance (e.g., doing “problems that aren’t too hard, so I don’t get many wrong”) or mastery (e.g., doing “problems that I’ll learn a lot from, even if I won’t look so smart”).

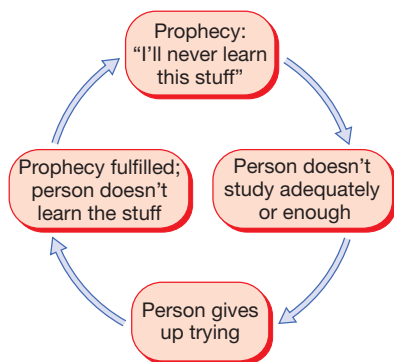
The children praised for being smart rather than for working hard tended to lose the pleasure of learning and focused instead on how well they were doing. After these children failed the second set of problems, they tended to give up on subsequent ones, enjoyed them less, and actually performed less well than children who had been praised for their efforts. As you can see in Figure 14.2, nearly 70 percent of fifth graders who were praised for their intelligence later chose performance goals rather than learning goals, compared to fewer than 10 percent of children who were praised for their efforts. When children realize that all effort is subject to improvement, however, they realize that they can always try again. That is the key to mastery. As one learning-oriented child said to the experimenters, “Mistakes are our friends” (Dweck & Sorich, 1999).

Mastery goals are powerful intrinsic motivators at all levels of education and throughout life. Students who are in college primarily to master new areas of knowledge choose more challenging projects, persist in the face of difficulty, use deeper and more elaborate study strategies, are less likely than other students to cheat, and enjoy learning more than do students who are there only to get a degree and a meal ticket (Elliot & McGregor, 2001; Grant & Dweck, 2003). As usual, though, we should avoid oversimplifying: World class

athletes, musicians, and others who strive to excel in their fields blend performance and mastery goals.

Expectations and Self-Efficacy How hard you work for something also depends on your expectations. If you are fairly certain of success, you will work harder to reach your goal than if you are fairly certain of failure.

A classic experiment showed how quickly experience affects these expectations. Young women were asked to solve 15 anagram puzzles. Before working on each one, they had to estimate their chances of solving it. Half of the women started off with very easy anagrams, but half began with insoluble ones. Sure enough, those who started with the easy ones increased their estimates of success on later ones. Those who began with the impossible ones decided they would all be impossible. These expectations, in turn, affected the young women's ability to actually solve the last 10 anagrams, which were the same for everyone. The higher the expectation of success, the more anagrams the women solved (Feather, 1966). Once acquired, therefore, expectations can create a **self-fulfilling prophecy** (Merton, 1948): Your expectations make you behave in ways that make the expectation come true. You expect to succeed, so you work hard—and succeed. Or you expect to fail, so you don't do much work—and do poorly.



Your expectations are further influenced by your level of confidence in yourself and your abilities (Dweck & Grant, 2008; Judge, 2009). No one is born with a feeling of confidence, or **self-efficacy**. You acquire it through experience in mastering new skills (by making mistakes!), overcoming obstacles, and learning from occasional failures. Self-efficacy also comes from having successful role models who teach you that your ambitions are possible and from having people around to give you constructive feedback and encouragement (Bandura, 2006).

People who have a strong sense of self-efficacy are quick to cope with problems rather than stewing and brooding about them. Studies in North Amer-

ica, Europe, and Russia find that self-efficacy has a positive effect on just about every aspect of people's lives: how well they do on a task, the grades they earn, how persistently they pursue their goals, the kind of career choices they make, their ability to solve complex problems, their motivation to work for political and social goals, their health habits, and even their chances of recovery from heart attack (Bandura et al., 2001; Maddux, 1995; Stajkovic & Luthans, 1998).

The Effects of Work on Motivation

Imagine that you live in a town that has one famous company, Boopsie's Biscuits & Buns. Everyone in the town is grateful for the 3B company and goes to work there with high hopes. Soon, however, an odd thing starts happening to many employees. They complain of fatigue and irritability. They are taking lots of sick leave. Productivity declines.

What's going on at Boopsie's Biscuits & Buns? Is everybody suffering from sheer laziness? Most observers would answer that something is wrong with those employees. But what if something is wrong with Boopsie's? Psychologists want to know how the work we do, and the conditions under which we do it, nurture or crush our motivation to succeed.

One simple but powerful external factor that affects many people's motivation to work in a particular field is the proportion of men and women in that occupation (Kanter, 2006). When occupations are segregated by gender, many people form gender stereotypes about the requirements of such careers: Female jobs require kindness and nurturance; male jobs require strength and smarts. These stereotypes, in turn, stifle many people's aspirations to enter a nontraditional career and also create self-fulfilling prejudices in employers (Agars, 2004; Cejka & Eagly, 1999).

Thus, when law, veterinary medicine, and bartending were almost entirely male professions, and nursing, teaching, and child care were almost entirely female, few women aspired to enter the "male" professions and few men aspired to enter the "female" ones. As job segregation began breaking down, however, people's career motivations changed. Today, it is common to see a female lawyer, vet, or bartender and a male nurse or preschool teacher. And although women are still a minority in engineering, math, and science, their numbers have been rising: In 1970, women earned only 0.6 percent of the doctorates in engineering,

Thinking Critically
about Work
Motivation



self-fulfilling prophecy

An expectation that comes true because of the tendency of the person holding it to act in ways that bring it about.

self-efficacy

A person's belief that he or she is capable of producing desired results, such as mastering new skills and reaching goals.

7.6 percent of those in mathematics, and 16.3 percent of those in biological sciences. Thirty years later, the percentages had jumped to 17.3 percent, 29 percent, and 44.3 percent, respectively (Cox & Alm, 2005). As these numbers have increased, the old view that women are not “naturally” suited to engineering, math, and science has been fading.

Working Conditions Once in a profession, though, what motivates people to do well or lose their motivation altogether? To begin with, achievement depends on having the *opportunity* to achieve. When someone does not do well at work, others are apt to say it is the individual’s own fault because he or she lacks the internal drive to make it. But what the person may really lack is a fair chance to make it, and this is especially true for those who have been subjected to systematic discrimination (Sabattini & Crosby, 2009). Once they have entered a career, people may become more motivated to advance up the ladder or less so, depending on how many rungs they are permitted to climb. Women used to be rare in politics, but it’s not news today that they are governors, senators, congresswomen, or presidential candidates.

Several other aspects of the work environment are likely to increase work motivation and satisfaction and reduce the chances of emotional burnout (Bond et al., 2004; Maslach et al., 2001; Rhoades & Eisenberger, 2002):

- The work feels meaningful and important to employees.
- Employees have control over many aspects of their work, such as setting their own hours and making decisions.
- Tasks are varied rather than repetitive.
- Employees have supportive relationships with their superiors and co-workers.
- Employees receive useful feedback about their work, so they know what they have accomplished and what they need to do to improve.
- The company offers opportunities for its employees to learn and advance.

Companies that foster these conditions tend to have more productive and satisfied employees. Workers tend to become more creative in their thinking and feel better about themselves and their work than they do if they feel stuck in routine jobs that give them no control or flexibility over their daily tasks.

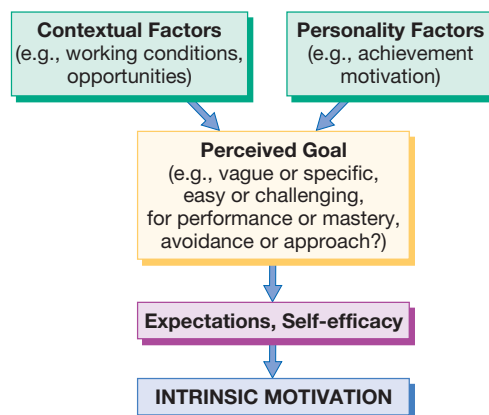
Conversely, when people are put in situations that frustrate their desire and ability to succeed, they become dissatisfied, their desire to succeed declines, and they may drop out. Although the



Like employees, students can have poor working conditions that affect their motivation. They may have to study in crowded quarters or may have siblings who interrupt and distract them.

rising number of women entering the sciences is heartening news, many are not staying. A study of nearly 2,500 women and men in science, engineering, and technology found that although women made up 41 percent of the entry-level jobs, more than half of them had left their specific jobs by age 35, and a fourth had abandoned science altogether. The women who lost their motivation to work in these fields reported feeling isolated (many said they were the only woman in their work group), and two-thirds said they had been sexually harassed (Hewlett, Luce, & Servon, 2008). Other reasons included being paid less than men for the same work and having working conditions that did not allow them to handle their family obligations. Mothers are still more likely than fathers to reduce their work hours, modify their work schedules, and report feeling distracted on the job because of child care concerns (Sabattini & Crosby, 2009).

As you can see, work motivation and satisfaction depend on the right fit between qualities of the individual and conditions of the work.



Quick Quiz

Work on your understanding of work motivation.

- Horatio wants to earn a black belt in karate. Which way(s) of thinking about this goal are most likely to help him reach it? (a) "I should do the best I can," (b) "I should be sure not to lose many matches," (c) "I will set specific goals that are tough but attainable," (d) "I will set specific goals that I know I can reach easily," (e) "I will strive to achieve key milestones on the way to my goal."
- Ramón and Ramona are learning to ski. Every time she falls, Ramona says, "This is the most humiliating experience I've ever had! Everyone is watching me behave like a clumsy dolt!" When Ramón falls, he says, "&*!!@\$@! I'll show these dratted skis who's boss!" Why is Ramona more likely than Ramón to give up? (a) She is a clumsy dolt, (b) she is less competent at skiing, (c) she is focused on learning, (d) she is focused on performance
- Which of these factors significantly increase work motivation? (a) specific goals, (b) regular pay, (c) feedback, (d) general goals, (e) being told what to do, (f) being able to make decisions, (g) the chance of promotion, (h) having routine, predictable work
- An employer is annoyed by the behavior of an employee and is thinking of firing her. Her work is competent, but she rarely arrives on time, doesn't seem as motivated as others to do well, and has begun to take an unusual number of sick days. The boss has decided she is lazy and unmotivated. What guidelines of critical thinking is the boss overlooking, and what information should the boss consider before taking this step?

Answers:

1. c, e 2. d 3. a, c, f, g 4. The boss is jumping to the conclusion that his employee has low work motivation. This may be true, but because her work is competent, the boss should consider other explanations and examine the evidence. Perhaps the work conditions are unsatisfactory: There may be few opportunities for promotion; she may have been getting no feedback that lets her know she is doing well or that could help her improve; perhaps the company does not provide child care, so she is arriving late because she has child care obligations. What other possible explanations come to mind?

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YOU are about to learn ...

- why people are poor at predicting what will make them happy or miserable.
- why money can't buy happiness—and what does.
- three basic kinds of motivational conflicts.

Motives, Values, and the Pursuit of Happiness

When you think about setting goals for yourself, here is a crucial psychological finding to keep in mind: People are really bad at predicting what will make them happy and what will make them miserable, and at estimating how long either of those feelings will last (Wilson & Gilbert, 2005).

For example, college students were asked how happy or unhappy they imagined they would feel after being randomly assigned to live in a dorm they thought was "desirable" or "undesirable" (Dunn, Wilson, & Gilbert, 2003). The students predicted that their dorm assignments would have a huge impact on their overall level of happiness and that

being assigned to an undesirable dorm would essentially wreck their satisfaction for the whole year. But one year later, everyone had nearly identical levels of happiness no matter where they were living, as you can see in Figure 14.3 on the next page.

Perhaps the undesirable dorms turned out to be unexpectedly pleasant, with cool people living in them? No. The students had focused on the wrong factors when imagining their future feelings of happiness in the houses; they had placed far more importance on what the house looked like and on its location than on its inhabitants. But it's people who make a place fun or unpleasant to live in, and all of the houses had likable people in them. Because the students could not foresee this, or how much they would like their new roommates, they miscalculated their future happiness.

These findings have been replicated in many different contexts: The good is rarely as good as we imagine it will be, and the bad is rarely as terrible. The reason is that people adjust quickly to happy changes—new relationships, a promotion, even winning the lottery—and fail to anticipate that they will manage bad experiences just as quickly. They will make sense of unexpected events, cope with

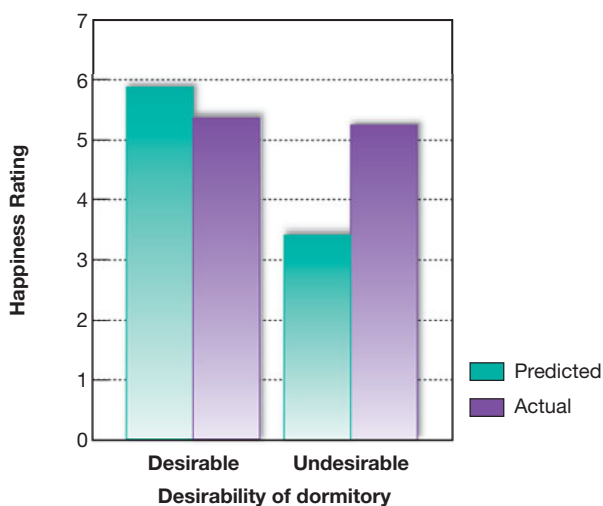


FIGURE 14.3
The Misprediction of Emotion

In a longitudinal study, college students about to be randomly assigned to a dorm had to predict how happy or unhappy they would feel about being assigned to a house they had ranked as “desirable” or “undesirable” (green bars). Most students thought that they would be much less happy in an “undesirable” dorm, but in fact, one year later, there was no difference between the two groups (purple bars) (Dunn, Wilson, & Gilbert, 2003).

tragedies, and make excuses for loved ones who hurt them. Yet people make many decisions based on how they imagine they will feel in the future. You might spend more money than you can afford on a car or sound system because you think that *this* is what will make you truly happy.

What, then, *does* make people happy? In all the domains of human motivation that we have examined, a key conclusion emerges: People who are motivated by the intrinsic satisfaction of an activity are happier and more satisfied than those motivated solely by extrinsic rewards (Deci & Ryan, 1985; Kasser & Ryan, 2001).

In American culture, many people are more motivated to make money than to find activities they enjoy. They imagine that greater wealth will bring greater happiness, yet once they are at a level that provides basic comfort and security, more isn’t necessarily better. They adjust quickly to the greater wealth and then think they need even more of it to be happier (Gilbert, 2006a). In addition, regardless of whether they live in America (an affluent nation) or Russia (a struggling nation), people who are primarily motivated to get rich have poorer psychological adjustment and lower well-being than do people whose primary values are self-acceptance, affiliation with others, or wanting

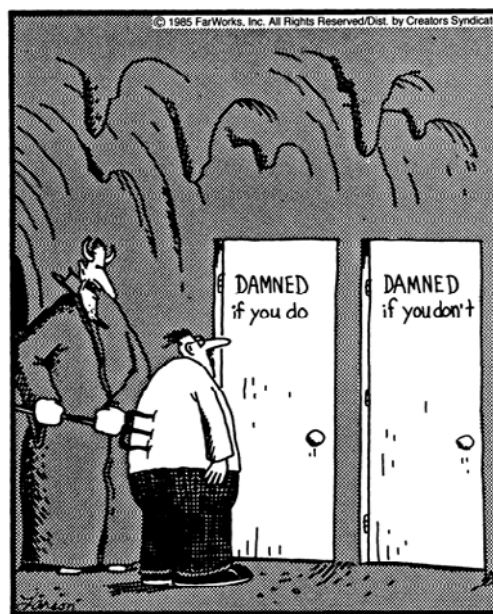
to make the world a better place (Ryan et al., 1999). This is especially true when the reasons for striving for money are, again, extrinsic (e.g., you do it to impress others and show off your possessions) rather than intrinsic (e.g., you do it so you can afford to do the volunteer work you love) (Carver & Baird, 1998; Srivastava, Locke, & Bartol, 2001). Having positive, intrinsically enjoyable *experiences* makes most people happier than having *things*: Doing, in other words, is more satisfying than buying (Headey, 2008; Van Boven & Gilovich, 2003). **Simulate**

Whichever values and goals you choose, if they are in conflict, the discrepancy can produce emotional stress and unhappiness. Two motives conflict when the satisfaction of one leads to the inability to act on the other—when, that is, you want to eat your cake and have it, too. There are three kinds of motivational conflicts (Lewin, 1948):

1 Approach–approach conflicts occur when you are equally attracted to two or more possible activities or goals: You would like to be a veterinarian *and* a rock singer; you would like to go out Tuesday night with friends *and* study like mad for an exam Wednesday.

2 Avoidance–avoidance conflicts require you to choose between the lesser of two evils because you dislike both alternatives. Novice parachute

THE FAR SIDE® By GARY LARSON



“C’mon, c’mon—it’s either one or the other.”

A classic avoidance–avoidance conflict.

Simulate with
Survey on
Happiness on
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jumpers, for example, must choose between the fear of jumping and the fear of losing face if they don't jump.

3 Approach–avoidance conflicts occur when a single activity or goal has both a positive and a negative aspect. In culturally diverse nations, differing cultural values produce many approach–avoidance conflicts, as students have told us. A Chicano student says he wants to become a lawyer, but his parents, valuing family closeness, worry that if he goes to graduate school, he will become independent and feel superior to his working-class family. A black student from a poor neighborhood, in college on scholarship, is torn between wanting to leave his background behind him forever and returning to help his home community. And a white student wants to be a marine biologist, but her friends tell her that only nerdy guys and dweebs go into science.

Conflicts like these are inevitable, part of the price and pleasure of living. But if conflicts remain unresolved, they can take an emotional toll. In students, high levels of conflict and ambivalence about goals and values are associated with anxiety, depression, headaches and other physical symptoms, and more visits to the health center (Emmons & King, 1988). Students who strive for goals that are consistent with the qualities they value are healthier and have a

greater sense of meaning and purpose in life than do those who are pursuing goals discrepant with their core values (Sheldon & Houser-Marko, 2001).

Years ago, humanist psychologist Abraham Maslow (1970) envisioned people's motives as forming a pyramid. At the bottom level were basic survival needs for food, sleep, and water; at the next level were security needs, for shelter and safety; at the third level were social needs, for belonging and affection; at the fourth level were esteem needs, for self-respect and the respect of others; and at the top, when all other needs had been met, were those for self-actualization and self-transcendence.

Maslow's theory became immensely popular, and motivational speakers still often refer to it, using colorful pictures of the pyramid. But the theory, which was based mostly on Maslow's observations of people he personally decided were self-actualized, has had little empirical support (Sheldon et al., 2001; Smither, 1998). The main reason, as we have seen in this chapter, is that people have *simultaneous* needs for comfort and safety and for love, intimacy, and competence. Higher needs may even supersede lower ones. History is full of examples of people who would rather die of torture or starvation than sacrifice their convictions, or who would rather explore, risk, or create new art than be safe and secure at home.

Quick Quiz

Do you wish to approach or avoid this quiz?

1. Max has applied for a junior year abroad, but couldn't get into his first choice, a drama school in London. He is feeling so miserable about the rejection that he is thinking of staying home. "Why should I go to a second-rate school somewhere else?" he reasons. What is the matter with his reasoning?
2. A Pakistani student says she desperately wants an education and a career as a pharmacist, but she also does not want to be disobedient to her parents, who have arranged a marriage for her back home. Which kind of conflict does she have?
3. Letitia just got her law degree. She wants to take a job in environmental law, but a corporate firm specializing in real estate contracts has offered her a job with an enormous salary. Why should she think carefully and critically in making a decision?

Answers:

1. Max assumes that how he feels now is how he will feel in the future. He can't imagine the more likely scenario, that he will find things to like about any program he enters. 2. approach–avoidance 3. She should think critically because taking a job primarily for its extrinsic benefits might suppress her intrinsic satisfaction in the work. Also, people who are motivated solely to acquire money often have poorer psychological adjustment and lower well-being than people who are motivated by work they enjoy. Of course, money provides material benefits, but psychological needs such as autonomy, competence, self-esteem, and connection to others are also important.

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Psychology in the News

REVISITED

Understanding the biological, psychological, and cultural influences on motivation can help us understand the stories that opened this chapter and others that make the news every day.

For critical thinkers, the news item about soda taxes raises many questions. Since the late 1970s, the cost of soda has fallen more than any other food or beverage group; the cost of fresh fruits and vegetables has risen the most. Carbonated sodas have no nutritional value at all but they are cheap, and the typical American consumes almost three times as many calories from these drinks today as in the 1970s. As we saw, that increase in consumption of sugary, high-calorie drinks has contributed to the worldwide rise in obesity, so a sales tax on those drinks may seem like a good idea. (Certainly it raises revenues for cash-strapped states.) But a tax of just a few cents per can or bottle may not reduce consumption much, if at all. A larger tax may be needed, comparable to the tax on cigarettes, which has been effective in reducing the number of smokers. Moreover, if the tax causes people to switch to untaxed diet sodas, sugar consumption could actually increase, because, as we noted, artificial sweeteners make people crave more sugar. Finally, this chapter showed that the increase in obesity has many causes, including sedentary lifestyles, a wide variety of available foods, an increase in inexpensive fast foods and processed foods, and large portion sizes.

The saga of Mzee and Owen tempts us to conclude that nonhuman animals share with us the capacity for love, or at least for passionate, devoted friendship. No doubt many animals have that capacity, as any dog lover can tell you! Certainly our species shares with many other animals the biological bases of bonding, such as the hormones oxytocin and vasopressin. But human love takes different forms, and whether it fades away or lasts for years depends on social, economic, and cognitive factors such as a couple's attitudes, values, and perception of their relationship as being fair or unfair. Thus, Mzee and Owen's touching friendship

illustrates that human attachments are both similar to and different from those of other animals.

The news item about the rape conviction of Anand Jon Alexander reflects some of the unpleasant motivations that some people bring to their sexual encounters. As we saw, the causes of rape and sexual assault have less to do with physical pleasure than with contempt for women, narcissism, insecurity, sadism, or a need to prove masculinity. In Alexander's case, prosecutors accused him of acting out sadistic fantasies during the assaults. Whatever his motivations might have been, convictions of successful men like Anand Jon Alexander, who could easily attract consensual partners, show that rape is not simply about sexual gratification or an evolutionary desire to reproduce.

Finally, and on a happier note, the story of Anamika Veeramani, the spelling bee champion, demonstrates the importance of having self-efficacy, setting challenging but achievable goals, and persisting in the pursuit of your dreams. Anamika may have been driven in part by performance goals, but we'll bet that she also found intrinsic pleasure in learning to spell as many difficult words as she could. Spelling bees are intensely competitive and are not for the faint of heart; they require young entrants to risk failure, and public failure at that. We're pretty confident that she will achieve her next dream, of becoming a cardiovascular surgeon.

Abraham Maslow may have been wrong about a universal hierarchy of motives, but perhaps each of us develops our own hierarchy as we grow from childhood to old age. For some people, the needs for love, security, or safety will dominate. For others, the need for achievement or power will rule. Some of us will wrestle with conflicting motives; for others, one consuming ambition will hold sway over all others. The motives and goals that inspire us, and the choices we make in their pursuit, are what give our lives passion, color, and meaning. Choose wisely.



Taking Psychology with You

How to Attain Your Goals

What are your values? What would you most like to achieve and accomplish in your life? Is the answer love, wealth, security, passion, freedom, fame, the desire to improve the world, being the best in a sport or other skill? Something else? What are your short-term goals: Would you like to improve your love life? Get better grades? Enjoy school more? Lose weight? Become a better tennis player?

There is a whole world of motivational speakers, books, and tapes that offer inspiration, enthusiasm, and a few magic steps to change your life, but we hope that by now you will apply critical thinking to their promises. Enthusiastic inspiration is fine as far as it goes, but it usually doesn't transfer into helping you make real-life changes. What does help? Think about some of the lessons of motivational research that you have learned in this chapter:

Seek activities that are intrinsically pleasurable. If you really, really want to study Swahili

or Italian, even though these languages are not in your pre-law requirements, try to find a way to do it. As the great writer Ray Bradbury said at age 89, the secret to living to a grand old age is to “do what you love and love what you do.” If you are not enjoying your major or your job, consider finding a career that would be more intrinsically pleasurable, or at least make sure you have other projects and activities that you do enjoy for their own sake.

Focus on learning goals, not only on performance goals. In general, you will be better able to cope with setbacks if your goal is to learn rather than to show others how good you are. Regard failure as a chance to learn rather than as a sign of incompetence.

Assess your working conditions. Everyone has working conditions. Whether you are a student, a self-employed writer, or a homemaker, if your motivation and well-being are starting to wilt, check out your environment. Are you getting support from others? Do you have opportunities

to develop ideas and vary your routine, or are you expected to do the same thing day after day? Are there barriers that might limit your advancement in your chosen field?

Take steps to resolve motivational conflicts. Are you torn between competing goals? For instance, are you unhappily stuck between the goal of achieving independence and a desire to be cared for by your parents? The reconciliation of conflicts like these is important for your well-being.

For almost everyone, psychological well-being depends on finding activities and choosing goals that are intrinsically satisfying and on developing the self-efficacy to achieve them. That is why it is important to think critically about the goals you have chosen for yourself: Are they what *you* want to do or what someone else wants you to do? Do they reflect your values? If you are unhappy with your body, your relationships, or your work, why? Think about it.

Summary

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- *Motivation* refers to a process within a person or animal that causes that organism to move toward a goal—to satisfy a biological need or achieve an ambition—or away from an unpleasant situation. A few primary drives are based on physiological needs, but all human motives are affected by psychological, social, and cultural factors. Motivation may be *intrinsic*, for the inherent pleasure of an activity, or *extrinsic*, for external rewards.

The Hungry Animal: Motives to Eat

- Overweight and obesity are not simply a result of failed willpower, emotional disturbance, or overeating. Hunger, weight, and eating are regulated by a set of bodily mechanisms, such as *basal metabolism rate* and number of fat cells, that keep people close to their genetically influenced *set point*. Genes influence body shape, distribution of fat, number of fat cells and amount of

brown fat, and whether the body will convert excess calories into fat. Genes may also account for certain types of obesity; the *ob* gene regulates *leptin*, which enables the hypothalamus to regulate appetite and metabolism.

- Genetics alone cannot explain why rates of overweight and obesity are rising all over the world among all social classes, ethnicities, and ages. The environmental reasons are (1) the increased abundance of inexpensive fast food and processed food, because humans have a genetic disposition to gain weight when rich food is plentiful; (2) the increased consumption of sugared high-calorie sodas; (3) the rise of sedentary life styles; (4) increased portion sizes; and (5) the availability of highly varied foods.

- When genetic predispositions clash with cultural standards, physical and mental problems can result. In cultures that foster overeating and regard overweight as a sign of attractiveness and health, obesity is acceptable. In cultures that foster unrealistically thin bodies,

eating disorders increase, especially *bulimia nervosa*, *binge-eating disorder*, and *anorexia nervosa*, and also unhealthy attitudes toward food and weight. Bulimia and anorexia are more common in women than in men, but rates of body image problems and eating disorders among men are increasing.

The Social Animal: Motives to Love

- All human beings have a need for attachment and love. Psychologists distinguish *passionate* (“romantic”) love from *companionate* love. Biologically oriented researchers believe that the neurological origins of passionate love begin in the baby’s attachment to the mother. Various brain chemicals and hormones, including *vasopressin* and *oxytocin*, are associated with bonding and trust; endorphins and dopamine create the rushes of pleasure and reward associated with romantic passion.
- Two strong predictors of whom people will love are *proximity* and *similarity*. Once in love, people form different kinds of attachments. *Attachment theory* views adult love relationships, like those of infants, as being secure, avoidant, or anxious. People’s attachment styles tend to be stable from childhood to adulthood and affect their close relationships.
- Men and women are equally likely to feel love and need attachment, but they differ, on average, in how they express feelings of love and how they define intimacy. A couple’s attitudes, values, and perception that the relationship is fair and balanced are better predictors of long-term love than are genes or hormones. As women have entered the workforce in large numbers and pragmatic (extrinsic) reasons for marriage have faded, the two sexes have become more alike in endorsing intrinsic motives such as love and affection as a requirement for marriage.

The Erotic Animal: Motives for Sex

- Human sexuality is not simply a matter of “doing what comes naturally,” because what is “natural” for one person or culture may not be so natural for others. The Kinsey surveys of male and female sexuality and the laboratory research of Masters and Johnson showed that physiologically, there is no right kind of orgasm for women to have, and that both sexes are capable of sexual arousal and response. However, there is enormous individual variation in sexual excitement, response, and inhibition.
- The hormone testosterone promotes sexual desire in both sexes, although hormones do not cause sexual behavior in a simple, direct way.
- Some researchers believe that men have a stronger sex drive than women do, because men have higher rates of almost every kind of sexual behavior. Others

believe that gender differences in sexual motivation and behavior are a result of differences in roles, cultural norms, and opportunity. A compromise view is that male sexuality is more biologically influenced than is women’s, whereas female sexuality is more governed by circumstances, relationships, and cultural norms.

- Evolutionary psychologists argue that males and females have evolved different sexual and courtship strategies in response to survival problems faced in the distant past. In this view, it has been adaptive for males to be promiscuous, to be attracted to young partners, and to want sexual novelty, and for females to be monogamous, to be choosy about partners, and to prefer security to novelty.
- Critics argue that evolutionary explanations of infidelity and monogamy are based on simplistic stereotypes of gender differences; that the remarkable variation in human sexual customs across and within cultures argues against a universal, genetically determined sexual strategy; and that evolutionary argument rely too heavily on answers to questionnaires, which often do not reflect real-life choices. Our ancestors probably did not have a wide range of partners to choose from; what may have evolved is mate selection based on similarity and proximity.
- Men and women have sex to satisfy many different psychological motives, including pleasure, intimacy, security, the partner’s approval, peer approval, or to attain a specific goal. Extrinsic motives for sex, such as the need for approval, are associated with riskier sexual behavior than intrinsic motives are. Both sexes may agree to intercourse for nonsexual motives, including revenge, perks, power, to prove oneself, or to preserve the relationship. People’s motives for consenting to unwanted sex vary, depending on their feelings of security and commitment in the relationship.
- What many women regard as rape or coercion is not always seen as such by men. Men who rape do so for diverse reasons, including narcissism and hostility toward women; a desire to dominate, humiliate, or punish the victim; and sometimes sadism.
- Cultures differ widely in determining which parts of the body people learn are erotic, which sexual acts are considered erotic or repulsive, and whether sex itself is good or bad. Cultures transmit these ideas through *gender roles* and *sexual scripts*, which specify appropriate behavior during courtship and sex, depending on a person’s gender, age, ethnicity, religion, social class, and sexual orientation.
- As in the case of love, gender differences and similarities in sexuality are strongly affected by cultural and economic factors. When gender roles have become more alike, so does the sexual behavior of men and women, with more women wanting sex for pleasure rather than as a bargaining chip.

- Traditional psychological explanations for homosexuality have not been supported. Genetic and hormonal factors seem to be involved, although the evidence is stronger for gay men than for lesbians. The more older biological brothers a man has, the greater his likelihood of becoming homosexual, suggesting that prenatal events might be involved. In spite of the evidence of a biological contribution to sexual orientation, there is great variation in the expression of homosexuality around the world. Women's sexual orientation seems more fluid than men's.

The Competent Animal: Motives to Achieve

- The study of achievement motivation began with research using the *Thematic Apperception Test (TAT)*. The TAT has empirical problems, but it launched the study of the factors that motivate achievement.
- People achieve more when they have specific, focused goals; when they set high but achievable goals for themselves; and when they have *approach goals* (seeking a positive outcome) rather than *avoidance goals* (avoiding an unpleasant outcome). The motivation to achieve also depends on whether people set *mastery (learning) goals*, in which the focus is on learning the task well, or *performance goals*, in which the focus is on performing well for others. Mastery goals lead to persistence in the face of failures and setbacks; performance goals often lead to giving up after failure. People's expectations can create *self-fulfilling prophecies* of success or failure. These expectations stem from one's level of *self-efficacy*.
- Work motivation also depends on conditions of the job itself. One factor that strongly influences men's and women's choices of work is the gender ratio of people in an occupation. When jobs are highly gender segregated, people often stereotype the abilities of the women and men working in those fields. Working conditions that promote motivation and satisfaction are those that provide workers with a sense of meaningfulness,

control, variation in tasks, supportive relationships, feedback, and opportunities for advancement. Jobs that lack these conditions, or that fail to allow employees to balance the demands of their families with those of work, are more likely to have high dropout rates.

Motives, Values, and the Pursuit of Happiness

- People are not good at predicting what will make them happy and what will make them miserable, and at estimating how long those feelings will last, so they often choose goals that do not bring them long-term satisfaction. Well-being increases when people enjoy the intrinsic satisfaction of an activity. Having intrinsically enjoyable experiences makes most people happier than having riches and possessions.
- In an *approach–approach conflict*, a person is equally attracted to two goals. In an *avoidance–avoidance conflict*, a person is equally repelled by two goals. An *approach–avoidance conflict* is the most difficult to resolve because the person is both attracted to and repelled by the same goal. Prolonged conflict can lead to physical symptoms and reduced well-being.
- Abraham Maslow believed that human motives could be ranked in a pyramid, from basic biological needs for survival to higher psychological needs for self-actualization. This popular theory has not been supported empirically. Rather, psychological well-being depends on finding activities and choosing goals that are intrinsically satisfying and on developing the self-efficacy to achieve them.

Taking Psychology with You

- Motivational research suggests that people are happiest and most fulfilled when they seek intrinsically pleasurable activities, focus on learning, improve their working conditions, resolve conflicts, and choose the goals that reflect their most important values.

Key Terms

motivation 467

drives 467

intrinsic motivation 467

extrinsic motivation 467

set point 468

basal metabolism rate 468

leptin 469

ob gene 469

bulimia nervosa 472

anorexia nervosa 472

binge-eating disorder 472

passionate and companionate love 474

vasopressin 475

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approach and avoidance goals 490

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self-fulfilling prophecy 493

self-efficacy 493

approach and avoidance conflicts 496

Motivation refers to an inferred process within a person or animal that causes that organism to move toward a goal or away from an unpleasant situation.

- **Intrinsic motivation** is for the inherent pleasure of an activity.
- **Extrinsic motivation** is for external reward, such as money or fame.

The Hungry Animal: Motives to Eat

The Biology of Weight

Hunger, weight, and eating are governed by a genetically influenced **set point**, which regulates food intake, fat reserves, and basal metabolism rate. Genes also influence:

- Body shape
 - Extent of weight gain
 - Percentage and distribution of body fat
 - Certain types of obesity
- The obese (ob) gene causes fat cells to secrete *leptin*, which helps the hypothalamus to regulate appetite.
- Other genes and chemicals are involved in appetite, metabolism, and weight gain.

Environmental Influences on Weight

The primary environmental causes of the worldwide epidemic of overweight and obesity are:

- Prevalence of fast food, processed food, and high-calorie soft drinks
- Decline in exercise and expenditures of energy
- Larger portions of food and drink
- Abundance of highly varied foods

Cultural Influences on Weight

- Eating habits are influenced by cultural standards of the ideal body—e.g., fat, thin, soft, muscular.
- These standards vary across cultures and may change within a culture (e.g., as gender roles change).
- When people believe that their bodies do not match the cultural ideal, eating disorders such as **bulimia** and **anorexia nervosa** may increase.
- Eating disorders are more common in women than in men, although body image disorders among men are increasing.

The Erotic Animal: Motives for Sex

The Biology of Desire

- Testosterone influences sexual desire in both sexes but does not “cause” sexual behavior.
- The Kinsey surveys of male and female sexuality and the lab research of Masters and Johnson showed that:
 - There is much individual variability in sexual physiology.
 - Both sexes are capable of sexual arousal and response.
- Sex and the “sex drive”:
- On average, men have a higher frequency of many sexual behaviors than women do.
- Some researchers believe the reason for this difference is that men have a stronger sex drive.
- Others believe the difference is a result of differences in roles and cultural norms.

The Riddle of Sexual Orientation

- Homosexuality is not a result of psychological factors or of having gay parents.
- Same-sex behavior has been documented in more than 450 species.
- There is some evidence for prenatal and genetic contributions to homosexuality, but to date biological explanations cannot account for the sexual orientation of most gay men and lesbians.

Evolution and Sex

Evolutionary psychologists argue that men and women have evolved different sexual strategies and behavior in response to survival problems faced in the distant past.

In this view, it has been adaptive for males to:

- Be promiscuous
 - Be attracted to young partners
 - Want sexual novelty
- Also in this view, females have evolved to:

- Be monogamous
- Be choosy about partners
- Prefer security to novelty

Critics counter that:

- The assumption that males are promiscuous and females are choosy is a stereotype; in many species, males care for their young and females have multiple partners.
- Human sexual behavior is too varied to favor a single evolutionary explanation.
- Human sexual behavior changes with cultural changes.
- What people say is their ideal partner is not necessarily whom they choose.

The Culture of Desire

- Cultures differ in determining:
- Which body parts are considered erotic
 - Which sexual acts are considered erotic
 - Whether sex itself is good or bad
- Cultures transmit sexual norms through:
- Gender roles
 - Sexual scripts

The Psychology of Desire

Psychological approaches to sexual motivation emphasize the influences of values, beliefs, expectations, and fantasies. The many motives for having sex include:

- Pleasure
- Intimacy
- Insecurity
- Partner approval
- Peer approval
- Attaining a goal

Extrinsic motives for sex (e.g., for peer approval or fear of losing the relationship) are associated with risky sexual behavior and consenting to unwanted sex.

Sexual Coercion and Rape

Women and men differ in their views of rape and sexual coercion. Motives for rape include:

- Narcissism
- Hostility
- Desire to dominate, humiliate, or punish the victim
- Sadism

The Social Animal: Motives to Love

The Biology of Love

Biological origins of passionate love may begin in infancy, when the mother–infant bond releases neurotransmitters and hormones involved in pleasure and reward:

- Vasopressin and oxytocin
- Endorphins

The Psychology of Love

The two major predictors of whom people will love are:

- Proximity: The people nearest are most likely dearest
- Similarity: Like attracts like

Attachment Theory of Love

Attachment theory views adults' love relationships, like those of infants, as:

- Secure
- Avoidant
- Anxious-ambivalent

Gender, Culture, and Love

- In Western societies, the sexes do not differ in their feelings of love but in how they express those feelings:
 - Women often express love in words.
 - Men often express love in actions.
- Gender differences in love reflect economic and social forces, such as whether a person can afford to marry for love.

The Competent Animal: Motives to Achieve

The Effects of Motivation on Work

The need for achievement was first studied using the **Thematic Apperception Test (TAT)**.

Expectations and Self-Efficacy

- Expectations of success or failure can create a **self-fulfilling prophecy**.
- Expectations of success stem in part from feelings of **self-efficacy**.

The Importance of Goals

People achieve more and feel better about themselves when goals are:

- Specific rather than vaguely defined
- Challenging but achievable
- Framed as **approach goals** rather than as **avoidance goals**

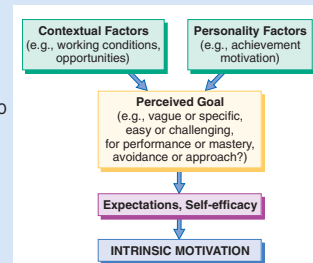
Most people develop higher intrinsic pleasure in learning when they are motivated by:

- **Mastery (learning) goals**, learning the task well, rather than by **performance goals**, showing off for others.
- Top performers, however, such as world-class athletes and musicians, are motivated by both kinds of goals.

The Effects of Work on Motivation

Working conditions increase employees' satisfaction and motivation, especially when employees:

- Feel their work is meaningful
- Have control over many aspects of their work
- Have varied tasks
- Have supportive relationships
- Get useful feedback
- Have opportunities to learn and advance



Motives, Values, and the Pursuit of Happiness

Motivational Conflicts

- **Approach-approach conflict:** A person is equally attracted to two goals.
- **Avoidance-avoidance conflict:** A person is equally repelled by two goals.
- **Approach-avoidance conflict:** A person is both attracted to, and repelled by, the same goal.

Psychological Needs

- In setting goals, most people are not very good at predicting what will make them happy or miserable.
- People who are motivated by the intrinsic satisfaction of an activity are happier and more satisfied than those motivated solely by extrinsic rewards.
- Abraham Maslow believed that human motives could be ranked in a hierarchy of needs, from basic safety to personal transcendence, but this theory has had little empirical support.