PERSONALITY PSYCHOLOGY

A Student-Centered Approach

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Needs, Motives, and Goals

❖ *What do I want? Why does it matter?*

Do you ever eat when you're not hungry? Have you shopped for things you don't need (or even want)? Ever wasted time watching a brain-numbing TV show? If you answered yes to any of those questions, why did you do those things?

The question of *why* we want what we want is a question of motivation. Our motives have been called the "springs of action"—they move us to get something or avoid something. Human motivation is a complex subject. Not only do we have many different motives—biological, social, uniquely personal—that change over the life course, our motives also differ in their accessibility to awareness. Sometimes we know clearly what we want and why we want it. At other times, the actual motives for our behavior are hazy, indistinct, or simply unknown.

Unconscious motivation underlying a particular action may be inferred whenever an individual *sincerely* responds "I don't know" when asked *why* he or she engaged in that behavior.[1] Unconscious motivation, as noted in Chapter 1, is a key distinguishing feature of the psychodynamic orientation, represented in this chapter by the views of Alfred Adler.[2] The path to full awareness of the motives behind our actions begins by realizing that we are not always as aware of them as we could be.

Alfred Adler's Fundamental Human Motive

The psychic life of man is determined by his goal.

—Alfred Adler (1927/1957, p. 29)

Adler's changing views of *the basic* human motive that moves all of us to action were heavily influenced by his own dramatic childhood experiences. The death of his younger brother in the next bed when Adler was only 3, multiple serious childhood accidents, nearly dying of pneumonia when he was 5, and growing up as a weak and sickly child—all of these led to his early decision to become a physician. This future goal, Adler later recounted, meant that "I had set a goal from which I could expect an end to my childhood distress, my fear of death" (Ansbacher & Ansbacher, 1956, p. 199). To Adler, then, goals are therapeutic because "by means of this concrete aim or goal, the individual can think and feel himself superior to the difficulties of the present because he has in mind his success of the future" (1929, p. 2).

During childhood, Adler was painfully aware of his feelings of inferiority in comparison with his athletic older brother. From this distressing personal experience, Adler formulated a general law of development: All children, healthy or not, feel inferior in comparison with their bigger and more powerful parents. The painful feeling of inferiority (the inferiority complex) is compensated for by the child, whose desire for recognition and superiority "determines the goal of an individual's existence" (1927/1957, p. 67). Thus Adler holds that the motive to be superior to others is simply a way of dealing with the more basic and more threatening inferiority complex.

"Striving for superiority" is Adler's expression for what Abraham Maslow later called "self-actualization." In a healthy person, striving for superiority means the individual is motivated by the goals of self-realization and self-perfection. But for anyone in the grip of a neurosis, striving for superiority is distorted into a drive to be superior

to other people and have power over them. Adler coined the term *masculine protest* to describe the power-oriented behaviors by men and women in reaction to their feelings of inferiority.

In sum, Adler (1929) strongly emphasized the significance of the goal-directed aspect of our personalities, which he referred to as "the mysterious creative power of life … that power which expresses itself in the desire to develop, to strive, and to achieve" (p. 2). His emphasis on the importance of the motive to create ourselves has also been stressed by theorists from the humanistic/existential/narrative orientation, such as Abraham Maslow and Carl Rogers.

Three Humanistic Approaches to Motivation

Abraham Maslow's Hierarchy of Needs

In the ideal instance, inner requiredness coincides with external requiredness, "I want to" with "I must."

—Abraham Maslow (1971, p. 302)

Abraham Maslow, as we saw in Chapter 1, distinguishes between *deficiency motivation* and *growth motivation* (Maslow, 1968). In general, deficiency motivation refers to those basic human needs whose chronic nonfulfillment lead to illness. Maslow's (1970) deficiency needs are

- *Physiological needs* (food, water, oxygen)
- *Safety* (shelter, security, protection, freedom from fear)
- *Belongingness and love* (companionship, affiliation, intimacy)
- *Self-esteem* and *esteem from others* (recognition, appreciation, status)

Needs that are continually unfulfilled can lead to various illnesses and difficulties. Continued lack of food or water can result in death. Continual threats to safety can

Photo 6.1   Abraham Maslow (1908–1970).

One of the founding fathers of Humanistic Psychology, Maslow distinguished growth needs from deficiency needs. He presented the image of needs arranged in a pyramid, with our physiological needs at its base and self-actualization at the pinnacle.

Key publications:

Motivation and Personality (1954)
Toward a Psychology of Being (1968)
The Farther Reaches of Human Nature (1971)

result in generalized anxiety and neurosis. The thwarting of the needs for love and belongingness is commonly found at the core of severe pathology (Maslow, 1970). And the absence of esteem may result in deep-seated feelings of inferiority. For these reasons, Maslow considers basic needs to be motivated primarily by their absence or deficiency.

Growth motivation, also called the *need for self-actualization*, refers to a person's desire to do those activities that he or she is individually fitted for: "What a man can be, he *must* be. He must be true to his own nature" (Maslow, 1970, p. 46, italics in original). Self-actualization means that the individual desires self-fulfillment in ways that are unique to him or her. For one person, self-actualization may take the form of being the best father he can be to his children; to another person, self-actualization means providing the best possible service to those who are sick; to a third person it means creating the best product she can, whether it is in art, architecture, or animation. Maslow (1970) notes that individual differences are at their maximum when it comes to the specific ways we express our need for self-actualization.

Behaviors Leading to Self-Actualization

There are some commonalities across the idiosyncratic expressions of self-actualization. Maslow (1971) lists eight characteristics:

1. Doing the chosen task with total absorption and full concentration. This complete attention to the task at hand blocks out all self-conscious thoughts.

2. Choosing to grow, daily, rather than playing it safe. "*Self-actualization is an on-going process*" (p. 45, italics in original).

3. Paying respectful attention to our inner selves to determine whether or not we really like something rather than responding automatically in terms of how we think we should respond.

4. Being honest rather than not.

5. If the previous four steps are taken on a daily basis, the individual will come to know what his or her mission in life is.

6. "Self-actualization means working to do well the thing one wants to do" (p. 48).

7. Recognizing peak experiences—transient moments of ecstasy that accompany activities performed under growth motivation.

8. Being willing to become aware of one's characteristic defense mechanisms and having the courage to give them up.

Personality Characteristics of Self-Actualizing People

Maslow (1970), on the basis of sampling his personal friends and acquaintances, his biographical knowledge of historical figures, and sampling the healthiest 1% of college students, determined the 15 major personality characteristics of self-actualizing people. These are the following:

1. More efficient perception of reality: They are better able to spot phonies and judge people correctly.

2. Acceptance of self, others, and nature: Because they see reality for what it is rather than wishing it were different, they possess a deep-seated acceptance of who they (and others) are. They are not free of feelings of guilt and anxiety, but these feelings are confined to their *improvable* shortcomings.

3. Spontaneity, simplicity, naturalness: They are free to adopt or to ignore the social conventions of everyday living when they express themselves.

4. Problem centered: They have a mission in life, devoting themselves to an important human problem outside of narrow self-interest.

5. Need for privacy: They like privacy and solitude to a greater extent than most people.

6. Self-sufficiency and autonomy: They are not dependent on other people or their culture for their main sources of satisfaction in life.

7. Continued freshness of appreciation: They have the capacity to reexperience as new and beautiful what to others are just the ordinary events of everyday life (a sunset, a human baby, music).

8. Capacity for peak experiences: Some self-actualizers commonly experience those feelings of wonder, awe, and ecstasy that have been called *mystical experiences* by William James (1961). Other self-actualizers rarely or never have such experiences.

9. Deep feeling of identification for mankind: They exhibit what Adler (1939) called "social interest," a genuine desire to help other people.

10. Interpersonal relations: They tend to have deep relationships with a small number of close friends, who are likely to be self-actualizers themselves.

11. Democratic character structure: They are friendly with people from all walks of life and backgrounds.

12. Transforming means into ends: They have the capacity to distinguish the end or aim of some activity from the means to that end, yet they often treat the means as if it were an end in itself. They enjoy the journey on the way to their destination.

13. Philosophical, nonhostile sense of humor: They do not enjoy jokes made at the expense of others. Their sense of humor is responsive to "the human condition" that applies to all of us: They prefer to *laugh with*, not *laugh at*.

14. Creativeness: They all demonstrate an originality akin to that seen in healthy children.

15. Resistance to enculturation: They maintain a certain detachment from the norms and mores of their culture. They are "ruled by the laws of their own character rather than by the rules of society" (Maslow, 1970, p. 174).

Measures of Self-Actualization

These 15 characteristics reported by Maslow make it seem desirable to be a self-actualizer. It is pleasing to believe Maslow has correctly unearthed the distinguishing characteristics of the most evolved members of our species. Yet his own methodology prevents other investigators from independently confirming or disconfirming his findings. For example, we cannot be sure how Maslow decided some historical figures were self-actualized and others were not; we wonder at the inclusion of some of his

historical personages as self-actualizers who are known to have suffered from mental depression or other psychological disorders (e.g., Abraham Lincoln, Ludwig van Beethoven); we don't know how various personality tests of his college students were scored to determine which students were self-actualized; and, finally, we don't know to what extent Maslow simply and unconsciously selected people he admired—people who reflected his own value system—and labeled them "self-actualizers."

To surmount these difficulties, two measures of self-actualization have been developed. The first is called the Personal Orientation Inventory or POI (Shostrom, 1963). The POI is a self-report test consisting of 150 pairs of forced-choice items. The person taking the POI is asked to select the one item in each of the pairs that best reflects himself or herself.

The POI provides scores on two major scales—time competence and inner direction (autonomy)—and ten subscales. High self-actualizers are time-competent people who live fully in the present. They meaningfully relate their past and expected future to their current lives. They do not dwell on what happened to them in the past nor do they avoid the present by fantasizing what joys or difficulties will befall them in the future. They use their past experiences to help them make effective choices in the present. Time incompetence, in sharp contrast, characterizes those who are not self-actualized. It is manifested by living "primarily in the past, with guilts, regrets, and resentments, and/or in the future, with idealized goals, plans, expectations, predictions, and fears" (Shostrom, 1974, p. 4). Time-incompetent people tend to split their past and possible futures from their present. They find it difficult to integrate their past, present, and future selves into a coherent whole.

On the inner-directed dimension, high self-actualizers demonstrate autonomy in their decisions. At the same time, they are not insensitive or unaware of the social demands associated with living as part of a group. Yet, on balance, high self-actualizers tend to be more self-directed than other-directed.

Research indicates the POI has reasonable reliability and validity. Individuals who are high self-actualizers tend to score low on measures of neuroticism or emotional instability. High self-actualizers also tend to be highly creative (Damm, 1969; Knapp, 1965).

As an alternative to the 150-item POI scale, Jones and Crandall (1986) developed a brief measure of self-actualization. Respondents are asked to rate each of 15 statements on a 4-point scale, where 4 = *agree*, 3 = *somewhat agree*, 2 = *somewhat disagree*, and 1 = *disagree* (except for those items that are reverse-keyed in which 1 = *agree*, etc.). Jones and Crandall administered both their 15-item scale and the POI to over 500 college students. They found that the overall self-actualization scores on both tests correlated positively. Moreover, scores on their short scale were found to correlate positively with self-esteem and negatively with neuroticism. Table 6.1 presents the 15 items of this measure of self-actualization. Items followed by (R) have been reverse-keyed: disagreement indicates greater self-actualization.

Self-actualization correlates positively with the importance of self-acceptance and negatively with the importance of financial success. The greater the importance of self-acceptance, affiliation with others, and community feeling (making the world a better

❖ **Table 6.1**   A Brief Measure of Self-Actualization

1. I do not feel ashamed of any of my emotions.
2. I feel I must do what others expect of me. (R)
3. I believe that people are essentially good and can be trusted.
4. I feel free to be angry to those I love.
5. It is always necessary that others approve of what I do. (R)
6. I don't accept my own weaknesses. (R)
7. I can like people without having to approve of them.
8. I fear failure. (R)
9. I avoid attempts to analyze and simplify complex domains. (R)
10. It is better to be yourself than to be popular.
11. I have no mission in life to which I feel especially dedicated. (R)
12. I can express my feelings even when they result in undesirable consequences.
13. I do not feel responsibility to help anybody. (R)
14. I am bothered by fears of being inadequate. (R)
15. I am loved because I give love.

Source: Adapted from Jones and Crandall (1986, p. 67). Reprinted with permission.

place to live), the greater is a person's psychological well-being and self-actualization (Kasser & Ryan, 1993).

The greater the importance college students attached to financial success as their main goal in life, the less self-actualized they were. Subjects motivated primarily by financial success were found to be less self-actualized, showed less vitality in living, were more depressed, and experienced greater anxiety. Additionally, individuals who placed a high priority on materialistic values incurred more debt, had lower-quality interpersonal relationships, and reported decreased personal and physical well-being. Finally, people valuing financial goals over other goals were affected more by extrinsic rewards in the situation than by intrinsic ones within themselves. Thus it appears that the greater the motive for financial success (over all other possible motives), the less the person may be described as *fully functioning,* the term used by Carl Rogers to indicate self-actualizing individuals (Kasser, 2016; Kasser & Ryan, 1993).

Carl Rogers' Actualizing Tendency

The person who is psychologically free moves in the direction of becoming a more fully functioning person.

—Carl Rogers (1961, p. 191)

Carl Rogers (1961) thought of self-actualization as the "mainspring of life" (p. 35). He believed that there is only one basic human motive, a motive he called "the actualizing tendency." Rogers defines the self-actualization motive as "the urge … to expand, extend, become autonomous, develop, mature—the tendency to express and activate all the capacities of the organism" (1961, p. 35). A person in the *process* of

self-actualizing himself or herself is a person who is fully functioning. Rogers (1961) describes the personality characteristics of the fully functioning person as follows:

1. *An increasing openness to experience.* This is the *opposite* of defensiveness. As we saw in the last chapter, in Rogers' view, defensiveness is the person's response to threatening experiences. Fully functioning people are willing and able to experience all of themselves, nondefensively. They are open to *all* of their feelings, their fears and pain as well as their courage and tenderness.

2. *An increasing tendency to live fully in each moment.* Fully functioning people are responsive and adaptable to the changes occurring in themselves and in other people. By living fully in the present, fully functioning persons do not attempt to rigidly impose their preexisting views of what should be on their own experience. Rather, they allow their experiences to be whatever they are.

3. *An increasing trust in oneself.* Instead of relying on fixed rules and past decisions, fully functioning individuals learn to trust what feels right to them in every situation. Because a fully functioning person is open to experience, any error of judgment can be quickly corrected.

The effect of becoming a fully functioning person is to live an enriched life filled with meaning, challenge, and excitement. It involves stretching and growing one's potentialities. Fully functioning individuals are not primarily motivated by such external inducements as money, fame, or the approval of others. Fully functioning people are primarily motivated by their intrinsic interest in their chosen activities and by the challenge of successfully accomplishing their chosen tasks. The actions of fully functioning people, then, are more likely to be intrinsically motivated rather than extrinsically motivated. The distinction between these two sources of motivation lies at the heart of self-determination theory.

Edward Deci and Robert Ryan's Self-Determination Theory

The Self-Determination Theory (SDT) of Edward Deci and Richard Ryan assumes that all humans possess the inner resources for the growth and self-regulation of their personalities. SDT identifies three needs that promote the development and integration of personality: *competence* (I am capable), *relatedness* (I am connected to other people), and *autonomy* (I choose my own goals). These needs are innate, essential, and universal (Ryan & Deci, 2000, 2008).

Can you see how SDT connects to Erikson's ideas? *Will* is the strength attained by the successful resolution of the *autonomy versus shame and doubt* crisis in toddlers; *Competence* is the adaptive ego quality that develops from the successful resolution of the *industry versus inferiority* crisis during the middle school years; and *Love* is the ego strength that accrues from successful resolution of the *intimacy versus isolation* crisis of young adulthood.

SDT's research program began by investigating two different kinds of motivation, intrinsic versus extrinsic. *Intrinsic motivation* is conceptualized in terms of the person's needs for competence and self-determination. Although White (1959) made the need

for competence the essence of intrinsic motivation, Deci and Ryan believe that it is not only competence but also self-determined competence that forms the basis of intrinsic motivation. They are focusing on the difference between learning to play the piano only because your parents want you to versus learning to play the piano because you love the sound of beautiful melodies (Deci & Ryan, 1985, 1991; Ryan, 1993).

Self-determination, like the concept of self-actualization favored by Maslow and Rogers, stresses the importance of *choice* as a determinant of our actions. Observations consistent with Deci and Ryan's (1985) formulation reveal that intrinsically motivated college students are persistent: They are more likely to complete their courses of study than students who are not intrinsically motivated (Vallerand & Bissonnette, 1992).

Intrinsic motivation, then, refers to doing some activity simply because one wants to do it and chooses to do it. Extrinsic motivation refers to engaging in the same activity for an external reward (e.g., money; praise or avoiding blame from others; meeting a deadline). Both forms of motivation may be involved simultaneously: A person may work hard at a task both because she extrinsically hopes to reap a financial windfall *and* because she intrinsically finds the task to be challenging.

These two forms of motivation, considered singly, have quite different psychological effects on the individual. Intrinsically motivated individuals experience greater self-confidence, interest, and excitement while doing the chosen task, which typically results in superior performance, persistence, creativity, vitality, self-esteem, and general well-being. Extrinsic motivation, since it refers to doing an activity for the rewards (separate from the activity itself), can be associated with feeling alienated and inauthentic (Ryan & Deci, 2000). Our sense of well-being is enhanced when intrinsic, but not extrinsic, goals are reached (Sheldon & Kasser, 1998).

Can intrinsic and extrinsic sources of motivation affect each other? Yes. Suppose you like to solve anagram puzzles (ranamag zelzups) because you enjoy the challenge. Suppose further that a research psychologist offers you a monetary reward for each correct solution. After the money was paid and you could return to solving them just for fun, would you do so? Research indicates you might not. The *overjustification effect* refers to situations that inadvertently turn play into work by controlling intrinsically motivated behavior via external rewards. The highly replicated effect of extrinsic rewards under these conditions is to *decrease* intrinsic interest in the activity (Deci, Koestner, & Ryan, 1999). Moreover, people are likely to produce *less creative* work (Amabile, Hennessey, & Grossman, 1986; Deci & Ryan, 1985). Moreover, threats, deadlines, and imposed goals can diminish intrinsic motivation. Like external rewards, they serve to focus the person's attention on the consequences of the behavior rather than experiencing the satisfaction of self-directed autonomy.

Can extrinsic rewards increase intrinsic motivation? Surprisingly, yes. The critical variable is how the reward is interpreted. If the person sees the reward as an attempt to *control* his behavior, intrinsic motivation decreases. If, however, the reward is seen not as control but as *positive feedback* about one's competence, intrinsic motivation increases (Ryan, Mims, & Koestner, 1983). Similarly, what began as an external regulation can become internalized if its rationale is understood, other individuals accept it as reasonable, and the person feels a degree of choice about compliance (Kuhl & Fuhrmann, 1998).

Thus situational influences (e.g., external rewards) can affect future intrinsic motivation for that task. A college student, for example, might initially be motivated solely by the extrinsic reward (incentive) of attaining a college degree. Her academic experiences, however, might be so interesting that she begins reading the optional assignments to satisfy her curiosity. At that point, her motivation to remain in college would be for both internal and external reasons.

The research stimulated by Self-Determination Theory has contributed important insights into the complex relationships between intrinsic and extrinsic motivation. Moreover, the accumulated data support the basic assumption of SDT: Intrinsic motivation is likely to be present when the person chooses his or her activities (autonomy), feels capable of carrying them out (competence), and these activities occur within a context of security and connection to other people (relatedness). Those who have authority over other people (e.g., supervisors, educators, etc.) are more likely to promote positive outcomes by attending to the basic psychological needs of those they supervise. Such desirable outcomes may be achieved by allowing them as much autonomy as possible, fostering competence, and treating them with respect (Ryan & Deci, 2000).

In general, research has shown that the *quality* of our performance is more likely to be affected by our intrinsic motivation, while the *quantity* of our work output is more predictable by our extrinsic motivation (Cerasoli, Nicklin, & Ford, 2014).

Evolutionary Psychology's View of Motivation

A basic assumption of evolutionary psychology is that over our 5- to 6-million-year journey as a separate species, we gradually acquired many hard-wired cognitive units that aided our survival and reproduction. One example is our ability to recognize faces (as mentioned in Chapter 5). These units, called *modules*, evolved to (a) react to a specific stimulus (seeing a human face) and (b) effortlessly produce an immediate specific response (we instantly classify the image as familiar or unfamiliar). Modularity is a property of all living organisms at every level of organization and may well be indispensible for understanding the human mind (Barrett & Kurzban, 2006).

Evolutionary psychology (EP) assumes that each human motive evolved to deal with a specific need. Human motivation from the EP point of view wants to identify (a) the specific stimuli behind each motive that cause us to "spring into action" and (b) the conditions that satisfy that motive (Kurzban & Aktipis, 2006). The modular point of view denies that the human brain is a "general problem solving device." Why? Because in nature there is no such thing as a "general" problem. Each and every problem is specific and requires its own unique solution (Cosmides & Tooby, 2013; Tooby & Cosmides, 1992). Thus feeling hungry motivates us to find something to eat (rather than hide); feeling frightened motivates us to freeze, flee, or fight (rather than mate); feeling tired motivates us to rest (rather than explore). A thorough understanding of any particular motive, then, requires that we understand

1. Its functional significance: How does this motive help us survive or reproduce?

2. Its developmental course: How and when does this motive become active?

3. Its triggers: What determines which motives become active at any specific point in time? (Kenrick et al., 2010)

While evolutionary psychology can help us understand numerous human motives (Neel et al., 2015), in this section we examine how it applies to three fundamental social motives: the need to belong to a group, the need for social status, and the need to select a mate.

The Need to Belong

The desire for interpersonal attachment may well be one of the most far-reaching and integrative constructs currently available to understand human nature.

—Roy Baumeister and Mark Leary (1995)

The view that humans need to belong to a social group is incontrovertible. In Chapter 3, we saw the adaptive value of friends within many animal species. In Chapter 4, we saw how essential is an infant's attachment to a caregiver for its survival and growth. In Chapter 5, we saw how much self-esteem is affected by friendship and social acceptance.

The evolutionary story of the human species involves the coevolution of genes, social structure, and culture. All human beings are born into an existing social group and grow up as members of that group. We are unable to survive and reproduce outside of the active support by a social group (Brewer & Caporael, 2006). Moreover, caring and close relationships are necessary for us to thrive and develop to our full potential (Feeney & Collins, 2015; Greenaway et al., 2015).

How do we know this? One intriguing piece of evidence shows a strong relationship, over the long evolutionary history of our species, between changes in the size of our ancestors' neocortex and the size of the groups they lived in. As neocortex size increased, so did the number of individuals in the group. This relationship is one of *coevolution*: both variables changed at the same time (without implying that either variable caused the other to change). Robin Dunbar estimates that we evolved a neocortex large enough to handle living in a group of about 150 people (Dunbar, 1993, 1998, 2010).

We evolved to be aware of both *who* is in our social circle as well as the *relationships* among these people. You don't want to invite mortal enemies to your party. We usually can keep track of the friends and enemies of our friends. However, as group size increases, the number of possible relationships between any two people grows even faster. If you invite 20 people to your party, there are 190 possible conversations (relationships) between any two guests.[3] Humans need a brain big enough to keep track of all that potential social information.

Other evidence of our need to belong includes

- How readily we form into *cohesive groups* with strangers

- How effortlessly we categorize our social world into *us versus them*

- How quickly we *detect cheating* within the group

- How much it *hurts to be excluded* from our group

  ○ The impressive research program of Henri Tajfel and his colleagues has demonstrated repeatedly that individuals assigned to a social group by the most trivial of reasons (e.g., a coin flip) will immediately show favoritism to that group. When asked to divide resources between two groups, individuals consistently show favoritism to their arbitrarily assigned group (Tajfel, 1970; Tajfel & Billig, 1974). These data show that the human mind is well prepared for living in groups.

  ○ Along with ingroup favoritism there is often, but not always, prejudice and discrimination against outgroups. Throughout our evolutionary history, members of unfamiliar tribes might have posed real threats to health by carrying diseases against which the invaded group had no natural immunity (Makhanova, Miller, & Maner, 2015). Intergroup anxiety is correlated with avoidance of outgroup members (Stephan, 2014). And the less we know about the "others," the easier it is to stereotype them. In fact, we humans negatively stereotype outgroup members so easily that it seems we evolved a "tribal mind" (Berreby, 2005) with its own dedicated tribalism circuit in the brain.

This possibility is supported by the observation that the ability to stereotype is located in the brain's orbitofrontal cortex. We know this because damage to this area prevents individuals from stereotyping (Milne & Graffman, 2001). Erikson, as we have seen, proposed the concept of *pseudospeciation* to describe the common but erroneous assumption that some social groups are so different from us, are so *other*, that we react to them as if they are a lower and inferior species. *Dehumanization* is a frequent reaction to individuals from other racial and ethnic groups (Haslam, 2015). Blatant dehumanization is likely to occur after incidents of intergroup violence (Kteily et al., 2015). Moreover, there is the possibility that the human brain evolved to react to different ethnic groups as if they really are different biological "species" (Gil-White, 2001).

We remember information about ingroup members differently than outgroup members. Outgroup members are categorized in memory according to their attributes (traits, duties), while ingroup members are remembered as distinct persons (Ostrom et al., 1993). Moreover, we experience divergent emotional and hormonal reactions to outgroups depending on the kind of threat they pose. Outgroups seen as threats to safety evoke fear, while outgroups seen as obstacles evoke anger (Cottrell & Neuberg, 2005; van der Schalk et al., 2011). Hormonal reactions to outgroups also differ. Testosterone levels of men playing violent video games significantly increased only when they were competing against outgroup members (Oxford, Ponzi, & Geary, 2010).

Finally, we tend to attribute fewer emotions to outgroups in the same way that we assume animals have fewer emotions than we do, a process called *infrahumanization*—we think that outgroup members are less human than we are (Haslam & Loughnan, 2014; Leyens et al., 2007). Susan Fiske's neurological research program shows that dehumanizing is most likely to occur when we both dislike and disrespect an outgroup—such as homeless people and drug addicts—whose images, she finds, evoke the same brain activity in the amygdala as when we feel disgust (Harris & Fiske, 2006).

The ease with which we categorize individuals into ingroups or outgroups leads some evolutionary psychologists to assume the existence of "in-group" and "out-group" modules as innate structures of the mind (Geary & Huffman, 2002; Neuberg & Cottrell, 2006). In support of this possibility is the observation that when a person is reminded that he belongs to a distinct social group, he is more willing to express his prejudicial attitudes toward outgroups (Effron & Knowles, 2015). Our need to belong to a group is so important that we readily classify outgroups, even with minimal knowledge, as threats to our existence (Neuberg & Cottrell, 2006). Regrettably, it appears that pseudospeciation continues to influence how we feel, think, and react to individuals of different racial and ethnic backgrounds than our own. What will it take for us to transcend our tribal mind?

○ Group living requires that individuals trust one another. But philosophers like Nicolo Machiavelli (1469–1527) and Thomas Hobbes (1588–1679) advise us not to trust strangers we may never meet again (Hobbes, 1997; Machiavelli, 2003). Many modern economists agree with this way of thinking. Trusting people we do not know and may never see again only puts us at risk of being exploited by these strangers because it is in the stranger's self-interest (under this one-shot meeting scenario) to take from us more than he or she will return (Berg, Dickhaut, & McCabe, 1995; Bolle, 1998).

In spite of this rational analysis that directs us not to trust people we meet for the first time, studies show that most individuals do trust strangers at their first meeting. Are we so dense that we don't realize we can be exploited? Or is something else going on? David Dunning and his colleagues believe something else is going on—the presence of a social norm mandating that we begin social encounters assuming the other person will act with good will. Over a series of six investigations, they found that even when participants rated the stranger (based on a photo) as *less* trustworthy, they still extended initial trust. Why? Consistent with an evolutionary view of our need to belong, the authors conclude that "trusting others is what people think they should do" (Dunning et al., 2014, p. 122).

Belonging to a group means that sometimes individuals have to help the group and forego, at least temporarily, their own preferences for how to spend their time and energy. Selfish and clever individuals, however, realize it is to their advantage if they can manage to avoid the personal costs (e.g., time, effort, risks) of aiding the group yet somehow still enjoy the benefits produced by others. Such a person is a *cheater*—an individual who fails to reciprocate within the group. He or she accepts the benefits (e.g., food) of the implied social contract but fails to deliver (e.g., ducks out of the hunting party) the requirement that the benefit was based on—everyone contributes to the effort (Cosmides & Tooby, 2005). But if everyone in the group were to cheat, the group's survival would be in peril.

How often do you hear someone say, "That's not fair"? The research results of Leda Cosmides and her colleagues suggest that we are equipped with a *cheater-detection module* that is triggered whenever we suspect someone is trying to get away with something—trying to gain a personal benefit at the expense of the work of other people (Cosmides, 1989; Cummins, 1999). These individuals are also known as *free*

riders—they ride along without paying their fair share.[4] Abundant research shows that when free-riders are detected, they are punished by their group, although physically attractive free-riders may be punished less severely than unattractive ones (Putz et al., 2016). In any event, the sheer frequency of the words, "That's not fair!" suggests that there is a lot of cheating, as well as cheating detection, in everyday life.

In addition to detecting cheaters, research suggests that natural selection may have made it easier to identify potential physical threats from facial cues alone. Brief glimpses of photographs—observed for only 2 seconds each—were sufficient for participants to distinguish violent from nonviolent sex offenders. Features indicating high masculinity were associated with participants' accurate judgments (Stillman, Maner, & Baumeister, 2009).

Other data suggest we use facial cues to identify individuals who are trustworthy. Decisions that a stranger is trustworthy are made quickly and effortlessly. For example, we are more likely to trust a smiling stranger when we judge that his smile is sincere. An authentic smile seems to be an honest (valid) signal that one can be trusted (Centorrino et al., 2015). Other research finds that the human face gives reliable clues about a stranger's trustworthiness when we can observe the person's face at the moment the stranger decides to cheat or not. The effortlessness with which trustworthiness is judged suggests that trustworthiness detection is a modular process (Bonnefon, Hopfenzitz, & De Neys, 2013). Future research, one hopes, will pinpoint the facial cues we use to decide effortlessly if someone is trustworthy or a cheater.[5]

"Your brain's face recognition and cheater detection modules have merged and that's why everyone you see looks like a cheetah!"

○ Finally, if group participation is essential to human growth, one would expect individuals to be vigilant to signs of being excluded from the group and to feel hurt when they are ostracized. This is exactly what happens.

Babies, as we know from the work of John Bowlby, Mary Ainsworth, and others, protest at signs of abandonment by crying loudly and persistently. Children, teenagers,

and adults feel hurt when they are excluded from the groups that are important to them. These painful feelings are adaptive for survival in that they motivate us to try to be reinstated into the group. Other reactions to exclusion include anger, aggression, sadness, a decrease in self-esteem, increased physiological stress, and, if the exclusion is chronic, depression and helplessness. The particular attempts used by ostracized individuals to be readmitted are influenced by cultural norms (Uskul & Over, 2014; Williams, 2007).

The particular emotions that are generated by exclusion from the group depend on the reasons for being ostracized. Individuals excluded because they were free riders tend to feel guilty, ashamed, and sorry for their actions, while those who were excluded because they might carry a contagious disease tend to feel anger, disgust, and betrayal by the group. The strategies they employ to be readmitted also vary with the cause of exclusion. Free riders promise to be a "team player" and "work twice as hard," while those with a pathogen infection remind the group of their prior positive contributions and try to make the group feel guilty for excluding them (Robertson et al., 2014). In addition, the pain of social exclusion motivates ostracized individuals to pay close attention to the unique characteristics of those who can help them be readmitted and, consequently, stereotype them less, compared to individuals who were not excluded (Claypool & Bernstein, 2014).

The pain caused by social exclusion follows the same neural pathways as pain caused by physical injury. How do we know this? While participants were undergoing fMRI scans, they played a game of "Cyberball" on a computer monitor in front of them. At first they watched two other participants (in reality a prearranged software program) "toss" a ball back and forth on the computer monitor, while their own monitor was being hooked up (this delay was a ruse to obtain their pretest fMRI). After the participant was connected to the computer, the other two simulated participants "threw" the Cyberball to him a total of seven times, followed by excluding him from the game for the remainder of the scan (about 45 throws to each other). Participants reported feeling ignored and excluded during this period. Most importantly, their fMRI scans showed the same pattern of brain activation that is seen in patients undergoing physical pain (Eisenberger, 2015; Eisenberger, Lieberman, & Williams, 2003; MacDonald & Leary, 2005). It appears we evolved an ostracism detection system (Spoor & Williams, 2006) that causes us to feel pain whenever we are socially rejected in order to (1) focus our attention on our rejection and (2) motivate us to end our pain by trying to get readmitted to the group (Williams, 2007).

Participants who suspect they might soon be socially excluded pay special and prolonged attention to smiling faces as signals they are liked and thus will not be excluded (DeWall, Maner, & Rouby, 2009). Ostracized individuals with low self-esteem blamed themselves and showed they felt stressed by their increased cortisol reactivity (Ford & Collins, 2010). Individuals who are anxiously attached showed greater sensitivity to physical pain when they were excluded from a group, but not when they were included, indicating that the ostracism hyperactivated their attachment system and thereby increased their pain of exclusion (Frias & Shaver, 2014).

In other experimental circumstances, socially excluded individuals reacted with anger and acted aggressively only toward those who had excluded them, not to bystanders

(DeWall et al., 2009; Twenge et al., 2001). Detrimental psychological effects of being ostracized in a Cyberball game lasted for at least 55 minutes after the game was over (Buelow et al., 2015). However, a 10-minute online conversation with a person of the opposite sex was sufficient to replenish the battered self-esteem of those who had been excluded. New and positive social contact was sufficient in this study to restore the hurt feelings caused by the earlier exclusion (Gross, 2009).

Not putting all our eggs into the same social basket might be an effective way of coping with ostracism. Natural selection, it seems, solved some the problems associated with living in groups—dealing with free riders and avoiding contact with those who might carry communicable diseases—by banishing them from the group[6] (Kurzban & Leary, 2001). Unlike our tribal ancestors, however, today we are likely to be connected to two or more social groups (e.g., immediate family, work, neighborhood, church groups, friends from childhood, etc.), providing us with social alternatives and thereby softening the blow of being ostracized from any single one of them.

The explosive growth of online social media might be due, in part, to the power of being "friended" by as many people as possible.[7] Facebook usage, however, can come with psychic costs: The longer individuals are active on Facebook, the more depressed they feel afterward (even though they opened Facebook to feel better). Nevertheless, they continued to use Facebook (Blease, 2015; Sagioglou & Greitemeyer, 2014). Further research identified envy (e.g., "It is so frustrating to see some people always having a good time") as the likely culprit for their depressed mood. When envy was controlled for, Facebook usage resulted in less depression (Tandoc, Ferrucci, & Duffy, 2015). Facebook, it is worth noting, has become a valuable research tool for psychology and the social sciences in general (Kosinski et al., 2015).

In summary, the evolutionary approach to understanding the strength of our need to be connected to a group is strongly supported by observing (1) how we easily identify with a group, (2) how readily we see our social world in terms of "us" versus "them," (3) how quickly we detect untrustworthy ingroup members, and (4) how much it hurts to be socially excluded. As the epigram that began this section noted, the need to belong to a group is one of the most far-reaching and important constructs to help us understand human nature (Baumeister & Leary, 1995).

Striving for Status

Another motive that may be understood from an evolutionary point of view is that of seeking social status (via popularity, prestige, leadership, and/or dominance). Who doesn't want to be popular? It feels good to know that other people like us and want to hang out and be friends with us. We might not have ever asked ourselves why being popular feels good. Wanting to be popular seems self-evident—what's to understand?

Evolutionary psychology seeks *ultimate explanations* for any given behavior—its survival and/or reproductive value. These ultimate explanations are sufficient to explain what functions the behavior serves. Whether or not we are conscious of these functions is not important as far as EP is concerned. It doesn't matter that we do not

wonder why we like to be popular. It only matters that being popular or influential in our social circle matters to us. The loss of popularity, like the feeling of being excluded, is also painful because our social status is directly tied to our success at *inclusive fitness*, our ability to survive, reproduce, and take care of ourselves, our offspring, and our relatives. Higher status individuals, in most species, including ours, are less likely to die of starvation and more likely to leave living offspring (Cummins, 2005; Marmot, 2004). The desire for status is indeed a fundamental human motive (Anderson, Hildreth, & Howland, 2015).

Evolutionary psychology also wants to understand the *proximal causes* of behavior. What environmental changes cause us to be concerned with our popularity and status?

Since status is connected to ultimate fitness, natural selection has provided us with alarm bells that automatically go off whenever we perceive a loss of popularity or decreased social influence: We feel *stressed*. Our bodies react to this loss as if it were a matter of life-or-death. Perception of decreased status causes the brain to activate the autonomic nervous system, which causes the release of two hormones, adrenalin and cortisol. Adrenalin is a fast-acting hormone valuable for fight-or-flight reactions: our heart rate and blood pressure rises, and we are physiologically prepared for immediate action. Cortisol acts more slowly. It increases blood sugar and fat storage. Circulating cortisol is often used as a measure of stress (Sapolsky, 2004).

Animal research identifies additional hormones that are related to social status. Status correlates positively with androgen and serotonin levels: higher status individuals show higher levels of both hormones. Changes in social rank are reflected in changes in these hormone levels. While defeated males show a sharp decrease in androgen levels, androgen levels increase in the winners. Subordinate rats who were at the receiving end of frequent beatings from those at the top of the dominance hierarchy showed persistently elevated cortisol levels (Blanchard et al., 1993). Serotonin levels increase in those subordinates who rise in social status (Sapolsky, 1990).

Similar changes are found in humans. Male winners of athletic contests, both the athletes themselves as well as fans of the winning team, show increased levels of testosterone, while female winners show lower levels of cortisol (Cummins, 2005). High status male executives reveal *both* high levels of testosterone *and* low levels of cortisol (Sherman et al., 2015). Moreover, the relationship between changes in social status and hormone levels works in both directions. College students who were administered a Prozac-like drug, citalopram, were rated by their roommates as less submissive and more cooperative. They also spontaneously adopted a dominant pattern of direct eye contact when talking to strangers. Serotonin clearly influences social behavior (Tse & Bond, 2002).

What these studies add up to is that neuroendocrine changes reflect a signaling system that informs us about changes in our social status. How we feel communicates where we are in the pecking order and how we respond to social challenges communicates our self-perception to others (Cummins, 2005). What's so important about social hierarchies that any change in our social standing produces these automatic hormonal reactions?

Sex is what's so important. High status men gain greater access to women through two roads. Women prefer high-status men because these men offer women greater

protection and ample resources for them and their children (Hill & Hurtado, 1996). A second road to sexual access is through intrasexual domination. High status men might take the wives or mates of low-status men for themselves without fear of retaliation (Buss, 2012). History is replete with examples of kings, emperors, and other high-status males who amassed large harems of women simply because they could. The earliest known civilizations, as identified by Laura Betzig (1993), beginning in 4,000 BCE and lasting about 4,000 years, showed a consistent pattern of women-gathering by the rulers, ranging from the 332 women in the harem of the Maharaja of Patiala to over 10,000 women of the Chinese emperor Fei-ti (overcompensate much?).

What about today? Surely things have changed, right? Not really. Socially dominant men have more affairs than less dominant men, and high status men are preferred as partners in extramarital affairs (Baker & Bellis, 1995; Egan & Agnus, 2004; Perusse, 1993). But social dominance, and the status associated with "manhood" itself, are not forever fixed. They require effort to achieve and maintain. Men at the top are challenged by younger men below them in the hierarchy. "Precarious manhood" refers to the ease with which a man's status in his social hierarchy may be threatened and the steps he takes to reestablish it—steps which make him appear more "manly." Men whose "manhood" is threatened tend to become more aggressive, have low tolerance for the alternative lifestyles of others, and show increased support for warfare to solve international problems (Winegard, Winegard, & Geary, 2014).

It's not surprising that many young men compete with each other to jockey for social dominance. They want to get the attention and interest of women. These displays apparently pay off. Dominant behavior in young men increases female sexual attraction even though the women may not like these men very much (Sadalla, Kenrick, & Vershure, 1987). Sex is but one of the perks associated with being at or near the top of the social hierarchy. Higher status group members exert more influence within the group, have better access to scarce resources, obtain more social support, enjoy better health, live longer, and have better reproductive success (Ellis, 1994). All that sounds great. So how can a person get closer to the top?

One way to move up a rung or two of the social ladder is to become more valuable to your group. Two characteristics associated with increased social status are *competence* and *acting generously* toward others in the group. Those who take the initiative and self-confidently offer solutions to their group are seen as more competent than others (even though on objective measures they are average). Visibility within the group is a necessary condition for a change in status (Anderson & Kilduff, 2009).

In groups that are impressed by signs of wealth, conspicuously wearing luxury brands can help improve one's social standing. Evolutionary psychology's *costly signaling theory* (Miller, 2009; Saad, 2007) or *handicapping principle* (Zahavi & Zahavi, 1997) predicts that *conspicuous consumption* (Veblen, 1899/1994) signals to others that one has "money to burn." Individuals who wore luxury clothes were consistently treated better and raised more money for charity than those wearing ordinary, nonluxury clothes (Nelissen & Meijers, 2010). Acting as if one already has high status may be one way to be treated like someone who actually has high status.

Some personality characteristics are associated with high social status. In groups where the status hierarchy is based on prestige rather than dominance, individuals who display the traits of self-esteem, agreeableness, conscientiousness, and helpfulness to others tend to have higher social status. A *prestige hierarchy* is based on freely given deference to those who merit it by their achievements, talents, or excellence in some valued sphere of social life. In contrast, a *dominance hierarchy* is based on force or the threat of force (Henrich & Gil-White, 2001). In dominance hierarchies, the traits associated with high status individuals are narcissism, aggression, and disagreeableness (Cheng, Tracy, & Henrich, 2010). Since these are the same traits that make people unpopular, it seems that dominant leaders prefer to be feared rather than liked (which was Machiavelli's advice in *The Prince*).

Individuals who use abstract (as opposed to concrete) language are seen as more powerful and having higher status. Those who use abstract language are also perceived as more distant and judgmental. These are traits associated with being more socially powerful (Wakslak, Smith, & Han, 2014). Other language features that signal higher status are speaking in a lower pitched voice (Carney, Hall, & Smith LeBeau, 2005) and speaking rapidly (Miller et al., 1976). Speaking abstractly, rapidly, and with a low-pitched voice probably leads to perceiving the speaker as possessing high status more easily in some environments than others (e.g., a college classroom versus a playground).

Sex: The Mating Motive

When Charles Darwin published *On the Origin of Species* in 1859, he believed he had solved "the mystery of mysteries," how one species evolves into another. His answer: by natural selection. Individual animals who are equipped at birth—by nature—with the "right stuff," have a better chance of surviving and passing on their genes to their off-spring than do individuals who lack these qualities. As long as the selection pressure to survive always acts in the same direction (e.g., a major shift in climate causes a once fertile area to receive very little annual rainfall), then even slight variations in the heritable qualities that aid survival in this new environment could, over many generations, result in a new species that is *well adapted to that environment* (e.g., lizards are well adapted for living in deserts). Nature is the independent variable (so to speak), species change over time is the dependent variable.

But if natural selection solves the problem of how evolution occurs, why did Darwin write in 1860 that "the sight of a feather in a peacock's tail, whenever I gaze at it, makes me sick!"(Coyne, 2009, p. 145)? Darwin was not made sick by the beauty of the peacock's tail when it is fully opened and shimmering while he struts in front of admiring peahens (the peacock, not Darwin). No, Darwin was mightily annoyed because he did not understand how this large cumbersome apparatus the peacock drags around behind him could possibly help him survive. It's more the opposite—his huge tail is a clear impediment to walking without effort let alone trying to get airborne to escape a predator. Yes, the feathers are beautiful, and the peahens really like them, but the peacock's feathers also attract predators. The existence of peacocks mocked Darwin's solution of "survival of the fittest."[8]

The peacock did help Darwin eventually realize that natural selection is only one part of evolution. Darwin's 1871 publication, two books in one, *The Descent of Man, and Selection in Relation to Sex*, completed the picture. Evolutionary change requires both *natural selection* and *sexual selection*.

Sexual selection takes two forms. In *intrasexual selection*, members of the same sex compete with each other to gain access to mates. In almost all species, males do the competing, while females cheerlead on the sidelines and mate with the winners. Why is that?

Parental investment theory is the answer. The sex that invests more time and energy raising the young chooses who to mate with. The sex that invests less time and less energy competes. Across all species, it is almost always the female that invests more time and energy rearing her offspring. Relative parental investment and sexual selection are the root causes of sex differences (Bjorklund & Kipp, 1996; Buss, 1995).

In humans, we see sex differences in risky behaviors that can be explained by intrasexual competition: Young men want to impress young women by displaying their bravery, dominance, skill, and self-confidence—attributes that women find attractive in men. Men take more risks than women. Risk-taking by adolescent males to impress adolescent females is so prevalent that it has been labeled "The young male syndrome" (Wilson & Daly, 1985). If he is successful in attracting a female, the result is that the physical and mental qualities that contributed to winning—strength, coordination, cunning—will be inherited by his offspring. And *differential reproduction* is at the heart of evolutionary theory—the heritable traits associated with successful reproduction are passed on to the next generation, while the heritable traits of the losers are not.

Young men take risks even when women are not present. In those cases intrasexual competitions serve to establish dominance hierarchies (Who is the biggest chicken? Who is the best athlete?) and reveals skills valued for future leadership roles, team participation, and coalition formation (Byrnes, Miller, & Schafer, 1999). Adolescents of both genders take more risks in the presence of peers, compared to when they are alone, and when such decisions have an emotional component (Figner et al., 2009; Smith, Chein, & Steinberg, 2014).

Intersexual selection is the second way sexual selection operates. If there is consensus among the members of one sex about what are the desirable characteristics of the other, then individuals of the opposite sex who possess those qualities will tend to be chosen as mates. Those who do not show the desired traits will not be chosen. Assuming that the consensus of valuable qualities remains stable over time, then evolutionary change will occur as the desired qualities become more frequent in the population and the undesired traits will be seen less and less often until they vanish altogether.

Because the females of many species are choosy about their sexual partner, Darwin used the term *female choice* to refer to intersexual selection. Since peahens prefer to mate with peacocks with large, brilliant, shimmering tail feathers, those peacocks with the largest and most visually striking tail feathers are selected, and they, in turn, will produce sons whose tail feathers will be attractive to peahens when they became

sexually mature. A comprehensive investigation of sexual selection across 186 species reveals that many different male characteristics are correlated with mating success, and they almost always involve female choice (Anderson, 1994).

Women's Mate Preferences

Given the enormous difference in time and energy that men and women make in bringing a child into the world, evolutionary psychology expects women, more than men, to be more concerned with her potential mate's *economic resources*. This sex difference was found without exception

(a) in 37 cultures around the world, sampling over 10,000 individuals (Buss et al., 1990),

(b) among participants in speed dating (Asendorpf, Penke, & Back, 2011),

(c) in studies of personal ads (Gustavsson & Johnsson, 2008), and

(d) in studies of computer dating services (Bokek-Cohen, Peres, & Kanazawa, 2007).

Different samples, different methods, different countries, same result: Women have evolved a strong preference for those long-term mates who can show they have the ability to support them. Modern women are the descendants of generations of women who had this mate preference, a preference that contributes to their own and to their children's survival.

Women also prefer men with high social status, who are slightly older than themselves, who are ambitious and dependable, who are taller than they are, who are in good health, who love and are committed to them and their children, and who are kind, have a sense of humor, and are generous (Buss, 2012).

Men's Mate Preferences

Physical attractiveness is more important to men than it is to women (Li et al., 2013). There is an important exception to this well-replicated finding, however. When it comes to *short-term relationships*, women rate the importance of physical attractiveness of their partner almost as highly as men do (Buss & Schmitt, 1993; Gueguen & Lamy, 2012; Hald & Hogh-Oleson, 2010).

Physically attractive women are preferred by men worldwide and this has been true for as long as these preferences have been measured (Buss et al., 2001). Why? Evolutionary psychologists assume that a woman's physical attractiveness has been naturally selected as a cue or marker to indicate she enjoys good health. Of course that may or may not be true in any individual case. Aren't there billions of healthy women around the world who may or may not be especially physically attractive? Yes, but evolutionary processes work on what is true on average for that species, not on what is true for each member of the species.

If physical beauty has been selected because it signals good health, we would expect this trait to be relatively more important to men in those areas around the world where pathogens are highly prevalent but relatively less important in geographical areas where pathogens are rare. This is precisely what has been observed (Gangstad & Buss, 1993).

In addition to physical attractiveness, men prefer women who are younger than they are and who are preferably at the beginning of their reproductive years (historically about 22 years long). Mating with a woman at the beginning of these years allows more time to sire many offspring. Men prefer women who are shorter than they are, who have long hair, clear skin, who walk slowly and fluidly, and whose faces and bodies are symmetrical (Buss, 2012).

A woman's weight is more important in some cultures than others. In societies that experience frequent food shortages, women with more body fat are preferred. Plumper women are also preferred in non-Western societies with subsistence-based economic systems. Men from various countries around the world report the ideal woman's waist-to-hip ratio is about 0.7 (e.g., 18 inch waist/26 inch hips; 25 inch waist/36 inch hips; 30 inch waist/43 inch hips; etc.). Finally, human breasts are large relative to those in closely related species and for that reason are assumed to be the result of sexual selection. Men do prefer women with larger breasts, but only if they are symmetrical. Larger breasts tend to be asymmetrical and are associated with reduced fitness (fewer offspring). Asymmetrical breasts are not preferred by men. Large and symmetrical breasts are markers of successful fitness and are preferred by men (Sugiyama, 2005).

Self-Actualization

Now that we have looked at how evolutionary psychology understands the importance of the need to belong to a group, the need for social status, and the need to mate, how does EP understand self-actualization? Is the need for self-actualization the same sort of need as the need for food or shelter? How does self-actualization contribute to reproductive fitness? Are men and women attracted to each other because they are self-actualized? Or is their attraction based on the same activities and products generated by motives for status and mate selection?

Creative displays by humans are attractive to the opposite sex just as the peacock's tail is attractive to peahens. Male artists are more likely to draw attention to their creative output than are female artists. When mating motives are salient, males are more likely to display their creative outputs (Griskevicius, Cialdini, & Kenrick, 2006). Women are likely to choose creative men as mates (Miller, 2000). Okay, but what does the motivation behind the creative output have to do with it? Whether these creative outputs were motivated by the desire to be a multi-millionaire or by the desire to express one's deepest feelings, their sexual selection value lies in *what* was produced rather than *why* it was produced.

It is still fine to speak about our desire to self-actualize or to admire others for their personal growth in becoming more self-actualized individuals. EP does not change that. But EP does help us realize that the functional value of any motive ultimately lies in its contribution to survival and reproductive fitness. From this point of view, the self-actualization motive does not deserve a privileged place at the top of Maslow's pyramid (Kenrick et al., 2010).

Error Management Theory

Our final topic under evolutionary psychology's approach to motivation is error management theory (Haselton & Nettle, 2006; Haselton, Nettle, & Andrews, 2005).

This theory is an outgrowth of what is known about parental investment, sexual selection, and the psychological differences they create between men and women (e.g., the above section on gender differences in mating motivation). Error management theory predicts that these sex differences lead men and women to make different kinds of mistakes in thinking or cognition. The error each gender is likely to make follows from differences in reproductive fitness.

A man's contribution to reproduction may be exceedingly minimal in time, effort, and the use of personal resources (a wee bit of sperm). A woman's contribution to reproduction is always the opposite: It is time consuming (9 months), quite effortful, and increasingly depletes her resources. This biological difference, from an evolutionary point of view, leads to two quite different reproductive strategies: A human male's reproductive fitness is maximized by fathering as many different children with as many different women as possible. A woman's reproductive fitness, however, is maximized by raising fewer, healthy children who will eventually become parents. Quantity versus quality.

From this point of view, men should be ready to mate with as many women as often as possible. This tendency, error management theory says, leads men to misperceive women's platonically friendly behavior as a sign of sexual attraction. Men's minds are biased in the direction of minimizing the cost of missed sexual opportunities. It is better for him to *overestimate* her actual interest, and get shot down, than to not act on a true sexual signal and miss an opportunity to mate.

Women, however, are more concerned with the potential outcome of their sexual relations than are men. As we have seen above, women value men who have the resources to care for them and their children. But these resources are useless to her if the man doesn't stay around after she becomes pregnant. Error management theory predicts women are unwilling to have sex with a man she suspects is not committed to her. This is true to such an extent that she is likely to *underestimate* a man's true intentions to stay. Women's minds are biased in the direction of requiring solid evidence that her partner will be faithful so she will avoid the far more costly error of having to raise her child by herself. It is better for her to be really sure about him than to be sorry. Thus women are more likely to make the error of rejecting men who in fact would be faithful.

To test these hypotheses, written dating scenarios were given to men and women undergraduates. These students were asked how they would respond to various possibilities regarding sexual signals and commitment to the relationship (e.g., "If a woman touches a man's arm on a date, how likely is it that she is interested in having sex with him?"; "How much do you agree or disagree that a typical woman needs to know that a man loves her before she is willing to have sex with him?"). The researchers anticipated that men and women's ratings would differ as expected by error management theory. And they did. Men rated various behaviors by women as signaling greater sexual intent than women did; women underestimated a prospective mate's commitment more than men (Haselton & Buss, 2000).

Error management theory has been successfully applied to the study of mate poaching. Since men's resources are greatly valued by women, the threat of a mate being successfully poached by another woman is highly threatening. Thus, women

should be more sensitive than men to cues that other women are poaching as well as more sensitive to all cues of infidelity. This is what was found in a series of four studies of mate poaching. Women were quicker and more accurate in detecting poaching and cues of infidelity. Women focused more attention on what other women are doing (and less attention on how their mate was responding to them), while men focused their attention on their partner and who she might be interested in (rather than on what male poachers are doing). Consistent with error management theory, these results suggest men and women have developed different ways of dealing with the threat of mate poaching to achieve the same result—mate retention (Ein-Dor et al., 2015).

Dispositional Approaches to Motivation

In this section, we'll see that the dispositional approach looks at motivation as an enduring part of our personality. A dispositional motive is like a trait with an action component. It influences us to interpret events and to respond in consistent ways. I've selected three to look at in some detail: the need for achievement, the Dark Triad, and sensation seeking.

Need for Achievement

The primary goal of the achievement motive is **efficiency.**

—David McClelland and Carol Franz (1992, p. 680, emphasis in original)

Henry Murray published *Explorations in Personality* in 1938 and dedicated it to Sigmund Freud and Carl Jung (among others). Having been analysed by Jung, Murray was impressed with the reality of unconscious motivation, motives that can influence us without our conscious awareness. He wanted to study those wants and needs that lie outside (below?) full awareness and to do so in a systematic, scientific way. Working with Christiana Morgan, Murray developed the Thematic Apperception Test (TAT) as a means to accomplish this. The TAT consists of 20 ambiguous pictures, 19 of which depict one or more people. Participants are asked to make up a story concerning each picture, a story that answers questions such as "What led to this situation?" "What is happening now?" "What will happen in the future?" The TAT is a *projective test* in that it assumes the story reflects our current *covert* needs, wishes, and conflicts (Morgan & Murray, 1935).

Murray (1938) listed a number of psychological needs that we all have. These needs vary in strength between people and they also vary in strength within the same person at different times. Three of these needs have been well researched: the need for achievement, the need for affiliation, and the need for power. In the prior section we touched upon the need for affiliation (the need for belongingness) and, slightly, the need for power (striving for status). Here we cover the need for achievement.

David McClelland and his associates defined the achievement motive through observations of their research participants. College men who had a strong motive to achieve showed "a concern with doing things better, with surpassing standards of excellence" (McClelland, Atkinson, Clark, & Lowell, 1953, p. 228). McClelland (1985) later revealed that he wished he had called it the "efficiency motive" instead of

the achievement motive because efficiency more accurately describes the distinctive feature of this motive, that of wanting to "do things better."

Achievement as an Intrinsic Form of Competence Motivation

Koestner and McClelland (1990) point out that three major characteristics of intrinsic motivation are usually present in individuals who have a strong motive to achieve. Individuals high in the achievement motive have been found to prefer to

1. *Engage in Moderately Difficult Challenges.* Easy tasks do not provide the incentives to feel gratified by their successful completion (virtually everyone can do them) and very difficult tasks involve a low probability of success (virtually no one can do them). Individuals characterized by a high achievement motive, like those who are intrinsically motivated, prefer to engage in moderately difficult challenges.

2. *Act in a Self-Determined Manner.* In the absence of external constraints, individuals strongly motivated to be successful typically outperform those with a low achievement motive. But when external controls are present, individuals high in achievement motivation do not outperform those who are low. The externally controlling variables that undermine the effects of achievement motivation also undermine intrinsic motivation. Pressures to hurriedly complete the task, the presence of external rewards such as money, and competition with others have all been shown to reduce intrinsic motivation and eliminate the performance advantages otherwise shown by individuals high in achievement motivation. McClelland (1985) concludes that only a highly motivated person who feels personally responsible for her successful outcomes will experience satisfaction from doing something more efficiently.

3. *Receive Feedback About Their Performance.* Individuals strongly motivated to achieve success, like those who are intrinsically motivated, desire and profit from learning how effective their behavior is for reaching their goals.

A final similarity between the motive to achieve and intrinsic motivation concerns the type of parenting behaviors that seem to lead to each. Parents who emphasize independence training of their children, especially in decision making, and who set challenging standards for their children to reach, are likely to foster both the motive to achieve and intrinsic motivation (Koestner & McClelland, 1990).

McClelland's research into the achievement motive has been extremely wide-ranging. From the study of college students' achievement fantasies in the laboratory to the prediction of the economic growth of 23 countries over 21 years (McClelland, 1961), the need for achievement has been shown to affect the lives of individuals as well as entire nations.

The Dark Triad

Delroy Paulhus and Kevin Williams (2002) identified a personality cluster of three traits they called the *Dark Triad*. The three personality traits that make up the Dark Triad are psychopathy, narcissism, and Machiavellianism (at the subclinical level). Paulhus and Williams referred to this cluster as "dark" because each of the

three traits can show up in nasty or unpleasant behaviors. They are considered to be *subclinical* because none of these traits dominate a person's personality in an extreme way. Extremity of traits, as we will see in Chapter 8, can be a diagnostic symptom of a personality disorder. Nonextreme versions, however, are traits we may encounter in everyday life such as when we meet individuals who constantly brag, are emotionally cold, verbally aggressive, and insincere.

Psychopathy at the subclinical level is characterized by low empathy, impulsivity and thrill-seeking, and low levels of anxiety. Subclinical narcissism is described by such traits as vanity, grandiosity, entitlement, dominance, and feeling superior to others. Machiavellianism, first described in the psychological literature by Richard Christie and Florence Geis in 1970, is the trait of being manipulative, exploiting others, and doing whatever it takes to get what you want.

Paulhus and Williams (2002) found that while these three traits positively inter-correlate, they do not correlate so strongly that we should think of them as synonyms for each other. Their initial results led them to conclude (a) there is a common core among these three traits and (b) each trait contributes unique elements. An individual characterized by the Dark Triad is someone who scores above average on the three traits of psychopathy, narcissism, and Machiavellianism. As of 2014, there were over 700 publications dealing with some aspect of the Dark Triad (Paulhus, 2014).

How Does the Dark Triad Relate to HEXACO?

As covered in prior chapters, HEXACO is a conception of personality traits that adds the sixth trait of "Honesty-Humility" to the five "super-traits" of the Five-Factor Model. Research shows this sixth trait is related to the Dark Triad. The more highly individuals score on measures of the Dark Triad, the less honest and humble they are. The core of the Dark Triad is the opposite of Honesty-Humility (Lee & Ashton, 2005). This core is called *callousness;* it describes someone who is *callous-manipulative* as well as someone who is disagreeable and dishonest (Furnham, Richards, & Paulhus, 2013). Across a series of six experiments, individuals who scored low on Honesty-Humility were found to cheat more often than those who scored high on this trait. Low scores on Honesty-Humility were the only personality scores on any trait that consistently predicted cheating (Hilbig & Zettler, 2015). These results are consistent, of course, with the view that the core of the Dark Triad is callousness and dishonesty. How else does the Dark Triad show up in everyday life?

Behavioral Correlates of the Dark Triad

Workplace behavior: Counterproductive work behaviors (CWB) such as abusive supervision, making fun of a coworker, and excessive office politicking create aversive workplace environments and result in losses of billions of dollars per year (Bennett & Robinson, 2000). How is the Dark Triad implicated in CWBs? A meta-analysis found that two traits of the Dark Triad are associated with CWBs: narcissism and Machiavellianism. Individual workers who score highly on these traits are more likely to be involved with CWBs and thereby contribute to an aversive work environment (O'Boyle et al., 2012).

Cheating, lying, and mate poaching: In a study of the Dark Triad and self-reported cheating by college students, all three Dark Triad traits correlated positively and significantly with cheating, especially psychopathy. A second investigation found that the three traits significantly correlated with plagiarism with psychopathy again showing the strongest relationship (Williams, Nathanson, & Paulhus, 2010). Another study found a small but statistically significant positive association between frequency of lying and the traits of psychopathy and Machiavellianism (Baughman et al., 2014).

Mate poaching, as we saw above, is the attempt to form a romantic relationship with a person who already is in a romantic relationship with someone else. Studies have found that about 50% of men and women admit to trying to mate poach at some point in their lives and the overwhelming majority of adults (85%) report that someone has tried to poach them away from their current relationship (Schmitt & Buss, 2001).

The Dark Triad is implicated in mate poaching. In an online survey, individuals who scored highly on the Dark Triad made more poaching attempts than those lower on the scale. They also were more likely to have their own mate poached away from them. This latter finding may be due to the costs of mate poaching: One cannot pay as much attention and "guard" one's own mate if one is on a quest to poach the mates of others (Jonason, Li, & Buss, 2010; Kardum et al., 2015). Each of the traits of the Dark Triad positively correlated, for both men and women, with poaching attempts and with being the victim of poaching by someone else.

More generally, when it comes to long-term mating, individuals, both men and women, prefer romantic partners who are low in the traits of the Dark Triad. But for one-night stands, individuals who are high in those traits are preferred. An exception to these preferences was found for those, both men and women, who score high on psychopathy: These individuals rated partners who were high on the traits of the Dark Triad as more attractive for both one-night stands and long-term relationships (Jonason, Lyons, & Blanchard, 2015).

"So he's a narcissistic Machiavellian psychopath. What's not to like?"

Cyber-aggression and violence: Cyber-aggression consists of such acts as sending insulting comments to someone, spreading rumors online to damage a person's reputation, posting embarrassing photographs of someone (like a former girl friend) and other anti-social acts. An online survey of adolescents found that 36% admitted to one or more acts of cyber-aggression over the past three months. Each of the three traits of the Dark Triad correlated positively with cyber-aggression with psychopathy revealing the strongest relationship (Pabian, De Backer, & Vandebosch, 2015).

Other investigations concur. In one of them, the strongest predictor of cyber violence was scoring low on the trait of Agreeableness—violent actions are more likely to be perpetrated by those who who are disagreeable. The next strongest predictors of violence were psychopathy, Machiavellianism, impulsivity, and narcissism (Pailing, Boon, & Egan, 2014).

The correlations of the Dark Triad with aversive behaviors in the workplace, with cheating, lying, and mate poaching, and with acts of cyber-aggression and violence demonstrate its wide range of influence. While the Dark Triad traits help individuals be reproductively successful (Mealy, 1995; Schmitt & Buss, 2001; Wilson, Near, & Miller, 1996), they come with a price tag. Two studies reveal the Dark Triad's darker side:

1. Using functional magnetic resonance imaging (fMRI), one investigation found that photographs of people who had two of the personality characteristics of the Dark Triad—psychopathy and Machiavellianism—activated the amygdala, the brain structure that reacts to fearful or threatening stimuli in the environment. Perhaps natural selection has provided us with a facial cue warning us to be careful when interacting with those whose Dark Triad is pronounced (Gordon & Platek, 2009).

2. Have you ever been cheated, taken advantage of, or had your trust betrayed? I have. What happens next? After we become aware we were cheated, our cheater-detection module activates the amygdala, adrenalin is released, and the adrenalin causes our memory of being cheated to last a lifetime. Once a person has been identified as a cheater, the ensuing distrust is difficult to change even if we later learn that our identification was a mistake. Once a person is branded as a cheater, distrust lingers. We do not forget who cheated us. This memory, painful though it may be, helps us avoid being exploited again by this person in the future (Mealy, Daood, & Krage, 1996; Suzuki, Homma, & Suga, 2013).

Sensation Seeking

Sensation seeking is the personality trait that reflects how strongly or how weakly we want to experience a variety of novel and intense sensations. Sensation seeking is negatively correlated with the trait of conscientiousness of the Five-Factor Model (Zuckerman, 2009).

The Sensation Seeking Scale (SSS; Zuckerman, 1971) consists of four subscales:

1. *Thrill and Adventure Seeking:* engaging in extreme sports and taking risks. Items indicate a person's *intentions* rather than what he or she has actually done (e.g., "I would like to go skydiving someday").

2. *Experience Seeking:* wanting new experiences through the mind and the senses, travel, music, etc. Individuals who score high on this subscale are drawn to social nonconformity. They prefer to associate with unconventional people.

3. *Disinhibition*: seeking intense experiences in parties, social drinking, and sex.

4. *Boredom Susceptibility*: an intolerance for repetitive experiences and boring people. Those who are high in sensation seeking quickly feel restless and antsy when they are in such situations (Zuckerman, 2009).

A number of different kinds of risky behaviors are associated with sensation seeking. Soldiers who volunteer for combat duty are higher in sensation seeking than other soldiers (Hobfoll, Rom, & Segal, 1989). Individuals who engage in unprotected sex are higher in sensation seeking than those who do not (Hoyle, Fejfar, & Miller, 2000). People who like to drive fast and furiously by speeding, tail-gating, and/or driving while intoxicated tend to be high sensation seekers (Jonah, 1997). Those who enjoy high-risk sports such as mountain climbing and downhill skiing typically score high on the SSS (Goma-i-Freixanet, 2004). Finally, individuals who are drawn to occupations that involve physical risk—paratroopers, airline pilots, firefighters, and so on—are above average sensation seekers (Zuckerman, 2007).

Many studies have shown that individuals who report frequent marijuana use, smoking cigarettes, and/or bouts of heavy drinking tend to score high on sensation seeking. A comparison of personality tests found that the SSS was the best predictor of the use of most kinds of drugs (Jaffe & Archer, 1987). This test also predicted treatment failures for individuals addicted to cocaine: the higher an individual's SSS score, the lower the prognosis for successful recovery (Ball, 1995).

Violent criminals score higher on the SSS than those who engage in risky sports (Goma-i-Freixanet, 1995). The Disinhibition subscale scores of early adolescents predicted delinquent behavior when they became older (Horvath & Zuckerman, 1993; Newcomb & McGee, 1991).

Why is this? Zuckerman (2005) prefers a psychobiological explanation to account for these relationships. Behavior genetics research shows that sensation seeking is highly heritable and that a specific gene for the dopamine receptor (DRD4) is associated with novelty seeking. Forms (alleles) of this gene are also associated with strength of response to novel stimuli, heroin use, alcohol abuse, and compulsive gambling. Zuckerman's psychobiological model of sensation seeking assumes there is a genetic predisposition toward acting impulsively as well as a relatively weak arousal system to risk and dangerous situations. Indeed, individuals who are low in sensation seeking are more easily aroused and upset by aversive stimuli (e.g., unpredictable loud noises) than those who are not (Lissek et al., 2005). Many individuals are biologically predisposed to seek novelty and excitement without being inhibited by fears of injury or other potentially negative consequences. For them, mountain climbing is more about the thrill of victory than the agony of the feet.

Cognitive Approaches to Motivation

We conclude the chapter with three cognitive treatments of the significance of motives and goals for understanding personality. As mentioned in Chapter 1, goals are one of the five classes of personality variables proposed by Walter Mischel (1973). A *goal* is a present mental image, associated with positive or negative feelings, directing your

actions to bring about a desired outcome in the future (Pervin, 1989). Your present goals are self-constructed highways to your future self.

The following three treatments of goals are cognitive because they are organized around your *major beliefs* about your present self (and current situation) as well as your potential future self (and a different situation). To hold and pursue realistic goals means you have faith in your abilities and efforts as well as hope for the future. To have no goals worth pursuing is to live in despair. It is your "possible selves" (Hazel Markus), your "personal strivings" (Robert Emmons), and your "personal projects" (Brian Little) that give meaning to the present events of your life.

Our Possible Selves

Hazel Markus and her colleagues refer to *possible selves* as our cognitive representations of our hopes, fears, and goals. Possible selves are our imagined ideas of what we hope to become and what we fear we might become. Possible selves are incentives that guide present behavior (Markus & Nurius, 1986; Markus & Wurf, 1987).

The most important element of any goal is its *concrete meaning* for the person. A goal will influence a person's behavior to the extent that she can make it personal by building a bridge of self-representations that span her current state and her desired future state (Markus & Ruvulo, 1989). Thus a close and inherent connection exists between a person's goals and his or her present self-concept. An essential part of how I see myself today includes who I hope to become tomorrow.

The theory of possible selves has been successfully applied to understanding some aspects of juvenile delinquency. Researchers suggest that a desirable expected self ("I will be able to get a good job") has maximum motivational significance when it is *balanced* by a feared possible self in the same domain ("I will be unemployed"). Youths, ages 13–16, were asked to describe their possible selves. Nondeliquent youths showed the expected balance between their hoped-for self and their feared-self. Delinquent youths, however, did not. These youths lacked images of positive expected selves that could serve as incentives for avoiding criminal activity in the future (Oyserman & Markus, 1990; Oyserman & Saltz, 1993).

These results suggest that the theory of possible selves might usefully be applied to other problematic domains of adolescent life (e.g., dropping out of school, using drugs, becoming pregnant unintentionally). The theory of possible selves explains how the mental image of a hoped-for future self can function as an incentive that guides present behavior. Prospective first-time fathers, whose possible future selves included being actively involved in child care were indeed more active after the birth of their children. A possible self of competence in a particular domain can serve as a buffer against feedback that one has failed on a task-relevant domain. The feedback apparently does not cause one to get discouraged by the failure compared to someone else whose possible self does not include competence in that domain (Strauss & Goldberg, 1999).

Our Personal Strivings

Robert Emmons (1989) defines a *personal striving* as an idiographically coherent pattern of goals that represent what a person is trying to accomplish. The term

idiographically is an important qualifier of this approach to goals because Emmons is interested in focusing on how each individual's distinctive goals make sense (are coherent) within the overall life course of that person. The concept of personal strivings is a unifying construct that organizes different single goals around a common theme. For example, an individual who personally strives to "make a good impression" might have specific goals such as to "get good grades," "be a cool dresser," and "show the boss I can handle more responsibility." Other examples of personal strivings include "get to know new people" and "avoid arguments when possible" (Emmons, 1989).

Personal strivings relate to a person's physical and psychological well-being. People who rate themselves as happiest are those who, in general, successfully attain their personal strivings (Emmons, 1986). This is especially true when a person's strivings do not conflict with each other. When one personal striving ("to appear more intelligent than I am") conflicts with another personal striving ("to always present myself in an honest light"), individuals are likely to feel distressed and report more physical illness and visits to the doctor (Emmons & King, 1988). As Erikson would expect, the well-being of older people has been found to be positively related to their personal strivings for generativity and ego integrity (Sheldon & Kasser, 2001). When individuals select goals for which they have the necessary resources, subjective well being increases. The greater the congruence between your goals and the resources available to you (such as family support, close friends, or social skills), the higher your subjective well being is likely to be (Diener & Fujita, 1995).

Moreover, the *degree of generality* of our personal strivings appears to be an important determinant of our happiness or distress. *High-level strivers* are individuals who describe their goals in abstract and expansive ways ("become the best manager in the company") whereas *low-level strivers* tend to frame their goals in concrete terms ("meet next week's sales quota"). Emmons (1992) found that high-level strivers experience more psychological distress but less physical illness whereas low-level strivers show the opposite pattern (less distress, greater risk of illness). High-level strivers are better able to deal with their conflicts in the long run (although they experience more distress while doing so). Low-level strivers, on the other hand, do not feel distress—because they repress conflicts among their personal strivings—but at the long-term cost of an increased risk of physical illness (Emmons, 1992).

Our Personal Projects

Brian Little defines *personal projects* as extended sets of actions designed to reach some goal. These projects may vary along several dimensions. For example, they may be relatively important or unimportant to us, chosen by us or assigned by someone else, solitary concerns or ones shared with others, and highly specific or most general. Like the prior approach, Little (1989) stresses the idiographic nature of an individual's *personal* projects: They have meaning and significance to the person.

Little's research program begins by asking college students to list the projects they are currently working on. Examples of such projects include "finish my psychology essay," "make new friends," and "lose 10 pounds." They then rate each project along a series of dimensions.

Little (1989) finds that the three dimensions that reveal the strongest correlations with overall present life satisfaction are stress, outcome, and control. Those who rate their projects as highly stressful show *less* overall life satisfaction, whereas those who rate themselves as being in control of and making progress toward a desired outcome tend to be more satisfied with their present lives. Little's findings support Bandura's concept of *self-efficacy* as mediating between our personal projects and our sense of competency and well-being. Not only is personal project efficacy associated with happiness, but also the meaningfulness of the project is strongly related to how well it allowed the students to "be themselves." Individuals whose personal projects are consistent with core aspects of their identity report higher levels of meaning than those whose projects are less related to their identity (McGregor & Little, 1998).

Moreover, Palys and Little (1983) found that the time dimension of personal projects relate to one's present subjective well-being. Projects extending very far ahead in time (a college student who wants to become head of a major corporation) are less likely to be related to present life satisfaction and well-being than projects that can be realized sooner. It is important for our present well-being that our personal projects strike the right balance between being personally meaningful as well as manageable in the here-and-now to provide us with the satisfaction of seeing them successfully realized.

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QUESTIONS TO PONDER

1. Is it possible to live a full life without goals? Can a person realistically have the goal of "having no goals"? What would be the psychological consequences?

2. How do people decide which particular goals to pursue? How are goals related to a person's needs and motives?

3. What are the differences between a "want" and a "need"? List five things you want and five things you need. Which list is more essential to achieve your present goals?

4. From the standpoint of evolutionary psychology, do humans really have a *need* for self-actualization? Why or why not?

5. Carl Jung postulated that *archetypes* are unconscious bundles of energy found in all humans that help us deal with reality. Is archetype a synonym for what evolutionary psychologists call *modules*? If not, how do these concepts differ?

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NOTES

1. Responding "I don't know" does not imply the presence of unconscious motivation if the question concerns *how* one performed a certain behavior. If you are asked to explain how you tie your shoelaces, for example, you may be hard-pressed to articulate consciously the precise sequence of your actions. All well-rehearsed, overlearned, habitual

behaviors may be performed more or less automatically with minimal awareness. But the question of unconscious motivation is relevant should a person *honestly* answer, "I don't know" to the query, "*Why* did you tie your shoelaces?" Of course, "I don't know" may simply be short-hand for "It's none of your business."

2. Adler is sometimes mistakenly identified as a "Neo-Freudian." This error probably traces back to Hall and Lindzey's (1957) first edition of their hugely influential *Theories of Personality* that lumped Adler, Horney, Fromm, and Sullivan together in a chapter labeled "Neo-Freudians" because that's how each *began* their careers, as followers of Freud. But an examination of their mature theories shows they have little in common with the basic drive-reduction premises of psychoanalysis. Hall and Lindzey's third edition (1978) now classifies these theorists as "Social Psychological," a more accurate depiction because their theories replaced Freud's biological reduction-ism with our social environment as a more important influence on our personality development.

3. The formula that connects the number of people in a group (N) to the number of possible two-person relationships (R) is $R = N(N-1)/2$. So for the 20 lucky people at your party, there are $20 \times 19/2 = 10 \times 19 = 190$ possible 2-person conversations.

4. Will the cheater-detection module eventually eliminate cheating? No. Natural selection tells us that the really good cheaters will go undetected and pass along their clever cheating genes to their offspring. But so will those who are skillful cheater detectors. As some get better at detection, some cheaters get better at avoiding detection. And so forth and so on. This is an example of an evolutionary arms race (Pinker, 1997).

5. Bonnefon et al. (2013) report that while trustworthiness detection is a reliable skill, it is easily overridden by distractions from irrelevant variables such as clothing and facial hair. If these findings are replicated, the implication is that we need to learn to trust our intuitive (i.e., modular) judgment because any conscious analysis only makes it worse. All modular processes are impenetrable or opaque to conscious analysis. We can experience this fact for ourselves by trying to consciously articulate all of the processes that allow us to see. Vision is modular.

6. Informal evidence of how highly we value being part of group appears in the strong ratings in numerous countries around the world of the long-running TV show (it began airing in Europe in the late 1990s; the United States in 2000) depicting strangers who form into tribes and vote each other off islands.

7. Dave Eggers dystopian novel, *The Circle*, takes obsession with social media to its logical and creepy conclusion.

8. "Survival of the fittest" was first introduced by British philosopher Herbert Spencer in 1864. He used it to replace Darwin's term, "natural selection." Darwin accepted this phrase in 1868 to mean "better designed for an immediate, local environment." Regrettably, Spencer's phrase was inappropriately extended to refer to British society as a whole. "Survival of the fittest" became a convenient rationalization by those born at the top of the social class system to justify their superior standing ("We're simply more fit, don't you know!"). "Social Darwinism" has interfered with some people's understanding of Darwin's exclusively *biological* meaning of "survival of the fittest." Any examination of Darwin's life clearly shows he certainly was *not* a "Social Darwinist."

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SUGGESTIONS FOR FURTHER READING

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Miller, G. (2000). *The mating mind: How sexual choice shaped the evolution of human nature*. New York, NY: Anchor Books.

Wright, R. (1994). *The moral animal: Evolutionary psychology and everyday life*. New York, NY: Pantheon.

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INTERNET RESOURCES

1. For information about the relationship between rejection and self-esteem, see http://www.psychologytoday.com.articles/200707/dumped-not-down.

2. Mark Leary has provided a number of personality scales to measure such characteristics as our need to belong, our fear of being negatively evaluated, and so on, go to http://people.duke.edu/~leary/scales.html.

3. To take a personality test that measures the three components of the Dark Triad, go to http://personality-testing.info/tests/SD3.php.