A

Abnormal Psychology

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Abnormal psychology is the area of psychological investigation concerned with understanding the nature of individual pathologies of the mind, mood, and behavior. It addresses dysfunction associated with distress or impairment in functioning and a response that is not typical or culturally expected. Such dysfunction should be considered on a continuum, rather than solely whether it is present or absent. Clinical assessment and diagnosis are important processes in the understanding and treatment of abnormal behavior, or psychopathology. Clinical assessment involves the evaluation of psychological, biological, and social factors in an individual presenting with abnormal behavior or symptoms of a possible psychological disorder. Diagnosis refers to the determination of whether reported problems or symptoms meet the criteria of a psychological disorder. As there are no specific lab tests to identify the presence of a disorder, diagnosis depends on the client report of symptoms, clinician observation of behavior, and signs from a mental status examination. *The Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (DSM-IV) provides a recognized classification system for identifying abnormal behavior. It includes disorders arranged in a number of major diagnostic classes: disorders usually first diagnosed in childhood (e.g., mental retardation, learning disorders, pervasive developmental disorders); delirium, dementia, amnestic, and cognitive disorders; substance-related disorders (i.e., substance use disorders, and substance-induced disorders); schizophrenia and other psychotic disorders; mood disorders (i.e., depressive and bipolar disorders); anxiety disorders; somatoform disorders; factitious disorders; dissociative disorders; sexual and gender identity disorders; eating disorders; sleep disorders; impulse-control disorders; adjustment

disorders; and personality disorders. Personality disorders reflect an enduring pattern of functioning that deviates from the expectations of an individual's culture. They are also pervasive and inflexible, have an onset in adolescence or early adulthood, are stable over time, and lead to distress/impairment. There are three clusters of personality disorders based on descriptive similarities. Cluster A reflects odd/eccentric behavior and includes paranoid, schizoid, and schizotypal personality disorders. Cluster B reflects dramatic, emotional, and erratic behavior, and includes antisocial, borderline, histrionic, and narcissistic personality disorders. Cluster C reflects anxious/fearful behavior, and includes avoidant, dependent, and obsessive-compulsive personality disorders. Culture often sets parameters for what is viewed to be pathological versus what is not. For example, prior to 1980 the DSM included homosexuality as a mental disorder; it has since been removed from the DSM and is seen as part of normality. Diagnosis continues to evolve as the understanding of mental disorders increases. This is reflected by changes to each new edition of the DSM. Diagnosis is limited by clinical judgment about whether an individual's symptoms meet diagnostic criteria. Cultural differences can be misinterpreted as impairments if the clinician is not sensitive to the cultural context.

Conceptions of abnormal behavior have changed considerably over time. Efforts to understand problematic behavior often derive from the prevailing theories of behavior that are popular at any given time. During the fourteenth to fifteenth centuries supernatural traditions prevailed which suggested that deviant behavior was defined by the battle between good and evil. Bizarre behavior was seen as the work of the devil and witches and drastic action was taken against those who were viewed to be possessed, such as exorcism. Later, biological traditions proposed physical causes for mental disorders. Hippocrates, known as the father of modern medicine, suggested that mental disorders were caused by brain pathology or head trauma. Brain functioning was proposed to be related to four bodily fluids or humors – blood, black bile, yellow bile, and phlegm – which emanated from different organs. Disease resulted from too much or too little of the fluids. For example, too much black bile was thought to lead to melancholia (depression). The biological tradition flourished in the nineteenth century, leading to increased institutionalization for those with mental illness. Psychological traditions soon developed. The approach of moral therapy developed to treat patients as normally as possible in environments providing the opportunity for social interaction. By the twentieth century two major psychological approaches emerged. Sigmund Freud developed the psychoanalytical approach which emphasized the influence of unconscious processes on abnormal behavior. Behaviorism also emerged with a focus on learning and adaptation in the development of psychopathology. The prevailing theory is now one of a multidimensional model of psychopathology (integrating biological, behavioral, cognitive, emotional, and social factors). This biopsychosocial model has been attributed to the work of George Engel. He described a framework from which to understand health and disease, offering a broad view that biological factors alone are not enough to explain health

and illness. Biopsychosocial factors are thought to be involved in the development, course, and outcome of illness, including mental disorders. The relative importance of any one factor on causation varies. The role of these factors also varies across individuals, and across stages of the lifespan. Biological influences include the role of genetics in the development of illness. It is a challenge to determine which genes affect behavior and how. It is expected that no single gene or even combination of genes determines whether someone will develop a disorder, but rather genes providing risk interact with environmental factors. Psychosocial influences include stressful life events, one's personality and temperament, interpersonal relationships, and culture. Various terms are used in discussing the etiology of mental illness, such as correlation, causation, and consequence. Correlation refers to the association between two or more events, and does not necessarily mean causation. Correlation studies have identified risk factors, which are biological, psychological, or sociocultural variables that increase the probability for developing a given disorder. Causation is difficult to establish, particularly due to the challenges of experimental research involving human subjects.

There are several research strategies for studying psychopathology, with the ultimate goal to uncover the causes of a particular disorder. Case study methodology provides detailed examination of a single individual; it provides detailed understanding of the given individual, but not general psychological principles. Epidemiological studies address the distribution of disorders in a given population, and the variables that are associated with the distribution. To study genetic and environmental influences, behavior-genetic paradigms are used which involve family, twin, and adoption studies. Environmental studies also address shared versus non-shared influences on psychopathology. Biological studies include psychophysiological research which addresses the impact of physiological responses on psychological processes, and utilizes brain imaging technology to document the structure and functioning of the brain. Psychopathology research is increasingly turning to hybrid forms of research design to address multiple methodological approaches simultaneously.

Treatment for mental disorders has evolved since the deinstitutionalization movement of the 1950s. Treatments may be pharmacological, psychological, or a combination of both. Much research has focused on the effectiveness of psychotherapy for psychological disorders. Most prominently, Hans Eysenck questioned the effectiveness of psychotherapy in papers in 1952 and 1960. This spurred increased attention to the study of therapeutic effectiveness, and in 1977 Smith and Glass reported that therapy works after utilizing meta-analysis. With increased efforts to study therapy outcomes has come increased attention to the development of empirically-based treatment for psychological disorders. The goal is the identification of which treatment is most effective for which person.

SEE ALSO: ► Clinical psychology ► Developmental psychopathology ► *Diagnostic and Statistical Manual* ► Mental illness ► Psychopathology

Academic Achievement

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Academic achievement refers to any measure of a student's progress in a scholastic setting or in an academically related subject area. Academic achievement is usually measured by a student's subject test scores, course grades, standardized test scores, or matriculation through school. The body of research related to academic achievement is significant. Numerous research studies use some measure called academic achievement. Academic achievement has been studied since the early days of psychology. Such notable psychologists as James, Lewin, Festinger, and McClelland have all made important early contributions to the study of academic achievement.

Researchers use many different types of behaviors and measures to quantify academic achievement. Most studies use these measures to determine how some intervention, teaching technique, student condition, or learning situation affects achievement. Test scores and course grades are the most typically used measures of academic achievement. Often test scores result from assessments given during the course (e.g., a midterm or final exam grade), but test scores can also stem from standardized tests. Qualitative research in academic achievement utilizes interviews and alternative assessment techniques (e.g., portfolios, journal responses, etc.). These qualitative measures attempt to reveal aspects of academic achievement that may not be apparent in traditional pen-and-paper tests, such as cultural bias, nonverbal ability, or creativity.

Academic achievement is believed to be related to intellectual ability. One of the primary ways psychologists measure intellectual ability is through intelligence tests. Intelligence has been a popular indicator of academic achievement since Alfred Binet and Theodore Simon developed the first intelligence tests to determine the academic fitness of children in France. The exact nature of intelligence has been debated over the past century. Charles Spearman in the early 1900s advocated for a generalized view of intelligence (called the *g* factor). This *g* factor was thought to pervade all aspects of life so that a person who was intelligent in one subject would also be intelligent in another. Lewis Terman, who brought the original Binet-Simon test to the United States, developed a formula for calculating intelligence by dividing mental age (the score from the test) with chronological age and multiplying by 100. Studies throughout the years have shown a correlation between this intelligence quotient (IQ) and academic achievement. Modern theorists and researchers, such as Howard Gardner and Robert Sternberg, believe that intelligence is a combination of several factors, and people can be intelligent in one or more areas and perhaps not in others. Intelligence tests, such as the Stanford-Binet and the Wechsler Intelligence Scale for Children (WISC), are often used by school districts to identify students who might need special education

services, either for mental retardation or for giftedness, although they are not typically used as the only determinant of special education placement. Critics of intelligence tests believe that the tests harbor cultural and socioeconomic biases that inordinately identify minority and lower-income children as academically challenged.

Numerous lines of research have revealed other factors that lead to determining and defining academic achievement. The level of intrinsic and extrinsic motivation one has can be related to academic achievement. Intrinsic motivation is that which is inherently desirable, such as enjoying an activity for its own sake, while extrinsic motivation includes externally valuable rewards for behavior. Studies indicate that intrinsic motivation leads to higher long-term academic achievement. People who report that when they participate in activities for their own sakes, they work harder and longer toward accomplishing the goals they set. Extrinsic motivation often leads to less enjoyment in a given activity, particularly in terms of the overjustification effect. Studies on the overjustification effect have shown that when people are rewarded for activities they find inherently enjoyable (e.g., learning), they will lose their intrinsic motivation for the activity and rely on the extrinsic rewards. Whether externally valuable rewards such as grades have a detrimental effect on academic achievement is unclear, however.

The goals students set for themselves can also affect academic achievement. C. R. Snyder's hope theory suggests that the quality of a goal determines whether one is hopeful. Snyder proposes that those who set easily achievable goals, such as watching TV all day, will not show high levels of hope even though they have set concrete goals. Goals that are too easily achieved do not lead to developing suitable pathways or require high levels of agency for achieving the goals. The same is true for those who set unreasonable goals. Snyder believed that goals should be challenging, yet achievable in order to lead to high levels of hope. A complementary line of research is goal orientation theory, formulated by Nicholls, Dweck, and Ames, as well as others. These researchers have found that the type of goals students set for themselves influences their academic performance. They identified two main types of goals related to academic achievement: mastery goals, which focus on learning the material or mastering a skill; and performance goals, which focus on earning a particular grade or doing better than another student. According to Dweck, students who set mastery goals do better in school and are resilient in the face of failure. Performance-oriented students do not seek out challenges, but only pursue those activities that will guarantee success. Performance-oriented students experience less academic achievement than their mastery-oriented counterparts. Both hope and goal orientation research suggest that the quality and type of goals affect academic achievement.

The types of attributions students make about failure can affect achievement. Weiner's attribution theory predicts that students who make stable attributions about failure experience self-pity and decreased effort. Seligman's explanatory style theory suggests that pessimistic students who are at risk for depression often underachieve. A pessimistic explanatory style predicts that students who fail will

explain the event as internal ("I'm so stupid!"), stable ("I'll never do well in this subject!"), and global ("I must be a terrible student overall!"). These types of attributions about academic failure lead students to underachieve.

Social and cultural factors that influence academic achievement include socioeconomic status (SES), racial/ethnic status, and gender. Students who live in low SES neighborhoods and attend schools that are poorly funded typically achieve less than their more affluent counterparts. Students in certain minority groups (i.e., Hispanic, African American) that are typically impoverished also underachieve, yet other minority groups (i.e., Asian American) achieve as well or better than the majority students. In addition, female students tend to underachieve in certain areas (e.g., math and science) when compared with their male counterparts. Students' perception of racial and ethnic stereotypes about their own group can influence how well they achieve on certain standardized tests. Claude Steele and Josh Aronson have identified a phenomenon known as stereotype threat that reveals the impact of prejudice on academic achievement. When students are made aware of the stereotypes about their own group, they tend to perform on standardized tests in the way the stereotype would predict. For instance, African American students scored lower on standardized tests than their White peers when told that the test would reveal innate intelligence. In addition, White students underperformed on standardized tests as compared to Asians when Whites were told the test would reveal skill in math. Research in stereotype threat has shown that the activation of a stereotype can lead to decreases in academic performance in many different groups.

Current research into academic achievement focuses on narrowing the definition of the term and pinpointing which factors most influence achievement. Researchers also debate how well traditional academic measures reveal true achievement. Legislation such as the No Child Left Behind Act (2002) defines academic achievement in terms of progress on standardized tests. This type of federal attention to test scores spurs research on practices that increase the scores. Leading psychologists have criticized such reliance on standardized test scores. Some argue that establishing benchmarks for all students of a particular age to achieve neglects issues in developmental readiness and individual progress. For instance, Robert Sternberg and Howard Gardner advocate a broad view of intelligence, and in turn academic achievement, which encompasses academic and non-academic domains. In their *Handbook of Competence and Motivation*, Andrew Elliot and Carol Dweck suggest that academic achievement ought to be reformulated as competence. Elliot and Dweck argue that achievement is too broadly articulated, with no coherent parameters by which to measure it, and yet does not go far enough to grasp the breadth of achievement. They propose that competence more accurately reflects the behavioral constructs of achievement and allows for achievement to be studied beyond the classroom.

SEE ALSO: ► Goals and goal-setting theory ► Intelligence ► Seligman, Martin ► Snyder, C. R. ► Stereotype threat

Actualizing Tendency

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Actualizing tendency refers to an innate growth drive or impulse that is said to exist within all human beings. Proponents of the concept make the optimistic assumption that people have an inherent tendency to become more elaborated, integrated, and internally coordinated over time – that is, to grow and develop as personalities. Although not everyone grows throughout the lifespan, the potential remains throughout. The challenge for teachers, therapists, and service providers, then, is to help people "unlock" these sometimes-hidden capacities.

The idea that humans have inherent growth potentials can be traced back at least to Aristotle, and his proposal that all people are born with certain virtues whose recognition and cultivation leads to happiness. The idea reappears in the enlightenment era proposal that people naturally seek greater self-determination and happiness, and also in the romantic era proposal that people are naturally good and will develop into virtuous citizens unless the socialization process goes awry. Such assumptions became unpopular during the early twentieth century, as operant behaviorism and Freudian psychoanalysis dominated mainstream thinking. However, even at that time some theorists, such as Jackson, Smuts, Dewey, Piaget, Angyal, and Goldstein, began to make use of the actualizing concept. These originators of the organismic theoretical perspective shared in common a belief that human beings have an inherent drive towards increasing complexity, self-organization, and wholeness. Stated in abstract terms, living systems are open and able to maintain themselves far from equilibrium, resisting the universe's dominant trend towards entropy or disorganization, by changing and elaborating their internal structures in response to perturbations and challenges. In this view *all* living things, not just humans, might be said to have an actualizing tendency, rooted in life's ability to utilize energy in service of compensation, adaptation, and learning.

Today, the actualizing tendency idea is most closely associated with the humanistic psychologies of Abraham Maslow and Carl Rogers. Maslow proposed that all humans have a need for self-actualization, but that this need does not come to the fore until lower level needs for safety, belongingness, and esteem are met. In Maslow's view the actualizing tendency is only contingently activated, and becomes fully manifest in only a rare few. In contrast, Rogers viewed the actualizing tendency as standard equipment in all human beings. Although people may sometimes get "stuck," the tendency can be reactivated by skilled therapists who give unconditional positive regard, use empathy, and employ nondirective techniques. In particular, Rogers proposed that all people have an *organismic valuing process* (OVP) which enables them to perceive and enact the most health- and growth-relevant choices for themselves. Although the OVP is

subtle and its outputs easily overlooked or ignored, Rogers claimed that accurate internal information is always available given sufficient desire and attention. Notably, neither Maslow nor Rogers provided empirical research support for their ideas, an omission for which the humanistic psychologists were justifiably criticized.

Within contemporary research psychology, the actualizing tendency is probably best represented within Deci and Ryan's self-determination theory (SDT). This complex but comprehensive theory of human motivation was built on the concept of intrinsic motivation, in which people are internally motivated to explore and engage the environment, elaborating their knowledge and skills in the process. SDT's proactive view of human nature contrasts with the reactive views of earlier drive and learning theories. Later, the theory expanded to posit an *organismic integration process*, which motivates people to internalize and identify with important behaviors that are not intrinsically enjoyable (i.e., studying, diaper-changing). Indeed, there is evidence that this process does occur and is even normative; for example, older children perform socially valued behaviors, such as sharing with others and picking up their rooms, for more internalized reasons compared to younger children, and older adults pursue personal goals for more internalized reasons than younger adults. Given that internalized motivation typically correlates with measures of well-being and personal development, such normative temporal trends may be interpreted as supporting the existence of an innate actualizing tendency in all humans.

Sheldon, Arndt, and Houser-Marko provided specific empirical support for the existence of the OVP posited by Rogers, through an application of SDT's *organismic values* model. Sheldon, Arndt, and Houser-Marko showed that participants tend to shift towards intrinsic values (satisfying and growth-promoting; intimacy, growth, community) and away from extrinsic values (compensatory and less satisfying; money, image, fame), over periods of time ranging from 20 minutes to 6 weeks. Also, Sheldon showed that a similar biased shift away from extrinsic values and towards intrinsic values took place over the 4 years of the college career. Furthermore, Sheldon and Kasser showed that older adults listed more generativity and integrity strivings, compared to young adults who listed more identity strivings. They suggested that the observed age-based shift towards the higher levels of Erik Erikson's stage model of personality development represents the cumulative effects of the OVP and the actualizing tendency.

Importantly, SDT does not propose that growth and actualization tendencies will always win out; a properly supportive environment is required to facilitate these tendencies. Specifically, authorities, teachers, bosses, parents, therapists, and coaches should be autonomy supportive rather than controlling, if they want to maximize their charges' growth and self-organizational potentials. Perhaps paradoxically, if people are granted the freedom to decide for themselves what to do, then they are most likely to internalize the values that authorities want them to. In contrast, authorities who try to force-feed ideas to their charges, or to compel or coerce their behavior, tend to forestall the internalization process.

Another contemporary perspective relevant to the actualizing tendency is that of motivational interviewing (MI). MI is a set of techniques for resolving clients' ambivalence, thus helping them to move towards more adaptive ways of being, especially in the domain of health behavior. MI assumes that the impetus for positive change can only come from within the client, and must be discovered by the client with a minimum of interference and direction from the therapist. Instead, the therapist merely reflects and mirrors the different sides of the client's internal conflicts, so they may be integrated in a manner of the client's own making. Notably, MI and SDT are quite consistent with one another, providing complementary technical and theoretical resources for counselors and researchers.

Positive psychology is in part an attempt to rectify the biases of past research's focus on pathologies and errors. The actualizing tendency concept is quite relevant for positive psychology because the goal of enhancing actualization fits squarely with positive psychology's emphasis on understanding positive adaptation and change, i.e., thriving. Also, the actualizing concept helps to ground positive psychology's optimistic assumptions regarding human nature, via a perspective ultimately rooted in biology and living systems theory. In addition, the concept provides an important heuristic for helping situations, suggesting that encouraging people's self-direction and personal initiative may be paramount for helping them to reach new levels of thriving. Finally, the concept helps link positive psychology to its conceptual and historical precursors (i.e., the humanistic and organismic philosophical perspectives). Acknowledging such linkages is something that positive psychology sometimes seems reluctant to do, to its own and the field's detriment.

In future research, it will be important to develop concepts and measures for determining when the actualizing process is occurring within an individual's life, vs. when it is not occurring. Ideally, this account would include biological and neurofunctional markers, perhaps involving temporal lobe activation or complex intercoordination between different brain regions. Research also needs to understand better the routes to actualization. As suggested above, autonomy-supportive authorities may help to forward the process, as well as unconditional positive regard or psychological need-satisfaction in general. However, it is also apparent that positive change often occurs in the face of negative circumstances and great difficulties (i.e., post-traumatic growth), and research needs to understand the different initiators, processes, and results of growth derived from supportive vs. traumatizing life-circumstances. It will also be important to understand how exposure to inspirational peers and mentors might "kick-start" people's own actualizing process. Could actualization sometimes result from social contagion processes, such as those instantiated by transformational leaders? Obviously, these are crucial questions for a positively-oriented psychology.

SEE ALSO: ► Intentional self-development ► Maslow, Abraham ► Positive therapy ► Rogers, Carl ► Self-determination

Adaptability

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Adaptability is the capacity to adjust oneself readily (without great difficulty) to fit changed circumstances. This adjustment can be psychological and/or physical in nature, and the changed circumstances can be positive, negative, or neutral. Given the constantly changing universe in which all things exist, the degree of someone or something's willingness and/or capacity to adapt is a barometer of the likelihood of continued existence, as well as the subjective quality of that existence.

The traditional connotation of adaptability is a positive one. While the capacity to adjust to novel circumstances is positive, adaptability can lead to both positive and negative outcomes. A unique and complex concept, adaptability plays an integral role in several essential domains of human existence. Among these domains are developmental adaptability, interpersonal functioning, and relationship with the world of work. Adaptability is especially pertinent to the field of positive psychology, the focus of which is on defining and cultivating optimal functioning.

Adaptability is merely the *capacity* to change. Whether a change is made, as well as the appropriateness of the degree of change, is another issue entirely. A person may have a high capacity for change, but low self-efficacy about the probability of successfully implementing that change. Although the person realizes that change is necessary, and possesses many of the physical and psychological resources to effect change, the confidence to take action renders that capacity moot. There are many parallels between this aspect of adaptability and the agency component of Snyder's hope theory. Higher levels of hope facilitate more positive adaptation, increasing well-being, as well as the number of goals to be achieved and their difficulty and complexity. Furthermore, like most things in this world, adaptability exists as a continuum. Accuracy and moderation are the keys to successful adaptation.

Adaptability is not always a positive force. *Hedonic adaptation*, one of the many forms of adaptability, refers to a situation where someone adjusts to a positive life event to the point where the event is taken for granted and loses its positive valence. Hedonic adaptation is part of the hedonic treadmill. According to the model, although new circumstances may cause temporary increases in happiness or sadness, people rapidly adjust, and the effect of these new circumstances on their well-being then quickly decreases or disappears entirely. For example, Brickman and colleagues showed that recent lottery winners were no happier than controls (nonlottery winners) and, furthermore, that recent victims of paralysis were not as unhappy as one would expect. Brickman further reasoned that no matter whether something makes you happier or sadder, you will always come back to your biologically predetermined happiness set point. However, Diener and colleagues found individual differences in the rate and extent of adaptation that occurs to the exact same event with regard to the effect on measures of life satisfaction or subjective well-being. Understanding individual differences in adaptation

is important because it will help in discovering when and why hedonic adaptation does and does not occur.

Adaptability is a complex psychological mechanism that has received much intrigue and scrutiny in recent years. *Resilience*, and its role in positive adaptation, has been of particular interest. Resilience is often referred to as the maintenance of successful positive adaptation despite experiences of significant adversity. Temperament, sex, intellectual ability, humor, empathy, social problem-solving skills, social expressiveness, and an inner locus of control have been found to influence adaptation under stressful or adverse conditions.

Buckingham and Clifton identified adaptability as one of the 34 talent themes measured by the Clifton StrengthsFinder. They define *talent* to mean a "naturally recurring pattern of thought, feeling, or behavior that can be productively applied" (Clifton, Anderson, & Schreiner, 2006, p. 2). A talent represents a capacity to do something. In the case of adaptability, that capacity is to live in the moment. Someone who possesses a high level of adaptability sees the future as something they make for themselves with their choices today. Adaptability enables them to be flexible and respond to the demands of the moment even if they diverge from plans for the future. They are extraordinarily flexible people able to stay productive when the demands of life are pulling them in many different directions at once.

Career Adaptability

Career adaptability is the readiness to cope with the predictable tasks of preparing for and participating in one's job, and also includes the willingness to deal with the unpredictable changes in work and working conditions. That adaptability is a highly valued commodity in the world of work today which is not surprising. In today's ever-changing workplace, in which organizations are characterized by dynamic environments, the need for adaptive workers has become increasingly important. New technology, globalization, and modifications in jobs require workers to adapt to new and varied situations at work. This influx of new technology mutates the nature of various work tasks, and streamlining, or corporate "rightsizing," requires employees to learn new skills to remain competitive for different jobs. For the majority of the work force, gone are the days of learning one skill set to be used for an entire career. Instead, effective performers in today's organizations are those who anticipate future needs and adapt to changing job requirements by learning new tasks, technologies, procedures, and roles. Furthermore, the demands of an ever-increasingly global economy necessitate the capacity to adapt to different cultures and their subsequent values and orientations.

Pulakos and colleagues devised a multidimensional model to describe and measure adaptive job performance. The model consists of eight empirically generated dimensions: handling emergencies or crisis situations; handling work stress; solving problems creatively; dealing with uncertain and unpredictable work situations; learning work tasks, technologies, and procedures; demonstrating interpersonal

adaptability; demonstrating cultural adaptability; and demonstrating physically oriented adaptability. Indeed, adaptability has become so popular within the world of work that numerous researchers have suggested that adaptive characteristics should be one type of criteria used for personnel selection and performance evaluation. Some have even proposed that career adaptability replace career maturity as the central construct in career development theory.

Interpersonal/Social Adaptability

Adaptability can also be applied to interpersonal relationships. It is a personal characteristic that allows an individual to change his or her way of being in order to relate better to another person or persons. For example, you would lower your voice in a library, avoid profanity in a church, and raise your hand during class even though deep down you might prefer to be loud, vulgar, and impetuous.

If an individual can maintain their authenticity while adapting to the different ideas, customs, and worldview of others, that is the ideal scenario. *Interpersonal adaptability* is defined by being able to make compromises and to adjust to changing circumstances. Being able to consistently consider someone else's needs is also a positive aspect of adaptability. This ability to adapt makes all other relationships more likely to be meaningful and successful, and is a great boon to overcoming the evolutionary problems of reproduction and survival.

The when, how, how much, what, and why of adaptability are all crucial questions, and ones that are answered in various ways. Some are gleaned by individuals on their own through trial and error. Others are learned from family, friends, and society in general. When there is too much adaptation, instability and chaos result. However, when there is not enough change, rigidity and intractability arise. These polar extremes are especially problematic in interpersonal or group dynamics. Therefore adaptability, like all things, must be accurately engaged to produce a positive result.

Social/cultural learning increases human adaptability, particularly in uncertain environments, because it allows us to obtain useful information without the costly individual learning process of trial and error. For example, if a hungry person comes across a patch of berries in a field, but does not know which ones are edible, the process of trial and error could prove fatal. However, the person can avoid this problem by relying on information from other people with prior experience. The acquisition of human food preferences is very heavily influenced by social/cultural adaptation.

Evolutionary Psychology

Adaptability has also played a significant role in the evolution of mankind. The central aim of evolutionary psychology is to identify psychological mechanisms and behavioral strategies as evolved solutions to the adaptive problems that humans

have faced for millions of years. Human adaptive psychological mechanisms operate according to different principles across different adaptive domains, are many, and are complex solutions to specific adaptive problems. In general, these problems fall into two broad categories: problems of survival and problems of reproduction.

An example of evolutionary adaptability to address the problem of survival is infant attachment to the caregiver and early female interest in infants. An infant's fear of strangers is an adaptive psychological mechanism that has evolved to ensure the infant's safety and better its chances for survival. In addition to the examples of infant attachment to the caregiver, early female interest in infants, and infant avoidance of strangers, humans share with other primates many age-specific behavioral and psychological adaptations for survival and reproduction. Some of these adaptive traits have immediate fitness benefits at the age at which they are expressed, whereas others have delayed benefits that manifest later on. The capacity to adapt and change according to one's physical and social environment is an essential part of the development of human beings, both within their lifespan and across generations.

SEE ALSO: ► Career development ► Clifton StrengthsFinder ► Evolutionary psychology ► Hope ► Vocation

Reference

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Admiration

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Admiration is an emotional response involving pleasure, wonder, and reverence. Although admiration has been mentioned in the psychological literature for many years, it has only recently been studied empirically because it is representative of the many positive emotions that have become the focus of research by positive psychologists. According to Barbara Fredrickson, positive emotions are believed to be unique in that, unlike negative emotions which direct one's responses toward narrow and specific goals, they offer opportunities for broadening one's thought-action repertoire in a way that promotes positive well-being by increasing one's personal resources.

Admiration is among a group of positive emotions that are moral in nature. Moral emotions, as described by Haidt, are unique in that they are other-focused, rather than being focused directly on self-interests, and as such, they elicit prosocial or goal-directed behaviors that have potential benefits to others. Four

different families of moral emotions are discussed in the literature, including: (1) self-conscious emotions (shame, guilt, embarrassment); (2) other-suffering emotions (sympathy, compassion, empathy); (3) other-condemning emotions (contempt, anger, disgust); and, (4) other-praising emotions (gratitude, elevation, admiration). These latter emotions are the only ones that can be considered as positive moral emotions in that they involve emotional responsiveness to good deeds. Thus, as a positive moral emotion, the experience of admiration should broaden one's thought-action repertoire by recognizing goodness in other people.

Although the literature on admiration is sparse, available research by Haidt and colleagues suggests that admiration is triggered by specific contexts and elicits certain physical sensations. For example, whereas elevation is typically a response to witnessing excellence of the moral kind, admiration is a response to witnessing great skills or abilities. In a series of studies using video induction and self-report methods (recall and diary) to delineate the characteristics that make the other-praising emotions unique, in 2006, Algoe and colleagues found that both admiration and elevation produced a feeling of being "uplifted," but the experience of admiration was unique in producing excitement and energy. Thus, the experience of admiration is motivating because it activates one towards self-improvement; individuals who witnessed another person displaying great abilities reported the desire to achieve and to praise and emulate the person being admired. Finally, the experience of admiration was the only other-praising emotion that was associated with the kind of inspiration that includes having tears in one's eyes and experiencing chills or tingles.

In addition to being considered within the framework of positive emotions, the concept of admiration has also been considered as a character strength in a classification system for positive traits that includes 24 character strengths, which demonstrate six different virtues that appear to be valued across history and cultures. The core virtue of transcendence includes a character strength that involves aspects of admiration: namely, appreciation of beauty and excellence or awe, wonder, and elevation. Conceptualized in this way, the positive moral emotion of admiration is considered in a trait sense; a person who is high in the character strength of appreciation would have frequent emotional experiences of awe and its related emotions of admiration, wonder, and elevation, whereas a person who is low in appreciation would have fewer experiences of awe-related emotions. The practice of appreciating beauty and excellence is representative of the virtue of transcendence because it provides an experience of connecting to something larger than oneself. This argument is consistent with the consideration of awe-related emotions, including admiration, as important elements in a group of moral emotions referred to by Haidt as self-transcendent. Admiration, then, can be considered as an emotional response or aspect of character that motivates one toward self-improvement in a way that is transcendent.

SEE ALSO: ► Awe ► Haidt, Jonathan ► Heroes ► Positive emotions ► Strengths (personality)

Adult Attachment Security

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An *attachment* refers to a unique and enduring affectional bond between two persons and, according to attachment theory, the experience of security within these relationships favorably shapes individual developmental trajectories across the lifespan. Although originating in the study of infant and early child development, over the past two decades attachment theory has emerged as an important framework for understanding healthy and effective adult behavior.

Attachment Security: Basic Concepts and Assumptions

Attachment theory posits that our human propensities to seek and form affectional bonds with others reflect the functioning of an independent and innate motivational system that is operational at birth, activated by the experience of fear, discomfort, or fatigue, and designed by evolution to protect the species from external threat and predation. In short, when stressed, infants are programmed to elicit care and protection from their caregivers who, in turn, are typically disposed to provide these resources to their offspring. The caregiver's appropriate responsiveness to the infant's proximity needs returns the system to a quiescent state, thus enabling the infant to engage in unfettered exploratory behaviors. To the extent that this recursive dynamic is a consistent feature of early infant–caregiver interactions, the infant experiences a secure attachment bond with the caregiver, and the relationship itself advances the child's acquisition of affect self-regulatory competencies by alternatively serving as a *safe haven* from situational threat and a *secure base* for autonomous exploration and progressive environmental mastery. By contrast, an insecure attachment is formed when the infant's bids for comfort or care are either inconsistently apprehended or consistently rejected by the caregiver. These problematic relational patterns are assumed to bias the normative functioning of the attachment system toward either chronic states of *hyperactivation* (i.e., excessive proximity-seeking behavior) or *deactivation* (i.e., proximity-seeking behavior is suppressed) that impede healthy personality development.

Early observational studies of mother-infant pairs during controlled episodes of threat, separation, and reunion (i.e., the "Strange Situation") reliably identified the presence of three different *attachment styles* (i.e., secure, anxious, avoidant) representing distinctive patterns of mother-infant interactions under these varying conditions. Attachment theory further assumes that, within the first year of life, the child comes to cognitively represent these relational patterns as part of an *internal working model of self and other* or IWM. By integrating self-perceptions of lovability and appraisals of the dependability of caregivers with interactional

strategies for managing the experience of insecurity, the IWM is presumed to function as a cognitive template (and thus an individual differences variable) that guides patterns of affective self-regulation and interpersonal behavior in later adult relationships.

The Conceptualization and Assessment of Adult Attachment Security

Beginning in the mid-1980s, two parallel lines of research on the nature of adult attachment relationships emerged – one in developmental psychology and the other in social psychology, with each line fashioning different ways of conceptualizing and assessing the construct of adult attachment security. Developmental psychologists have generally conceptualized adult attachment in terms of one's recollections and accounts of early (childhood) experiences with adult caregivers gathered via a semi-structured interview (Adult Attachment Interview [AAI]). On the basis of the independently-rated discourse quality of AAI narratives, interviewees are reliably classified into one of four adult attachment "states of mind": *Secure/autonomous* persons demonstrate the capacity to provide thoughtful, reflective, and coherent answers to AAI probes. By contrast, persons classified into one of the remaining insecure groups are likely to respond to AAI questions by either emotionally disassembling (*preoccupied*), denying the emotional impacts of painful attachment experiences (*dismissing*), or otherwise lapsing into dissociative and dysfluent speech (*unresolved/disorganized*).

Social psychologists have alternatively conceptualized adult attachment security in terms of how persons describe their typical cognitive, affective, and behavioral responses to intimate peer relationships. Factor analyses of a large number of these self-report measures demonstrated that the specific nature of one's adult attachment organization can be characterized by the relative level of fears of rejection or abandonment by intimate partners (i.e., Attachment Anxiety) together with the corresponding level of expressed discomfort with closeness and intimacy (i.e., Attachment Avoidance). These two relatively independent dimensions are further assumed to create a conceptual space wherein four distinct adult attachment styles can be located. Adults with a *secure* style exhibit low scores on both dimensions, whereas persons with a *fearful* style report high scores on both dimensions. By contrast, adults with a *preoccupied* style evidence high levels of Attachment Anxiety but low levels of Avoidance, whereas those with a *dismissing* style demonstrate the opposite pattern (i.e., high scores on Avoidance, but low scores on Anxiety).

Although evidence of classification congruence between interview and self-report measures has been modest at best, both approaches yield moderately stable assessments that are nonredundant with scores on measures of more basic personality traits. Indeed, there is a growing consensus that each assessment method offers complementary and potentially integrative perspectives on the larger construct of adult attachment security.

Key Findings

Whether assessed using interview or self-report methods, adult attachment security has been consistently related to more adaptive cognitive, affective, and interpersonal functioning. For instance, when compared to their less secure peers, secure adults generally demonstrate more flexible and optimistic cognitive processes, more differentiated, integrated, and resilient perceptions of self-worth, and more competent forms of coping and social behavior. Adult attachment security also has been linked to more confident academic and career exploration, higher levels of work satisfaction and parenting competence, stronger altruistic and prosocial orientations, more trusting, collaborative, and satisfying intimate relationships, and to evidence of post-traumatic growth. Furthermore, and consistent with theoretical expectations, adult attachment security has been be related to more positive retrospective accounts of early family environments and, across several prospective studies, to more favorable developmental trajectories.

Research has progressed rapidly from an early focus on establishing bivariate associations between adult attachment security and various indicators of psychosocial functioning to more sophisticated correlational and experimental investigations of mediational processes capable of explaining these relationships. In particular, recent experimental studies have used either contextually-activated or subliminal methods to prime the experience of attachment security in order to establish causal associations with perceptual and self-regulatory processes and to differentiate conscious and nonconscious features of the construct. Also receiving greater current emphasis are observational studies of the care-seeking and care-giving behaviors of intimate adult couples as well as the operation of adult attachment dynamics in therapist–client relationships. Emergent findings in the latter domain indicate that variability in adult attachment security is related to distinct client patterns of symptom-reporting and help-seeking behavior, to transference and countertransference processes, and to the formation of effective working alliances.

Directions for Future Research

The extant literature on adult attachment security also suggests several important directions for future inquiry. For instance, further theory-guided prospective studies of particular dyads (i.e., intimate couples, therapist–client, supervisor–worker) should yield a more nuanced understanding of how the attachment-related expectations and appraisals of both interactants cooperatively shape relationship processes and outcomes over time. Also, because few investigations have thus far studied adult attachment security within diverse samples, greater inquiry into how cultural variables may interact with attachment schema should prove useful. Lastly, emerging efforts to integrate attachment concepts and assumptions within broader systemic frameworks of affect-regulation, personality development,

and therapeutic change should advance the practical applications of research findings in promoting psychological health and effectiveness.

SEE ALSO: ► Amae ► Attachment theory ► Close relationships ► Romantic love ► Successful aging

Aerobic Activity

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A walk in the park, climbing the stairs at work, cycling through the forest, a game of soccer, and an early morning swim are all forms of aerobic activity. *Aerobic activity* is a continuous, rhythmic activity that uses large muscle groups, loads the cardiovascular system, and results in an increase in energy expenditure above resting levels. Aerobic exercise is a subcategory of aerobic activity that is planned, structured, and repetitive and is performed to maintain or improve aerobic fitness. A robust body of evidence demonstrates that regular aerobic exercise reduces morbidity and mortality for chronic diseases such as coronary heart disease, hypertension, stroke, diabetes, and some cancers. However, the advantage of aerobic exercise is not confined to preventing the aforementioned conditions. Mounting evidence now relates this mode of activity with enhanced psychological well-being, making aerobic exercise a viable pathway to many of the mind states espoused within positive psychology.

The "feel good" effect of aerobic exercise has been demonstrated through decreases in anxiety and depression and increases in mood and emotion, self-esteem, and cognitive functioning. However, even though empirical evidence demonstrates that single bouts of activity can make people feel better in the post-exercise time period, levels of inactivity remain high. Further, in today's society physical exertion has been overtaken by mental exertion both in the workplace and at home. Therefore, we must seek to expend energy during our leisure time or by active integration into our daily routine. Engaging in regular aerobic activity holds considerable potential to enhance well-being and mental health. For example, individuals who partake in such activity routinely express feelings of achievement, control, energy, and in the case of group exercise, a sense of belonging, even in the presence of enduring mental ill-health. Given the diversity of possible psychological responses, this discussion will focus on the relationship between aerobic exercise and two aspects of well-being that embody the broad sweep of positive psychology – positive affect and self-esteem.

Aerobic Activity and Positive Affect

Pleasure–displeasure and perceived activation are dimensions that suitably define *affect*, and pleasure is a key theme within positive psychology. A recent meta-analysis

demonstrated that single bouts of aerobic exercise can invoke feelings of high-intensity pleasure, such as energy, vigor, excitement, and revitalization. However, aerobic exercise is a complex behavior and the findings highlight that positive change relies on specific conditions. From 158 studies, analysis indicated that aerobic exercise was associated with a moderate increase in high-activation pleasant affect (average effect size of .47). Moreover, the positive effect of aerobic exercise was larger, more consistent, and generalizable for: a) assessments taken up to 5 minutes post-exercise; b) individuals reporting lower than average pre-exercise scores; c) exercise of low intensity; d) exercise durations up to 35 minutes; and e) low and moderate doses of exercise (a product of intensity and duration). These findings have practical implications because evidence from general psychology suggests that people tend to engage in activities that make them feel good and avoid activities that make them feel bad, or that cannot compete successfully with other more pleasant alternatives (e.g., resting). Therefore, physical activity promoters will find value in understanding that low-intensity exercise (e.g., walking) had almost double the post-exercise effect of moderate or high intensity exercise for eliciting high-activation pleasant affect.

Chronic aerobic exercise, involving repeated bouts of activity over a prolonged period of time, has also been found to elicit positive effects on affective states. A meta-analytic review by Puetz, O'Connor, and Dishman demonstrated that chronic exercise (average duration = 13 weeks) is moderately (average effect size of .37) associated with increased feelings of energy and reduced feelings of fatigue. This finding notwithstanding, a number of important methodological considerations were highlighted that are worthy of attention. For example, it is impossible to overlook the possibility of a placebo effect at the present time. This is due to the difficulties in designing robust placebo controls for studies examining the chronic effects of aerobic exercise on positive affect. Also, additional research is required to ascertain the generalizability of the positive findings to a healthy population. Of the studies included in the meta-analysis, 77% were based on groups reporting ill-health, such as cancer patients. Finally, the optimal dose of chronic exercise required to bring about positive changes remains unclear and systematic examination of the exercise stimulus (i.e., intensity, duration, mode, and frequency) is warranted. These limitations aside, positive effects on feelings of energy and fatigue have been corroborated in narrative reviews and epidemiological evidence suggests that the dose required to obtain such benefits may not be excessive. Indeed, low-intensity chronic exercise, such as walking, has also been shown to increase feelings of energy and lessen feelings of fatigue.

The observation that the greatest public health benefits will result from convincing the most sedentary segments of the population to become modestly active has resulted in a recent shift towards promoting walking for health. From a positive psychology perspective, low-intensity aerobic activity, such as a 30-minute walk, could present an optimal challenge for many individuals, offering an important experience of gratification. Achieving the goal of walking for 30 minutes may enhance one's sense of control through a combination of self-selecting this activity, feeling a sense of belonging through interaction with friends and being

in a pleasant environment. In today's society there are numerous passive but instantly pleasant activities (e.g., watching television) that directly compete with aerobic activity when it comes to allocating precious time and resources. However, such passive activities do not present the opportunity for positive changes across the biological and psychosocial domains and therefore it appears important to capitalize on all the elements of the aerobic activity experience when promoting its potential for achieving gratification. Importantly, aerobic activity can be tailored to meet idiosyncratic needs.

Aerobic Activity and Self-Esteem

The self is constructed as multifaceted and context-dependent and this conceptualization helps to further our understanding of the exercise–self-esteem relationship. Self-esteem occupies a central position in the psychology of health and well-being. Briefly described, self-esteem refers to how we value ourselves and includes a global component concerning the perception of one's worth as a person, as well as judgments of personal competence or adequacy in particular domains. These domains include the physical, academic, social, emotional, and other elements of life.

Importantly, these self-constructs are not innate and a growing body of research suggests that they can be actively controlled or modified. Recently, the review provided by the Chief Medical Officer's report in the UK stated that one way for exercise to help individuals to feel better is through enhanced self-perceptions and improved self-esteem. The physical aspect of self-concept relates to individual perceptions of our physical appearance, capabilities, and skills. Given the potential positive impact of regular aerobic exercise on these aspects of the self, it is reasonable to suggest that changed levels of aerobic exercise may be linked to positive personal re-evaluation.

The past three decades of empirical investigation have consistently established a positive relationship between aerobic exercise and self-esteem. Thus, the conclusions of comprehensive narrative reviews are encouraging. However, the strength of the association between physical activity and global self-esteem change has been questioned. The more objective meta-analyses, spanning gender, age, and physical activity domains, consistently demonstrate that exercise brings about statistically significant increases in global self-esteem. However, these effects are *small*, often equivalent to an increase of approximately one-fourth of a standard deviation in global self-esteem.

Given the multifaceted nature of the self, the magnitude of change brought about by exercise participation in specific-self domains, such as physical self-perceptions (strength, appearance, skill, and endurance), has been larger than global changes. A recent meta-analysis conducted by Hausenblas and Fallon targeted 121 studies on the effects of exercise on body image, an element of physical self-worth. Comparing experimental and control groups showed a small positive influence

on body image (average effect size .28). However, important life cycle effects were noted, with adolescents demonstrating a significantly larger effect (.71) than adults (.25) or university students (.46). Furthermore, when exercise was fuelled by a combination of aerobic-type and strength activities, it also elicited a larger effect than aerobic or strength exercise alone.

Exercise, like the self, is multifaceted. Given the highly idiosyncratic nature of the self, researchers are tasked with the challenge of unraveling the complex relationship between aerobic exercise and self-esteem. However, the picture that has emerged up to this point is promising and, even allowing for differences across the life cycle, positive effects predominate. Moreover, favorable cognitions about the self with regard to the physical domain appear to be important in maintaining exercise behavior. Future investigations may be complemented by idiographic research to explore the different ways that individuals interpret the importance placed on physical activity, as a self-aspect, in their everyday lives.

Finally, the context in which aerobic activity takes place is worth highlighting. One can undertake aerobic activity individually or within a community of exercisers who present the opportunity for belonging and relatedness. The nature of such activity means it has the potential to influence all aspects of well-being. At the present time, few studies have taken into account the contextual factors involved in exercise behavior and, consequently, these aspects of well-being are ripe for examination. Moreover, the consideration of new positive psychology constructs, such as character strengths, offers exciting prospects for future study.

SEE ALSO: ► Global well-being ► Positive affectivity ► Relaxation ► Self-esteem ► Vigor

Aesthetic Appreciation

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Live What You Wear

Aesthetic appreciation is commonly referred to as the *appreciation of beauty and excellence*, defined by Peterson and Seligman as the ability to find, recognize, and take pleasure in goodness in the physical and social worlds. In the Values in Action classification of virtues and character strengths, appreciation of beauty and excellence is a character strength leading to transcendence, one of the six universal virtues. Transcendence and its strengths revolve around allowing individuals to go beyond connecting to others and to connect to the larger universe, which is believed to facilitate a more meaningful life. Peterson and Seligman propose three categories of good things that it is beneficial to appreciate: a) physical beauty (music is included in this category); b) skill or talent of others; and c) virtue or moral goodness (e.g., displays of forgiveness, kindness or other virtues, and character strengths).

Appreciation of beauty and excellence is a character strength, in part, because the related emotional experiences such as awe, wonder and elevation are uplifting. Peterson and Seligman further propose that people who are open to experiencing beauty and excellence find more joy and more meaning in their lives as well as a way to connect with others. Some skeptics speculate that viewing something beautiful, or witnessing excellence or a skilled performance, can intimidate observers. However, the uplifting feeling related to aesthetic appreciation does not crush us, but rather connects us to something larger than ourselves.

Historical Perspectives on Aesthetic Appreciation

Humanistic psychologists such as Abraham Maslow and Carl Rogers embraced the emotional response to beauty and excellence as a component of humanistic psychology. In Maslow's hierarchy of needs, people who exhibit the character strength of appreciation of art and beauty are likely at the highest stages of self-actualization in which individuals evolve out of esteem needs and are likely more able to take pleasure in the talents, and virtuous acts of others. Further, Maslow believed that transcendence is a peak experience.

Although the appreciation of art and beauty is embraced by positive psychologists, it is unfortunate that the field of psychology has not been a forerunner in the research about the appreciation of beauty and excellence and related emotions (as of yet). The research that psychologists have contributed is primarily concerned with if observer's judgments of emotion in artwork are accurate, and how emotion is portrayed in the media. Thus, to understand more fully appreciation of art and beauty, positive psychologists have borrowed from other disciplines, namely philosophy and evolution.

The notion of having awe-like emotional responses while experiencing art, for example, dates back to the Irish philosopher, Edmund Burke, and his explanation of the *sublime*, which is defined as the feeling of having expanded thought that is inspired by literary and visual arts. It was Burke who advanced our knowledge of awe, highlighting two important properties a stimulus must possess to produce the sublime experience. From Burke's perspective the stimulus must be both powerful and obscure to produce such an experience. Positive psychologists Keltner and Haidt have elaborated on Burke's notions and have proposed a prototype of awe with two similar requirements: perceived vastness and accommodation.

Charles Darwin described admiration, an emotion closely related to awe, as a combination of surprise, pleasure, approval, and astonishment. Behavioral manifestations of admiration include open, bright eyes, raised eyebrows, and an open, smiling mouth. These behavioral manifestations are similar to those occurring while witnessing beauty or excellence in a given domain.

Although the scientific study of appreciation of art and beauty is still in its infancy (it is emerging), it is clearly a socially valued construct. Take for example

the Nobel Prize, which is an award given to appreciate excellence in a given domain that benefits society.

Development of Appreciating Beauty and Excellence

It is likely that appreciation of art and beauty is a genetically linked strength, extrapolating on research connecting openness to experience as the most heritable of the Big Five personality traits. Because religious development is associated with feelings of awe, and is an exemplar of appreciating excellence, religious development may be useful to highlight as an example. It is likely that the emotional aspect of religion is more salient in adolescence than in childhood. Epiphanies are more common among adolescents and young adults, which is not surprising given the developmental trajectory that adolescence and young adulthood are times of appreciation because people are forming their own identities, value systems, and excellence. Thus, it is possible that the same developmental period is critical in the development of appreciating other types of beauty and excellence. It is also plausible that appreciation of certain types of excellence may require some kind of experience or expertise in a given area, therefore other character strengths such as curiosity and love of learning may overlap with appreciation of beauty and excellence.

Although some people equate appreciating beauty and excellence as fine things and associate that appreciation with snobbery, one does not have to have money to experience or appreciate beauty and excellence. What is perceived as excellence in dance, for one person may be observing a street dancer, and to another, Russian ballet. This notion is more clearly illustrated when the object of appreciation is a moral act. Appreciating moral excellence diminishes the perception of snobbery with aesthetic appreciation. It is one's noticing and appreciating excellence, not one's ability to afford excellence. Thus, this is a strength that is accessible to all, given that examples of beauty and excellence are plentiful, in all aspects of life. Given the accessibility to excellence, it is also possible to let people peak in their appreciation naturally through exposure or through interventions. Peterson and Seligman suggest exposing children to as many examples of excellence, providing guidance, and then letting it develop. It is important to nurture the experience of the activity, and not simply the activity. Examples of existing interventions include art therapy, music-based therapy programs, nature therapy, and religious retreats. Various institutions may facilitate appreciating excellence, including families, friends, schools, and specific clubs or activities (e.g., an art appreciation club), to name a few.

Measures

There are no self-report measures that assess appreciation of beauty and excellence, or related emotions such as awe. This makes it difficult to discuss correlates. However,

some speculate that appreciation of art and beauty is related to openness to aesthetics, extroversion, gratitude, political liberalism, and negatively correlated with materialism.

SEE ALSO: ► Admiration ► Benefit finding ► Character strengths (VIA) ► Open-mindedness ► Virtues

Affective Forecasting

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Affective forecasting, or hedonic prediction, refers to the prediction of emotional reactions to future events, typically in terms of liking, enjoyment, and happiness. Affective forecasting has implications for decision making, in that it may influence the actual choice individuals make when faced with a decision point, and/or the subjective quality of the decision, post-choice. To the extent that individuals are accurate in their predictions, they may also be more likely to make good decisions (e.g., decisions that maximize gains and minimize losses), pursue goals that lead to happiness, and understand and interact effectively with others. As individuals face many decisions in their lifetime that are based on these future-oriented predictions, researchers have begun to identify and examine the mechanisms behind such forecasts, as well as the factors that influence their accuracy or inaccuracy.

Overview of Affective Forecasting

Interest in the topic of affective forecasting began in the 1990s with the decision-making work of Kahneman and Snell. In their 1990 and 1992 work, the authors drew distinctions between various concepts of utility; specifically, they delineated *decision utility* (referring to the sign and weight given to an outcome in the context of a choice), *experienced utility* (the quality and intensity of an individual's actual affective response to an outcome), and *predicted utility* (an individual's beliefs regarding the experienced utility of a future outcome). The authors also proposed a research agenda, which suggested that in order to make an efficient or "good" decision (i.e., in order to establish a relationship between decision utility and experienced utility), individuals need to know what will be good for them (i.e., establish a relationship between predicted and experienced utility), and use that hedonic knowledge in a rational manner (i.e., establish a relationship between predicted and decision utility). Since that time, the concept of predicted utility (and subsequently affective forecasting, a particular type of predicted utility referring to predictions of hedonic states) has garnered additional theoretical and

empirical attention. Research on the topic has been conducted with multiple samples, ranging from college students to shoppers to hospital patients, regarding a variety of potential outcomes, including objects, behaviors, and circumstances associated with topics such as romantic relationships, sports, college classes, or medical operations, to name a few.

Affective Forecasting Literature

Current research suggests that affective forecasts are typically made in terms of three predictive categories: the valence of the reaction (i.e., predicting a positive or negative reaction to an event), the intensity or strength of the reaction, and the duration of the reaction (how long the feeling will last). Although individuals are typically adept at predicting the first quality (whether an event will elicit a positive or negative reaction), they are less skilled at predicting the latter two; that is, people are relatively inaccurate when predicting the intensity and duration of their affective reactions. Although underestimation of intensity or duration is possible (e.g., when the individual is satiated or a need or want for the event is not salient), research generally shows that predictions of future like or dislike for an event or object more commonly result in an *overestimate* of the expected intensity and duration of that reaction. This overestimation has been termed *impact bias*, and multiple causes for this bias have been proposed. One proposed cause, the concept of *focalism*, states that overestimation is likely because when individuals are making these predictions they tend to overestimate how much the event in question will be considered and underestimate the influence and impact of additional future events. Impact bias may also be attributed to an individual's inclination to neglect his/her tendency to explain and make sense of a novel event (thereby decreasing the impact of that novel event), or to *immune neglect*, where an individual does not take into account the natural tendency to rationalize failure or misfortune. Lastly, there is evidence that impact bias may also be partly due to people's reliance on available but unrepresentative memories of the past. Research integrating predicted intensity and duration of reactions suggest that while individuals tend to predict intense reactions will last longer than non-intense affective reactions, the opposite is actually true; less-intense states may actually last longer than intense states. This means that when making a decision, individuals may choose options that seem more pleasurable, but are ultimately less satisfying.

Another vein of affective forecasting research examines the relationship between individual differences variables and accuracy in affective forecasting. This research suggests that there are certain types of people who tend to be more or less accurate in their affective forecasts. For example, components of emotional intelligence (EI) have been shown to account for variability in responses, as have additional individual difference variables such as optimism and impulsivity. Specifically, research suggests that EI is positively associated with accuracy in affective forecasts, while

impulsivity may be negatively related to accuracy. Additionally, individuals high in optimism may be more apt to exhibit a particular type of inaccuracy, namely overestimation of liking.

Future Directions in Affective Forecasting

Research on affective forecasting is still in its early stages. Researchers are further delineating potential antecedents and consequences of accuracy (or inaccuracy) in these hedonic predictions, and the role that time (both *time course* and *temporal distance*) plays. Additionally, affective forecasting has examined prediction of only one of the three paths to life satisfaction proposed by Seligman – the pleasant life. Research has not, to date, examined predicted flow or meaningfulness of actions and it is unclear if the same phenomena will be seen in these areas. Integrating affective forecasting into this particular paradigm may be a fruitful framework for subsequent research.

SEE ALSO: ► Anticipatory enthusiasm ► Emotional intelligence ► Hedonics ► Kahneman, Daniel ► Positive experiences

Agency

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The concept of *agency* is fundamental to within-person developmental conceptions in positive psychology. Specifically, the idea that human behavior can be viewed as volitional due to either innate sources or experiential influences translates into a host of empirical questions about the sources, courses, and sequelae of agentic activity. Research hypotheses generated from various psychological theories regarding agentic characteristics and behaviors are testable and broadly supported in diverse contemporary psychological literatures. Outside positive psychology the agency concept has been used similarly, for example in the Leontiev- and Vygotsky-inspired sociocultural activity theory, and in sociology to distinguish between individual agency and social structure.

The agency concept is unique in that it is defined by the interplay between a person and the action space surrounding him or her – it is not only about how people think and feel about whether they pursue certain actions, but also about whether they actually do pursue them and the correspondence of the two over time. A primary tenet of agency-related concepts is the notion that individuals actively shape their developmental course and influence their environment. At the same time, environments are seen as exerting a reciprocal influence that can either hinder or bolster the agentic activity of the individual. In this sense, work within

the broader agency paradigm has firm epistemological roots in early contributions to action research, such as Lewin's field theory.

The agency concept and research on action go hand in hand. Because positive psychology focuses on ways in which peoples' choices can be viewed as rational and constructive, the agency-action family of constructs provides a very useful foundation for the consideration of intraindividual functioning. Agency-action ideas are found in numerous contemporary concepts that include action-control, perceived control, self-efficacy, self-determination, behavioral self-regulation, goal-directed behavior, and intrinsic motivation.

A sense of personal agency involves the sources of volition for, and mechanisms by which, one formulates, pursues, and regulates actions in progressing toward a goal. Theories of agency either implicitly or explicitly use concepts of action to describe behavior. Many historical theorists have utilized related concepts to describe behavior. The origins of the agency concept can be found in the seminal ideas of many of the early theorists in psychology such as Heider, Lewin, and Piaget. From a general agency perspective, behavior is conceptualized as goal-directed actions. From an agency perspective, the key characteristics of actions include that:

- they arise from both biological and psychological needs;
- they are directed toward self-regulated goals that service the biological and psychological needs, both short-term and long-term;
- they are governed by one's personal knowledge about the links among agents, means, and ends and by behaviors that entail self-chosen forms and functions;
- they give rise to self-determined governance of behavior and development, which can be characterized as hope-related individual differences;
- they are triggered, executed, and evaluated in contexts that provide supports and opportunities, as well as hindrances and impediments to goal pursuit; and
- their outcomes and consequences are interpreted in contexts that vary according to norms, social structure, and systemic features.

Although psychological inquiry into the agency and action is somewhat fragmented, they all share the organismic meta-theoretical perspective. The organismic perspective views the origins of behavior as emanating primarily from within the individual. Hence, behavior viewed as volitional and goal-directed action. All agency theories share the idea that individuals are inherently active and self-regulating in their goal pursuits and that their actions are both purposive and self-initiated. In terms of development, individuals actively follow a predominantly self-guided path, giving form and meaning to their actions along the way. That is, individuals are seen as active agents who plot and navigate a chosen course through the uncertainties and challenges of the social and ecological environments. A key element of being an active agent (i.e., being agentic) is that individuals engage in self-evaluative feedback processes that allow them to interpret and evaluate the effectiveness of their actions and the consequences of their actions. As a result of this active evaluative process, individuals are able to discover and refine their goals

and their personal knowledge of what it takes to achieve goals and whether they are able to utilize or execute effective actions to achieve their goals.

An exemplar of organismic theorizing is the work of Piaget. A number of basic elements of Piaget's theories are central to the study of agentic action. For example, his ideas about the processes by which learning occurs, such as equilibration, are fundamental to how individuals mature in their ability to plan and execute increasingly advanced actions. His description of internalized egocentric speech is critical to understanding how lasting beliefs relating to action may be formed. His positioning of the person as an actor in a system of interactions with the world who actively constructs understanding provides a basis for understanding how individuals might become purposive over the lifespan. In addition, Piaget's assertion that cognitive capacities are part of a *structure d'ensemble* (structure of the whole) is also influential in consideration of agency. The split between domain generality of cognitive capacities on the one hand and domain specificity of these capacities on the other can be seen in current inquiry into action in that certain types of action-related beliefs are thought to be domain specific and others are not.

The last decade has seen the emergence of several progressive attempts to develop a more comprehensive theory for the operation of personality-based motivational profiles. Emerging strands of inquiry in this area include the relationship of early experience to later agentic behavior and the consolidation of a range of agency and self-efficacy conceptions into an interrelated family of constructs with relevance in different contexts and life periods. A range of empirical applications have been pursued under the construct in several international settings, including Russia, China, throughout Europe, and the US. These have led to extensive construct validation, characterization of the developmental course of agency in various populations, and provided provocative underpinnings for new directions in applied settings such as education and youth programming.

SEE ALSO: ► Attribution theory ► Goals and goal-setting theory ► Hope ► Intentional self-development ► Locus of control

Agreeableness

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Agreeableness, which reflects a consistently warm, prosocial, non-aggressive orientation toward others, is one of the Big Five dimensions of human personality uncovered by factor analyses of trait ratings in several languages and cultures. Like the other Big Five constructs, agreeableness is a higher order statistical factor reflecting a pattern of intercorrelation among a number of more specific traits, in this case involving an individual's approach to interpersonal relationships.

Agreeableness appears to be a lifelong aspect of personality in that one's level of agreeableness relative to others tends to remain consistent over long periods of time, although people typically do become somewhat more agreeable as they age.

Measures of Agreeableness

Agreeableness is typically measured along with the other Big Five factors using questionnaires, in which the respondent rates his or her level of agreement with items describing the self or another target person. Because the Big Five personality factors were actually derived from studies examining correlations among items rated in this way, the items on Big Five questionnaires help to convey the content of each construct. The best known and most comprehensive Big Five questionnaire is Costa and McCrae's NEO Personality Inventory-Revised (NEO-PI-R); "NEO" represents the factors Neuroticism, Extraversion, and Openness to Experience, although these words are not used explicitly in the title. In this instrument, respondents rate 240 single-word adjectives dichotomously as true of the target or not true of the target. Factor scores are computed by weighting each item according to a schedule included in the NEO-PI-R manual. The Agreeableness scale of the NEO-PI-R has six eight-item subscales, or facets: Trust, Straightforwardness, Altruism, Compliance, Modesty, and Tender-Mindedness. John, Kentle, and Donahue's Big Five Inventory, a 44-item questionnaire derived from the NEO-PI-R adjectives, but framing each in a longer phrase and using a five-point response scale anchored at 1 (*disagree strongly*) and 5 (*agree strongly*), is also frequently used by personality and social psychology researchers (sample items in Box 1 reprinted from Benet-Martinez & John, 1998).

Box 1. Sample Agreeableness Items from the Big Five Inventory.

I see myself as someone who:

- is helpful and unselfish with others
- tends to find fault with others (reverse scored)
- has a forgiving nature
- is generally trusting
- can be cold and aloof (reverse scored)
- is considerate and kind to almost everyone

Agreeableness can also be reliably measured using other instruments widely used in personality and clinical research, such as the Adjective Check List, the California Q-set, and some subscales of the MMPI. Questionnaire measures of agreeableness and the Big Five are usually used as self-report instruments, but high agreement

between self-ratings and ratings by close others, such as spouses, romantic partners, and friends, suggest both that people can accurately report their own agreeableness, and that agreeableness is consistently manifested in behavior observed by others. Also, perhaps surprisingly, findings from "round robin" studies (in which participants rate several interaction partners as well as themselves) suggest that self-report measures of agreeableness show fairly little contamination by self-enhancement or social desirability concerns.

Implications of Agreeableness

The apparent universality of agreeableness as a dimension of personality, and its ease of measurement using self-report questionnaires, have encouraged a wide body of research on the correlates of this trait. Greater agreeableness is associated with higher levels of overall psychological well-being, typically defined as high positive affect, low negative affect, and high life satisfaction. Recent research suggests that agreeableness predicts more frequent and intense experience of positive emotions in close relationships, such as love and compassion, but not necessarily positive emotions associated with reward acquisition, high social status, or information processing.

One hallmark of high agreeableness is low experience of anger and expression of hostility, emotional implications that may explain why high agreeableness is associated with reduced vulnerability to cardiovascular disease. People high on agreeableness are more likely to engage in prosocial and altruistic behavior, and are generally well-liked and respected. The marriages of people high on agreeableness are likely to be happier and more stable than those of people low on this factor, with both husbands' and wives' agreeableness independently predicting marital satisfaction.

Although agreeableness is primarily thought of as a social disposition, it has practical implications as well – high agreeableness predicts stronger job performance, especially in jobs requiring frequent interaction or collaboration. In terms of mental health, high agreeableness is associated with lower risk of alcoholism and depression, and agreeableness scores are negatively correlated with measures of antisocial, narcissistic, and paranoid personality disorders.

Future Directions

After decades spent documenting the validity of the Big Five constructs and the reliability of instruments used in their measurement, researchers have recently turned to investigating the underlying causes of individual differences in the Big Five factors. Because Big Five dispositions seem to appear so early in life, and remain so consistent over the lifespan, genetic and other biological markers are of particular interest.

There is evidence that genes play some role in agreeableness. One behavioral genetics study examining agreeableness scores of identical and fraternal twins concluded that 41% of the variance among individuals in this factor was due to genes. However, a similar study concluded that only 12% of the variance in agreeableness was due to genetic influence, with the twins' shared environment accounting for 21% of variance. Differences among study findings may be due to use of different measures, samples from different regions, different statistical approaches, and a host of other study features, so controversy over the heritability of agreeableness will require considerably more research to resolve. At least one specific gene is believed to be associated with agreeableness – the 5-HTTLPR gene, encoding proteins involved in central nervous system serotonin transport. Researchers found that participants low on agreeableness were more likely to be homozygous for the 5-HTTLPR-*short* allele than heterozygous or homozygous for the corresponding -*long* allele, suggesting that high agreeableness may in part reflect more efficient serotonin transport. The effect size was small, however, and it is likely that multiple genes combine to influence this trait.

There is also increasing interest in the neuroanatomical correlates of agreeableness. One study found that higher agreeableness was associated with greater right and smaller left orbitofrontal cortex volumes of patients with frontotemporal dementia – a neurodegenerative disease in which severe deficits in empathy and intimacy are often noted. Because of the emerging interest in the biological markers of agreeableness, researchers are beginning to examine evidence of this factor in other mammals, considering the evolutionary origin of this factor and its importance in mammalian survival and reproductive fitness.

SEE ALSO: ► Altruism ► Five factor model ► Kindness

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Allport, Gordon W.

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Gordon Allport is regarded as one of the major figures in the history of psychology. Interestingly, Allport began his academic career as an English professor and was perhaps influenced by his older brother Floyd Allport, who became a

significant figure in the history of social psychology (completing one of the early texts in the field of social psychology).

Allport went on to complete a PhD in psychology. Among his significant contributions were his delineation of personality traits (e.g., common and cardinal), completing a still widely read text in the psychology of personality, his classic works on the nature of prejudice and discrimination, his widely utilized measure (with Vernon) of human values, and his examination of the profound existential anxiety suffered by those who were interned in Nazi concentration camps (many of whom he personally interviewed). These interviews revealed to Allport that many of those who survived were able to maintain some semblance of a positive outlook and not succumb to the depressing cynicism that was so likely to be induced in such horrible circumstances. Allport also countered some of the cynicism expressed in particular aspects of psychoanalysis by his refreshing optimism and faith in self-determinism of the individual reflected in his many articles and books. Furthermore, he mentored a group of American psychologists as a professor at Harvard who in their distinguished careers have carried on in their publications Allport's positive assessment of the individual and his or her potential for self-development.

My first contact with Allport was in the 1950s when he expressed an interest in my dissertation, "Personal Values as Factors in Anti-Semitism," for referencing in his forthcoming book, *The Nature of Prejudice*, a work that became a classic in the study of prejudice. This book remains an unmatched analysis of the root causes of prejudice and discrimination, but he concluded that only through an increasingly more positive perspective on the issue and through research-supported legislation would prejudice diminish over the years.

Allport's positive psychology was reflected in his interaction with students and colleagues and, of course, in his many publications and lectures. Some examples of this are that his belief that growth and socialization should incorporate a positive, future-directed optimism. Even while battling cancer, he scoffed at the notion of preoccupation with existential anxiety that was the fashion to discuss during the period of his later life. He died shortly after the biography *Gordon Allport: The Man and His Ideas* was published.

SEE ALSO: ► Labeling (positive effects) ► Positive law and policy ► Self-determination ► Stereotype threat

Altruism

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For centuries, altruism has spurred debate among philosophers and great thinkers including Plato, Aristotle, Machiavelli, Hobbes, Mill, Nietzsche, Hume, Smith, and

Kant. More recently, altruism has become a focus of scientific inquiry. At issue are the following questions: What is altruism? Does it exist among humans? If so, what are the origins of altruism, and what implications does altruism hold for our understanding of the human condition?

Defining Altruism

The term *altruism* is used to describe two distinct phenomena. The first is *behavioral altruism*, which refers to helping behavior that is either very costly to the helper or conveys no self-benefit for the helper. The second is *psychological altruism*, which refers to a motivation to increase the welfare of another as an end in itself. Although the latter definition is commonly used among psychologists and philosophers, the former is popular among researchers who study non-human animals.

Behavioral Altruism

Altruism is often attributed to individuals who help others while incurring either high cost or no benefit to themselves. In this case, altruism is a form of behavior and related consequences rather than a motivational state. Although behavioral altruism appears most relevant to analyses of human behavior, it has been observed in many organisms. Ethological examples of high-cost helping are found in organisms with no mental structure (amoebas) as well as those with relatively complex mental structure (nonhuman primates).

Psychological Altruism

Another view of altruism involves consideration of the intentions or motives of an individual. Thus, altruism is determined not by the consequences of behavior, but rather by a motive to benefit another individual. This notion of psychological altruism is often contrasted with *psychological egoism*, which is a motivational state in which the goal is to benefit oneself. Proposing the existence of psychological altruism logically does not preclude the existence of psychological egoism or vice versa because both may operate in the same situation.

Contrasting Behavioral and Psychological Altruism

It is important to note that defining altruism in behavioral terms carries with it certain limitations. For example, helping is usually costly at some level, which makes it difficult to decide how much cost must accrue before categorizing a helping response as altruism. Also, two individuals may engage in the same behavior but for very different reasons. Consider the following examples: Person A helps because she expects to receive self-benefit for helping, but receives none. Person B helps without expecting self-benefit, but nonetheless benefits. If one applies a

behavioral definition of altruism, then Person A's helping would be classified as altruism whereas Person B's helping would not. However, if one applies a motivational definition of altruism, these labels would be reversed. The disjoint between these two uses of the term altruism raises several important issues. First, psychological altruism may occur regardless of whether the consequences of helping are beneficial or costly to the helper. Second, psychological altruism may co-occur with other nonaltruistic motives (e.g., psychological egoism), and these motives can guide behavior jointly. Third, behavioral altruism may occur even if one is not altruistically motivated. Both psychological altruism and psychological egoism, operating either alone or in combination, can result in behavioral altruism.

Does Psychological Altruism Exist?

Although the existence of behavioral altruism is not in dispute, there is much debate as to the existence of psychological altruism. Because psychological altruism refers to an internal psychological process, it cannot be easily verified by focus on a single instance of helping. People may benefit others for a variety of nonaltruistic reasons, and the consequences of helping typically provide little insight into the underlying motives for helping. For these reasons, psychologists have attempted to determine if psychological altruism exists by examining patterns of helping behavior in carefully controlled experiments.

The Empathy-Altruism Hypothesis

Before one can test whether patterns of behavior reflect the existence of psychological altruism, one must first isolate potential causes of this motive. Based on numerous published studies that demonstrate an association between empathy and helping behavior, C. D. Batson proposed the empathy-altruism hypothesis. According to this hypothesis, feeling empathy for a person in need evokes an altruistic motive to increase that person's welfare. Here, *empathy* is defined as a vicarious emotional state congruent with the perceived welfare of another. Although a number of empathic emotions likely exist (e.g., empathic joy, empathic anger, empathic shame, etc.), the emotional response at issue in the empathy-altruism hypothesis is best captured by emotion words such as compassion, tenderness, softheartedness, and sympathy.

Egoistic Alternatives to the Empathy-Altruism Hypothesis

Not everyone is convinced that altruism exists, and a number of egoistic alternative explanations have been proposed to explain the association between empathy and helping. These egoistic explanations fall into three general groups, each defined by the specific type of egoistic motive that empathy may evoke. These explanations

encompass the following classes of egoistic self-benefits: (1) aversive-arousal reduction; (2) reward attainment; and (3) punishment avoidance.

Aversive-arousal reduction explanations propose that feeling empathy is unpleasant, and individuals are motivated to reduce or avoid this unpleasant state. According to this explanation, empathy leads to helping behavior when it provides the only way to reduce or avoid feeling empathy. However, helping behavior will not occur if a less costly means of reducing empathy is available (e.g., escaping the situation). Reward-attainment explanations propose that people are socialized to associate empathy with potential self and social rewards that accompany the act of helping. As such, empathically-aroused individuals help in order to feel good about themselves or to elicit approval or respect from others. Finally, punishment-avoidance explanations propose that people are socialized to associate empathy with self-administered and social punishments for failing to help. Thus, empathically-aroused individuals help in order to avoid guilt, shame, or social punishments such as censure from others, social rejection, legal liability, and the like.

To date, over 25 experiments have tested these different classes of egoistic explanations against the empathy-altruism hypothesis. In these experiments, researchers manipulated the ease of acquiring various egoistic goals and then examined who among those feeling relatively high levels of empathy (compared to those feeling relatively low levels) opted to help, even when doing so prohibited the individual from obtaining these egoistic goals. With few exceptions, these experiments supported the empathy-altruism hypothesis over each class of egoistic explanation. Although the weight of the evidence strongly favors the empathy-altruism hypothesis, some debate still exists regarding the tenability of the empathy-altruism hypothesis.

The Origins of Altruism

The Origins of Behavioral Altruism

A number of evolutionary explanations exist for why organisms help one another. One popular explanation is *kin selection*, which proposes that helping kin increases the reproductive success of individuals who share the helper's genes. Consequently, behavioral altruism toward kin will evolve in a species when those who help their kin are reproductively more successful than are individuals who do not help their kin. It is important to note that most versions of this explanation assume that natural selection operates at the level of the gene, a position that many evolutionary biologists find controversial.

A second explanation for behavioral altruism is *reciprocal benefit* (sometimes called *reciprocal altruism*). Reciprocal benefit may account for behavioral altruism among kin as well as nonkin, including members of different species. According to this explanation, helping behavior evolves in species when helpers are reproductively more successful than are nonhelpers. Advocates of reciprocal benefit

argue that psychological mechanisms responsible for friendship, gratitude, empathy, and the like may stem from reciprocal benefit.

Both kin selection and reciprocal benefit involve natural selection at the level of the individual (and possibly, at the level of the gene). However, some evolutionary biologists have revisited Darwin's suggestion that natural selection may also operate at the group level. Under certain circumstances, groups whose members engage in relatively high levels of costly helping may out-compete groups whose members engage in relatively low levels of costly helping. When this occurs, group selection may promote the species-wide emergence of mechanisms responsible for behavioral altruism.

When considering the role these three evolutionary processes may play in the development of behavioral altruism, it is important to note that natural selection likely affects organisms in multiple ways and at multiple levels, including at the level of the individual and of the group. Thus, it is possible that kin selection, reciprocal benefit, and group selection may foster the development of behavioral altruistic mechanisms either alone or in combination with one another. Within a species, the degree to which the capacity for behavioral altruism emerges will depend on the nature of the environmental pressures that face the species. Depending on these environmental pressures, a species may follow an evolutionary trajectory that involves the formation of mechanisms that provide relatively high levels of behavioral altruism, relatively low levels of behavioral altruism, or a balance between the two.

The Origins of Psychological Altruism

As discussed earlier, research suggests that humans have the capacity for psychological altruism. If this capacity does exist, from where does it originate? One possibility is that the capacity for psychological altruism is a consequence of developmental learning. A second possibility is that natural selection favored the emergence of innate emotional and motivational systems that evoke psychological altruism for those who contribute to reproductive success, such as kin, close others, or ingroup members.

Recall that much of the evidence for psychological altruism comes from experiments. In the majority of these experiments, participants directed their helping behaviors toward strangers, who are unlikely to promote reproductive success. These findings suggest that psychological altruism can generalize to a wide range of targets, which seems to favor a learning-based explanation over one that includes only innate, target-sensitive mechanisms derived from natural selection. However, much of the evidence for psychological altruism comes from tests of the empathy-altruism hypothesis, which claims that empathic feelings are a source of psychological altruism. The nature of the empathy examined in this research reflects tender feelings – feelings that people are likely to experience for young children, infants, and other vulnerable individuals. Thus, it is possible that psychological altruism arises from the generalized activation of innate

emotional and motivational mechanisms that evolved to promote parental care of offspring.

The suggestion that psychological altruism derives from parental care mechanisms is not new. One implication of this assertion is that natural selection did not endow humans with the capacity for psychological altruism toward adult close others and strangers. Rather, this capacity arises from the interaction of evolved emotional and motivational parental care mechanisms with the human capacity for complex and flexible cognitive-perceptual processing. As the individual develops throughout his or her lifespan, an increased capacity for recognizing and understanding vulnerability allows activation of parental care systems in response to a wide variety of vulnerable targets (e.g., young children, adults in immediate need, adults with chronic need).

Implications of Psychological Altruism and Directions for Future Research

The assumption that psychological altruism exists carries with it a number of important implications. First, it becomes necessary to disentangle the motivational basis of human prosocial behavior, and to recognize the distinction between altruistic motivation and prosocial behavior. The awareness that another is in need can elicit not only psychological altruism, but also a variety of prosocial egoistic motives (e.g., desire to obtain rewards for helping and to avoid punishments for not helping) as well as non-prosocial egoistic motives (e.g., desire to avoid the costs of helping). The behavioral outcome that results will therefore reflect a blend of these various motives, all of which may operate in a congruent manner or in conflict with one another. For example, research suggests that psychological altruism can lead individuals to help another, even when doing so harms others or is otherwise immoral. Thus, psychological altruism may lead to great acts of compassion, but it may do so at the expense of others, or at the expense of certain moral principles.

Although psychological altruism may conflict with other prosocial motives, it may also reinforce such motives. For example, altruistic motivation to increase the welfare of a victim of injustice may promote the desire to uphold principles of justice more generally. Similarly, altruistic desire to improve the welfare of a member belonging to a disadvantaged group may spur desire to improve the welfare of the disadvantaged group as a whole. Thus, it becomes important to consider how psychological altruism in combination with other prosocial motives can energize stronger, more widespread forms of prosocial behavior.

Because helping always is costly, a second implication of psychological altruism is that it may compel individuals to incur high levels of cost in order to increase the welfare of others. Thus, if successful helping is anticipated to involve high cost, individuals may attempt to avoid emotions that lead to psychological altruism, such as empathy. Empathy, and consequently psychological altruism, may also be

avoided when increasing or improving the welfare of the individual is impossible. Research suggests that an inability to satisfy an altruistic motive leads to negative affect. One implication of this finding is that empathy burnout may result from exposure to repeated situations in which helping is perceived as costly, taxing, or impossible (e.g., long-term care situations). With empathy burnout, individuals become disengaged from the needs of other, a response that may stem in part from active empathy avoidance.

Finally, future research should examine other ways in which psychological altruism manifests itself besides overt helping behavior. For example, research suggests that psychological altruism sometimes produces decreased helping if helping is perceived as undermining the long-term welfare of the individual. As this example suggests, the goal of psychological altruism is perhaps best conceptualized as *promoting and protecting* the welfare of another individual rather than as *increasing or improving* his or her welfare. Furthermore, psychological altruism may lead one to adopt a more caring and supportive communication style and become more vigilant of threats to the needs, goals, and values of vulnerable others.

SEE ALSO: ► Close relationships ► Empathy

Amae

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Amae is a Japanese emotion term, defined by Doi as "a sense of helplessness and the desire to be loved" (1963, p. 266) in which one is able to "depend or presume upon another's benevolence" (Doi, 1962, p. 145). Although the term amae is Japanese, and amae is often described by anthropologists and cultural psychologists as a Japanese emotion because of its central role in that society, Doi describes it as a universal response to being cared for by a trusted other. According to Doi, the prototypical experience of amae is an infant's love for its mother.

This definition, and the prototype of the infant's feelings toward its mother, suggest a link to the wide body of Western research on psychological attachment – the process by which infants seek proximity to primary caregivers, protest against separation from them, and turn to them when in danger or need. According to John Bowlby, such attachments serve the functions of ensuring the infant's protection in the face of danger or illness, and providing a secure base from which the infant can explore his or her environment. Recent years have seen acknowledgement of the role of psychological attachment in adult relationships as well, especially in the context of romantic relationships and marriage. Likewise, although the prototypical experience of amae is that of an infant toward its mother, amae as described by Doi can also be felt toward a spouse or romantic partner, an intimate friend, or any other person in whom one trusts and is able

to depend. In both infant and adult romantic attachment, the availability of a secure attachment figure appears to alleviate one's physiological and behavioral response to stressful situations. In the absence of immediate stressors, secure attachment helps facilitate successful engagement with the world outside the relationship as well.

In Western cultures a negative connotation is often placed on depending on others, and excessive dependence is considered a negative trait. Amae in Japan has a positive connotation, however – the acknowledgement that in the context of intimate romantic or family relationships, it is appropriate, desirable, and pleasurable to depend on others' assistance. Doi suggests that amae is encouraged excessively by Japanese culture and discouraged excessively by American culture, probably to the detriment of both societies. Feeling and displaying amae need not imply giving up control in the relationship. Studies suggest that both Japanese and Americans feel that a person asking a close friend for favors has as much control as the friend granting the favor. Relationships in which one feels amae are distinguished by the lack of need for explicit gratitude or reciprocity, in that one is entitled to caregiving and nurturance from this person, and in receiving it one incurs no obligation or debt.

In the past decade, amae has been of increasing interest to Western emotion researchers studying emotions in intimate relationships. Recent studies suggest that American undergraduate students can relate to the concept of amae in relationships, experiencing more positive emotion and inferring greater relationship intimacy when a friend asks a somewhat imposing favor of them than when the friend pays another person to perform the task, or asks a third friend to do it. The experience of amae has been elicited experimentally by asking research subjects to describe a time when others took care of them, or by having them read a scenario in which close friends take care of the subject while he or she is ill. The Dispositional Positive Emotion Scale, a self-report instrument measuring the trait experience of several positive emotions, includes an attachment love subscale appropriate for measuring dispositional amae. However, no English-language measures of the state experience of amae are currently available, and the term does not translate accurately into any single word in that language. Little is known about the cognitive or behavioral implications of state amae in adults, or about the process by which amae/attachment relationships develop between adults.

Researchers are also increasingly interested in finding physiological markers of amae, or love for caregivers. The neurohormone oxytocin is believed to facilitate the development of pair bonds in some mammalian species after mating, and may be involved in the initial formation of other attachments. The role of oxytocin in the state experience of amae is still unknown; however, oxytocin can be released in response to pleasant social touch, and oxytocin has been proposed as the mechanism by which social support facilitates physical health in the face of stress. Reunion with loved ones may also trigger the activity of beta-endorphins, neurotransmitters known to mediate tranquility and the reduction of physical pain. Studies with

several species of mammals suggest that beta-endorphin activity is reduced when animals are separated from attachment figures, but the role of endorphins in positive emotion associated with reunion and the receipt of another's care are still unclear.

SEE ALSO: ► Adult attachment security ► Attachment theory ► Collectivism ► Intimacy ► Positive emotions

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American Psychological Association

Carol Williams-Nickelson and David W. Nickelson
American Psychological Association

The American Psychological Association (APA) is the largest scientific and professional organization representing psychology in the United States and is the world's largest association of psychologists. APA's membership includes more than 150,000 researchers, educators, clinicians, consultants, and students.

The APA was founded at Clark University in 1892 with the goal of advancing psychology as a science. After beginning as an academically focused organization, APA reorganized in 1945 to include several smaller psychological organizations, evolving into a new organization with a mission that included both professional and scientific issues, as well as the application of psychology to the public interest. Over time, a multifaceted structure that included divisions and state, provincial and territorial psychological associations developed, reflecting the diversity of the field and the APA's members. The APA was incorporated in 1925 in Washington, DC, where it remains headquartered. Currently, the APA has over 600 employees, publishes a number of highly respected journals, has a well regarded book publishing function, holds an annual convention attended by 12,000–17,000 people, provides a monthly magazine to members, supports numerous volunteers serving on the APA's Boards and Committees, and houses multiple offices to address a variety of issues with the goal of advancing psychology as a science and profession in the legislative, public, academic and research arenas.

Through its divisions in 54 subfields of psychology, affiliations with 59 state, territorial, and Canadian provincial associations, and complex governance and

central office infrastructures, the APA works to implement its mission. That is, the APA advances psychology as a science and profession and as a means of promoting health, education, and human welfare by:

- the encouragement of psychology in all its branches in the broadest and most liberal manner;
- the promotion of research in psychology and the improvement of research methods and conditions;
- the improvement of the qualifications and usefulness of psychologists through high standards of ethics, conduct, education, and achievement;
- the establishment and maintenance of the highest standards of professional ethics and conduct of the members of the Association; and
- the increase and diffusion of psychological knowledge through meetings, professional contacts, reports, papers, discussions and publications,

thereby to advance scientific interests and inquiry, and the application of research findings to the promotion of health, education, and the public welfare.

Membership

APA members are primarily doctoral-level psychologists, about a third of whom are employed in educational settings, a third in private clinical practice, and a third in other settings such as hospitals, clinics, business, industry, and government. Affiliates comprise about one-third of the APA's total membership and include graduate students, high school teachers of psychology, master's level mental health professionals, psychologists in other countries, and others.

Divisions

The APA's 54 divisions also offer memberships for psychologists, students, and others who share similar interests. Divisions range in size from 300 to 7,500 members and affiliates. Each focuses on a different substantive area of psychology by offering a newsletter, sometimes a peer-reviewed journal, programming at the annual APA convention and other opportunities for their members to share information and advance their area of psychology. The APA divisions were established in 1945. Early on, Division 4 was set aside for the Psychonomic Society; however, the society decided to remain separate from APA. Similarly, Division 11 was set aside for Abnormal Psychology and Psychotherapy. These groups decided that they fit with the Society of Clinical Psychology (Division 12) and did not need to be identified in a separate division. For historical purposes, Divisions 4 and 11 have remained vacant. The current APA divisions include the following:

1 Society for General Psychology
2 Society for the Teaching of Psychology
3 Experimental Psychology
4 There is no Division 4
5 Evaluation, Measurement, and Statistics
6 Behavioral Neuroscience and Comparative Psychology
7 Developmental Psychology
8 Society for Personality and Social Psychology
9 Society for the Psychological Study of Social Issues (SPSSI)
10 Society for the Psychology of Aesthetics, Creativity, and the Arts
11 There is no Division 11
12 Society of Clinical Psychology
13 Society of Consulting Psychology
14 Society for Industrial and Organizational Psychology
15 Educational Psychology
16 School Psychology
17 Society of Counseling Psychology
18 Psychologists in Public Service
19 Society for Military Psychology
20 Adult Development and Aging
21 Applied Experimental and Engineering Psychology
22 Rehabilitation Psychology
23 Society for Consumer Psychology
24 Society for Theoretical and Philosophical Psychology
25 Behavior Analysis
26 Society for the History of Psychology
27 Society for Community Research and Action: Division of Community Psychology
28 Psychopharmacology and Substance Abuse
29 Psychotherapy
30 Society of Psychological Hypnosis
31 State, Provincial, and Territorial Psychological Association Affairs
32 Humanistic Psychology
33 Mental Retardation and Developmental Disabilities
34 Population and Environmental Psychology
35 Society for the Psychology of Women
36 Psychology of Religion
37 Society for Child and Family Policy and Practice
38 Health Psychology
39 Psychoanalysis
40 Clinical Neuropsychology
41 American Psychology-Law Society
42 Psychologists in Independent Practice
43 Family Psychology

44 Society for the Psychological Study of Lesbian, Gay, and Bisexual Issues
45 Society for the Psychological Study of Ethnic Minority Issues
46 Media Psychology
47 Exercise and Sport Psychology
48 Society for the Study of Peace, Conflict, and Violence: Peace Psychology Division
49 Group Psychology and Group Psychotherapy
50 Addictions
51 Society for the Psychological Study of Men and Masculinity
52 International Psychology
53 Society of Clinical Child and Adolescent Psychology
54 Society of Pediatric Psychology
55 American Society for the Advancement of Pharmacotherapy
56 Trauma Psychology

Organizational Structure

The APA is a corporation chartered in the District of Columbia. As such, the certificate of incorporation determines and limits the APA's activities to those primarily in the service of promoting psychology in the public interest as an educational entity. The charter takes precedence over all of APA's internal documents, including the APA Bylaws.

The APA Bylaws serve as the APA's constitution and take precedence over all other internal rules. They can only be amended by vote of the membership. They have remained fundamentally unchanged since they were ratified by the members a half-century ago. The bylaws establish the major structural units of APA: the Council of Representatives, the Board of Directors, the officers, the standing boards and committees, and the central office with a chief executive officer.

APA members hold the ultimate power within the Association and exercise their power through direct vote and through the election of members to serve on the Council of Representatives and as APA President-elect. The primary constituencies from which the representatives are elected are the divisions and the state, provincial and territorial psychological associations. The number of seats on the Council of Representatives allocated to a division or state/provincial/territorial association is based on an annual apportionment ballot, whereby each member of the Association may allocate a total of ten votes to the division(s) and/or state/provincial/territorial association(s) through which they wish to be represented the following year. Council representatives from divisions and state/provincial/territorial associations are required to be members of the division or state/provincial/territorial associations they represent, as well as members of the Association. The Council of Representatives elects six of its members to serve along with the elected APA officers (president, past-president, president-elect, treasurer, recording secretary and chief executive officer), as a 12-person Board of Directors

to manage the affairs of the Association, subject to the periodic approval of the Council. All voting members of the Board of Directors are elected for a three-year term. Board members-at-large, the Recording Secretary and the Treasurer are nominated and elected by the previous year's Council. The APA President-elect is nominated and elected by APA Fellows, Members, and Voting Associates. The presidency cycle is 3 years, with one year each of service as President-elect, President and Past President. The President chairs both the Council of Representatives and the Board of Directors. The Chair of the American Psychological Association of Graduate Students (APAGS) serves as a voting member of Council and a non-voting member of the Board of Directors.

The Council of Representatives has broad authority to develop the policies of the Association, within the framework of the charter and the bylaws. It has full authority over the affairs and funds of the Association.

Governance, Boards, and Committees

Much of the work of the Association is completed by member volunteers who serve on the APA's various Boards and Committees. These groups report to the Council of Representatives, the APA's most powerful governance group which is charged with the responsibility of setting policy and establishing priorities for the Association. Boards and Committees carry out a wide range of tasks and represent many interests of the APA's members and the field. Positions on the APA's Council, Boards, and Committees are filled through a process of electing eligible APA members and in some cases, affiliates. The APA Boards and committees include the following:

- Board of Directors
- Policy and Planning Board
- Committee on Structure and Function of Council
- Board for the Advancement of Psychology in the Public Interest
- Board of Convention Affairs
- Board of Educational Affairs
- Board of Professional Affairs
- Board of Scientific Affairs
- Election Committee
- Ethics Committee
- Finance Committee
- Membership Committee
- Publications and Communications Board
- Agenda Planning Group
- Commission for the Recognition of Specialties and Proficiencies in Professional Psychology
- Committee for the Advancement of Professional Practice

- Committee for the American Psychological Association of Graduate Students
- Committee on Accreditation
- Committee on Aging
- Committee on Animal Research and Ethics
- Committee on Children, Youth, and Families
- Committee on Disability Issues in Psychology
- Committee on Division/APA Relations
- Committee on Early Career Psychologists
- Committee on Ethnic Minority Affairs
- Committee on International Relations in Psychology
- Committee on Lesbian, Gay, and Bisexual Concerns
- Committee on Professional Practice and Standards
- Committee on Psychology Teachers at Community Colleges
- Committee on Psychological Tests and Assessment
- Committee on Rural Health
- Committee on Scientific Awards
- Committee on Women in Psychology
- Continuing Professional Education Committee
- Council of Editors
- Education and Training Awards Committee
- Teachers of Psychology in Secondary Schools

The APA Ad Hoc Committees and Task Forces are formed to address time-limited or newly identified issues that are important to APA members and to psychology in general. Some examples of these include:

- Ad Hoc Committee on Films and Other Media
- Ad Hoc Committee on Legal Issues
- Advisory Committee on Colleague Assistance
- Task force on Research Regulations
- History Oversight Committee
- Joint Committee on Testing Practices
- Task Force on Serious Mental Illness/Severe Emotional Disturbance
- Task Force on Urban Psychology
- Task Force on Workplace Violence

Central Office

While the APA's governance members establish the policies and priorities for the Association, the chief executive officer is responsible for implementing these policies and procedures and running the business aspects of the APA by managing and staffing the APA's Central Office. The APA's Central Office staff support and inform the work of all the boards and committees, run one of the largest

scientific publishing houses in the world, invest in stocks, manage real estate, and interact with private, state, and federal agencies and organizations. In addition to collecting roughly $16.5 million in member dues and fees each year and $41 million from the Communications Programs, the Central Office generates additional income of almost $15 million to expand the activities and services of the APA. Actual dues represent only 16 percent of the revenues needed to run the APA.

To serve the particular interests of the APA's diverse membership and the needs of the discipline as a whole, APA's Central Office is overseen by an Executive Office and organized into several semi-independent directorates that include Practice, Science, Public Interest, Education, and Central Programs. The Central Programs directorate is comprised of offices whose work applies to all areas of the Association, and includes the American Psychological Association of Graduate Students, Research, Ethics, International Affairs, Convention and Meeting Services, Public Policy, and the APA's Library and Archives. Similarly, the APA also has directorates that aide in the business, governance, and public outreach aspects of the Association. These include: Publications, Member and Public Communications, Finance, and Internet/Management Information Systems.

SEE ALSO: ► Allport, Gordon W. ► Bandura, Albert ► James, William ► Maslow, Abraham ► Rogers, Carl ► Seligman, Martin ► Watson, John B.

Americans with Disabilities Act of 1990

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The Americans with Disabilities Act (ADA) is a federal law that prohibits discrimination on the basis of disability. It was signed into law on July 26, 1990 by President George H. W. Bush. In enacting the ADA, Congress stated that prejudice and discrimination have denied people with disabilities the opportunity to compete on an equal basis and achieve full participation, independent living, and economic self-sufficiency.

While other laws, such as the Civil Rights Act of 1964, provided protection against discrimination on the basis of race, sex, national origin, and religion, no *comprehensive* laws existed that provided protection against discrimination on the basis of disability. For example, Section 504 of the Rehabilitation Act of 1973 banned discrimination on the basis of disability, but it only extended its protections to programs that were receiving federal financial assistance, such as public schools and universities and other federal programs. There were no legal protections available to people with disabilities in the private sector or in state and local programs not receiving federal funding. Therefore, Congress stated that there was a critical need to provide enforceable standards to address the day-to-day discrimination experienced by people with disabilities in areas such as

employment, housing, public accommodations, education, transportation, communication, recreation, institutionalization, health services, voting, and access to public services. Congress also acknowledged that discrimination against people with disabilities can take many forms, such as outright intentional exclusion, the discriminatory effects of architectural, transportation, and communication barriers, overprotective rules and policies, failure to make modifications to existing facilities and practices, exclusionary qualification standards and criteria, segregation, and relegation to lesser services, programs, activities, benefits, jobs, or other opportunities.

The ADA defines a person with a disability as someone who: has a physical or mental impairment that substantially limits one or more major life activities (for example, mental retardation); has a record of such an impairment (for example, an individual with a history of drug or alcohol abuse); or is regarded as having such an impairment (for example, an individual with disfigurement from an injury or birth defect that because the nature of the impairment is perceived by others as having a disability). Major life activities include activities that an average person can perform with little or no difficulty such as caring for oneself, performing manual tasks, walking, learning, and working. When the ADA was passed in 1990, Congress estimated that 43 million Americans had one or more physical or mental disabilities. In defining individuals with disabilities not only as people who currently have a disability but also as people who have a history of a disability or who are regarded as having a disability, Congress extended the protections of the ADA to individuals who experience discrimination on the basis of past or perceived disability. Congress was acknowledging that stereotypic assumptions about disability can result in participation restrictions and limitations, unequal treatment, and political powerlessness for individuals with current, past, and perceived disabilities.

By acknowledging the impact of prejudice and discrimination on individuals with disabilities, the ADA directed increased attention to the interaction between limitations that result from a physical or mental impairment and the social context in which these limitations are expressed. This perspective, often called the *social* or *social-ecological model of disability*, has received significant attention since the advent of the disability rights movement in the 1970s. Modeled after the civil rights movements that preceded it, the disability rights movement brought increased attention to the influence of social, cultural, political, and environmental factors in defining and shaping the experiences of people with disabilities. For example, a person who uses a wheelchair may experience limitations in his or her ability to participate in society because public accommodations like grocery stores, restaurants, and hotels are not accessible. Such a person may not be able to shop at a grocery store if the aisles are not wide enough for a wheelchair to pass through or may not be able to stay at a hotel when traveling if an accessible bathroom is not available. Therefore, the goal of the ADA was to provide standards to eliminate such discriminatory practices.

The ADA provides specific standards for eliminating discrimination in four broad areas: private-sector employment; public services, including transportation services;

public accommodations, such as hotels, grocery stores, shopping malls, restaurants; and telecommunications.

Private-Sector Employment

The ADA states an employer cannot discriminate against a qualified individual with a disability in the job application process, in the hiring, advancement, or discharge process, in employee compensation or job training, or in any other facet of employment. The term *qualified individual with a disability* means an individual with a disability who, with or without reasonable accommodations, can perform the essential functions of the job. The essential functions of the job are typically defined in the description of the position created by the employer when advertising and interviewing job applicants. During the interview process, employers can ask about an individual's ability to perform the essential functions of the job, but cannot inquire if the person has a disability or subject the person to tests that screen for disability, unless all applicants are subject to such screening.

Employers are required to make reasonable accommodations to the known physical or mental limitations of an otherwise qualified individual with a disability unless the employer can demonstrate that the accommodation would impose an undue hardship on the operation of the business. A reasonable accommodation is any modification or adjustment to a job or the work environment that enables an otherwise qualified person with a disability to perform essential job functions. Reasonable accommodations can include: making facilities accessible; job restructuring; part-time or modified work schedules; reassignment to a vacant position; acquisition or modification of equipment or devices; appropriate adjustment or modifications of examinations, training materials or policies; the provision of qualified readers or interpreters; and other similar accommodations. When considering whether an accommodation represents an undue hardship, the ADA suggests consideration of the nature and cost of the accommodation in relation to the size, resources, nature, and structure of the business. Since the passage of the ADA, research has suggested that reasonable accommodations tend to be of relatively low cost to the employer in the majority of cases. For example, the Job Accommodation Network, a service of the Office of Disability Employment Policy in the U.S. Department of Labor, has reported that 71% of accommodations cost $500 or less, with 20% of these accommodations having no direct cost to the employer.

Public Services

Under the ADA, public services include services, programs, and activities provided by state and local governments and their affiliates. The ADA states that state and local governments may not discriminate against a qualified individual with

a disability. The term qualified individual with a disability in this context means an individual with a disability who meets the essential eligibility requirements for services, programs, or activities provided by the state or local government. In addition, all government facilities, services, and communications must be made accessible to people with disabilities. Public services can include libraries, recreation facilities, health services, social services, and transportation services.

Standards for making public transportation services accessible to people with disabilities are specifically addressed in this section of the law. Separate rules were created for different types of transportation systems, with special rules for public bus and rail systems. Over time, all public transportation systems must be made accessible to individuals with disabilities.

Public Accommodations

The ADA also bans discrimination in public accommodations. Specifically the law states that no individual shall be discriminated against on the basis of disability in the full and equal enjoyment of the goods, services, facilities, privileges, advantages, or accommodations of any place of public accommodation. Public accommodations are defined as privately-owned entities not operated by state and local governments and can include restaurants, hotels, grocery stores, doctors' offices, parks, and private schools. However, most private clubs and religious organizations are exempt. Thus, the ADA prohibits discrimination in all programs and services, even those privately owned and operated.

Discrimination, in this context, can include: eligibility criteria that screen out individuals with disabilities; failure to make reasonable modifications in policies, practices, or procedures to avoid discrimination; failure to provide auxiliary aids and services to ensure effective communication such as interpreters, materials in large-print, etc.; and failure to remove architectural barriers in existing facilities and transportation barriers in existing vehicles and rail passenger cars. However, in cases where a public accommodation can demonstrate that making such modifications would fundamentally alter the nature of the goods, services, facilities, privileges, advantages, or accommodation offered, or that such modification is not readily achievable, alternative methods to make such goods, services, facilities, privileges, advantages, or accommodations available may be established. Further, all newly constructed public accommodations must be made accessible to people with disabilities.

Telecommunications

The ADA requires that all companies offering telephone services ensure functionally-equivalent services for individuals with disabilities, specifically those who are deaf or hard-of-hearing or who have speech impairments. For example, telephone relay

services must be available for individuals who use telecommunication devices for the deaf (TDD) or similar devices.

Current and Future Issues

Since the ADA was signed into law in 1990, regulations have been written and court cases have been litigated to establish its boundaries. For example, several Supreme Court cases have established who is protected under the ADA. In *Bragdon v. Abbott* the Court ruled that individuals infected with HIV were protected by the ADA, but, in *Sutton v. United Air Lines, Inc.*, the Court ruled that individuals whose impairments were correctible or treatable, in this case individuals with nearsightedness that could be corrected by eyeglasses, were not eligible for the protections of the ADA. Other Supreme Court cases have established that states must provide services to individuals with mental retardation in the most integrated setting appropriate, and that states can be required under the ADA to make public buildings, such as courthouses, accessible to people with disabilities. However, the concern expressed by several members of the 101st Congress when the ADA was enacted that a "flood of lawsuits" would result has not materialized. Research has suggested that, particularly with regard to the employment provisions of the ADA, most claims are resolved out of court.

The passage of the ADA has led to significant progress in creating a more inclusive society for people with disabilities; however, as of 2006, many policy makers, researchers, and disability rights advocates agree that the ADA has not yet achieved its goal of eliminating discrimination against people with disabilities. The National Council on Disability (NCD), an independent federal agency charged with making recommendations to the President and Congress to enhance the quality of life for all Americans with disabilities and their families, wrote in their 2006 annual report titled, *National Disability Policy: A Progress Report*: "while . . . the country is moving forward, expanding opportunities and inclusion for Americans with disabilities, the rate of progress is slow. Federal policy still contains inconsistent messages and unrealistic requirements for people with disabilities" (p. 1). The NCD identified several areas that must be addressed in order to increase the effectiveness of the ADA in reaching its goals of equality of opportunity, full participation, independent living, and economic self-sufficiency, including: increasing public understanding and awareness of the ADA, increasing coordination across federal agencies in the interpretation and application of the provisions of the ADA, evaluating current ADA enforcement strategies, including the role and efficiency of technical assistance and mediation, and directing further attention to current and emerging issues affecting the disability community including genetic discrimination, voting rights, the rights of institutionalized persons, and the availability of affordable housing.

SEE ALSO: ► Positive law and policy ► Rehabilitation psychology

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Amusement

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Amusement is the positive emotion experienced during play – either physical, rough-and-tumble play, or mental play in the form of games, puzzles, and humor. Although researchers typically emphasize one or other of these elicitors in their work, a growing body of evidence suggests common features in the emotional aspects of physical and mental play. One central characteristic of all play is cognitive flexibility – redefining a situation from an alternate perspective. In physical play, this might involve role-taking or inferring another person's perspective in a game. In mental play, this might involve generating alternate possible courses of action, or "getting" the change of perspective suggested by the punch line of a joke. For this reason, amusement in either context may facilitate creativity, effective problem solving, and skill development.

Evidence from primates, infants, and adult humans suggests that physical play and humor share a behavioral signal. In primates, a facial expression including crinkled eye corners, upturned lip corners, and a dropped jaw or wide mouth indicates willingness to play. Since primate play typically involves mock aggression, the "drop-jaw" component of this expression may indicate that no real harm is intended. Developmental researchers working with infants and toddlers have also identified a "duplay" smile, which includes a similar jaw drop exposing the upper and lower teeth, during rough-and-tumble play and humor about taboo topics (e.g., nudity) or another's clumsiness. The duplay smile is observed more often in toddler play with fathers than with mothers, probably due to fathers' greater emphasis on rough-and-tumble play. The duplay, drop-jaw smile also corresponds to the facial expression of amusement identified in adult humans.

In recent decades, theory and empirical research on amusement have addressed three major issues. One of these is establishing the links between physical play and humor, on one hand, and creative cognition on the other. There is some evidence that physical, rough-and-tumble play is associated with mental flexibility in other domains. In elementary school boys, frequency of rough-and-tumble play activity predicts the variety of solutions they generate to hypothetical social problems. The flexibility of boys' rough-and-tumble play (as measured by number of different types of play behaviors during an observation) also predicts the number of prosocial problem-solving strategies they are able to generate in

response to hypothetical scenarios. Theories of humor and neuroscience findings both suggest that humor perception also involves mental flexibility. In defining humor, theorists often emphasize the "cognitive shift" needed to understand the punch line of a joke, or the perception of "incongruous, contradicting, or opposing elements" that make sense when seen from another perspective. Given that creativity is defined as a combination of novelty/unexpectedness and utility/appropriateness, these theories suggest that amusement and creativity should be closely linked, although the exact nature of this link is still uncertain. Some studies have found that experimentally elicited amusement (after watching funny film clips) leads to enhanced performance on tests of creativity, although it is still unclear whether these effects are due to amusement in particular or positive affect in general.

Another strong line of research has examined individual differences in sense of humor, considering predictors and correlates of this personality trait. Several well-recognized measures of humor appreciation are available, including Martin and Puhlik-Doris's Humor Styles Questionnaire and Ruch's 3WD Humor Test. Finally, researchers are increasingly interested in the use of laughter to invite and communicate social support, noting that people often laugh in stressful or intimidating situations, and are more likely to laugh when companions are present than when alone.

A new focus of research addresses the central nervous system architecture of humor. Although only a few studies currently offer evidence on this subject, their findings are consistent with the cognitive theories of humor discussed above. Neurological patients with damage to areas of the prefrontal cortex believed to mediate integration across multiple pieces of information (Brodmann areas 10 and 11) show deficits in successful joke completion, and activation in this area distinguishes between the reading of funny and unfunny jokes by healthy subjects. One study found that reading verbal jokes led to greater activation than nonjokes in the posterior temporal gyrus (Brodmann areas 21 and 37), an area believed to mediate the processing of alternative interpretations of words and assessing the overall coherence of language. However, research with animal models suggests that cortical regions such as these are not necessary for play behavior in other animals, so they may not mediate the experience of amusement per se.

A number of other studies also provide data on the outcomes of experimentally elicited humor, including autonomic nervous system aspects of the humor response and a range of cognitive implications. However, most of these were designed as tests of the effects of "positive affect," incidentally using funny video clips as the experimental stimulus. As a result, it is unclear from this research whether the observed effects are due to amusement per se or to positive affect more generally. Researchers are now beginning to look more explicitly at the cognitive, physiological, and behavioral effects of specific positive emotions, including amusement.

SEE ALSO: ► Creativity ► Humor ► Play ► Positive emotions

Anticipatory Enthusiasm

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Anticipatory enthusiasm is the positive emotion experienced while one anticipates acquiring and/or consuming some kind of reward. Panksepp (1998, p. 147), described the environmental stimuli that elicit this emotion as "unconditional, distal, incentive cues of reward," meaning that the environment presents a cue of a definite reward to come in the near future, provided that the organism expends some energy to pursue it. Evidence of this emotion, and the neurological pathway underlying its experience, has been demonstrated across a wide range of mammals from rodents to humans. In laboratory mammals the reward is usually food, although in some species mates and offspring may also serve as rewards in this sense. In humans, stimuli eliciting anticipatory enthusiasm vary widely, including desired food (e.g., chocolate), money, other material rewards, and the promise of reunion with sexual/romantic partners or offspring.

Because psychologists and neurologists have long been interested in the neurological underpinnings of motivation, and because appetitive behavior is easily elicited and observed in laboratory mammals, the neural substrates of anticipatory enthusiasm are fairly well understood. Researchers have consistently identified a neurological pathway, labeled variously as the *behavioral activation system*, the *behavioral facilitation system*, and the *seeking* system, that includes the lateral hypothalamic nucleus accumbens (NAcc) shell and ventral tegmental area (VTA), and in some cases areas of the frontal cortex, that produce appetitive behavior in laboratory mammals when stimulated electrically. This appetitive behavior varies somewhat depending on environmental cues, but may include feeding, drinking, gnawing on things, cage exploration (presumably searching for food if none is present), and sex. Research with both rodent and human subjects suggests that the activity in this pathway is particularly sensitive to the magnitude of possible upcoming rewards, evaluated relative to recently received rewards. Human functional magnetic resonance imaging (fMRI) studies also suggest that NAcc firing only reflects the magnitude of a potential reward, without being influenced by the probability of the reward or a cost-benefit ratio.

Neural transmission in this pathway relies primarily on dopamine, and a substantial body of research on humans as well as laboratory mammals supports a critical role of dopamine in anticipatory enthusiasm and appetitive behavior. Dopamine agonists (drugs that activate dopamine pathways, either by mimicking dopamine, by encouraging its release into the synapse, or by blocking its reuptake into the presynaptic neuron) typically produce reward-seeking behavior, and dopamine antagonists (drugs that reduce or block dopamine transmission) tend to reduce reward-seeking behavior. In humans, many drugs of addiction act as dopamine agonists, including alcohol, cocaine, and the amphetamines (although marijuana, MDMA, and opiates such as heroin act primarily on other

neurotransitter systems). Also, behaviors to which people may potentially become "addicted," such as gambling, shopping, and sex, typically involve reward seeking and activation of dopaminergic reward pathways.

Anticipatory enthusiasm is typically experienced as pleasurable, and it is not unusual for people to enjoy looking forward to some pleasurable event as much as or more than the event itself. However, anticipatory enthusiasm may also be experienced as unpleasant craving, and even when a reward is anticipated, one may not necessarily experience sensory pleasure upon consumption. Berridge and Robinson differentiate *liking* from *wanting* in the context of addiction, noting that once addicted one can crave some substance of abuse without actually receiving much pleasure from consuming it. However, once one is satiated with a reward (e.g., chocolate), dopamine activation in reward pathways tends to decrease, even when the reward is presented again. Thus, the reward value of stimuli is not constant, but can change depending on one's level of need versus satiation. Also, once dopaminergic reward systems are activated, studies with lab rodents suggest that reward-seeking behavior can switch easily from one target (e.g., food) to another (e.g., water).

In humans, anticipatory enthusiasm can be elicited in the laboratory through various types of gambling tasks, or by showing the subject photographs of desired objects such as food, money, or material goods. Dispositional anticipatory enthusiasm is strongly correlated with the Big Five personality factor Extraversion, and several theorists have proposed that these are both rooted in individual differences in reactivity of the neurological reward systems discussed above. Current research addresses the autonomic nervous system aspects of anticipatory enthusiasm, the implications of anticipatory enthusiasm for social cognition, and the role of anticipatory enthusiasm in behavioral responses to social power.

SEE ALSO: ► Appetitive motivational systems ► Dopamine ► Functional MRI ► Positive emotions

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Appetitive Motivational Systems

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Appetitive motivational systems promote approach behaviors that seek a reward or positive outcome, whereas aversive motivational systems promote avoidant

behaviors that seek to avoid punishment or a negative outcome. Supported by neurophysiological evidence demonstrating activity in different parts of the brain and nervous system in response to reward-based stimuli versus punishment-based stimuli, the appetitive and aversive systems are thought to be distinct and relatively independent. This suggests that the two systems can be active at the same time and interact with each other. Every individual is believed to have a particular level of sensitivity for rewards-based stimuli and another level of sensitivity for punishment-based stimuli. Sensitivity for one system is not thought to be directly related to or predictive of an individual's sensitivity for the other system. This can result in a multitude of diverse appetitive/aversive combinations among people and suggests an intriguing and important individual difference.

Within the domain of motivation, there are various terminologies for the appetitive/aversive distinction including *approach/avoidance*, *positive/negative*, *promotion/prevention*, and *discrepancy-reducing/discrepancy-enlarging*. Some motivational theories are explicit in recognizing this reward-seeking versus punishment-avoidant dimension, whereas others are more implicit. Brief descriptions of several motivational systems are presented with the focus on the appetitive system.

Gray's theory of motivation posits an appetitive behavioral activation system (BAS) in response to reward or nonpunishment environmental cues and an aversive behavioral inhibition system (BIS) in response to punishment, nonreward or novelty cues. BAS activity is thought to result in the movement toward goals and to be associated with positive emotions such as happiness, hope, and elation. In 1994, Carver and White developed a BIS/BAS scale to measure an individual's sensitivity level to each system. Research consistently has shown higher BAS sensitivity to be associated with higher positive affect and higher BIS sensitivity to be associated with higher negative affect. Providing neurophsyiological evidence for independent appetitive and aversive systems, studies utilizing electroencephalographic (EEG) and neuroimaging technologies show greater activity in the regions in the left prefrontal cerebral cortex in response to BAS stimuli or in an individual with a higher BAS score, whereas there is greater activation in regions in the right prefrontal cerebral cortex in response to BIS stimuli or in an individual with a higher BIS score.

These two systems are thought to be managed by separate regulatory systems. Two self-regulation behavioral theories, Higgins' regulatory focus theory and Carver and Scheier's discrepancy-reducing/discrepancy-enlarging feedback process model are based upon the appetitive/aversive distinction. Both theories posit self-regulation approach processes that seek to reduce discrepancies between current states and desired end-states or goals. Affect is also integral to both theories.

Higgins' regulatory focus theory posits that one's behavioral self-regulation adopts either a promotion (appetitive) or prevention (aversive) focus depending upon the basic survival need it is addressing. A promotion focus is in response to one's nurturance or nourishment needs, whereas a prevention focus is prompted

by security-related or protection needs. Higgins also suggests that one's desired end-states may reflect either *ideal* goals (e.g., hopes and aspirations) or *ought* goals (e.g., duties and responsibilities) which involve a promotion or prevention focus respectively. Promotion focus is then a regulatory state that is concerned with the presence or absence of positive outcomes (aspirations, advancement, and accomplishment) and attempts to move the individual toward the goals of their *ideal self*.

Emotions are an important part of this self-regulation process. Successful goal attainment can result in cheerfulness-related emotions such as being happy or satisfied. Nonattainment of ideal goals results in not only the absence of the positive outcome but is also associated with the absence of positive emotions (i.e., dejection-related feelings) such as disappointment or discouragement.

Building on his regulatory focus theory, Higgins' posits the regulatory fit effect which suggests that matching one's regulatory state (either promotion- or prevention-focus) with the manner in which one pursues a goal will enhance motivational strength during the process and result in improved goal performance. One manner of goal pursuit is through the use of strategic means. For promotion-focused ideal goals, an eagerness-related approach strategy is thought to best sustain motivational intensity. For example, undergraduate study participants were asked to write a report about how they would spend an upcoming Saturday and to imagine certain steps to accomplish that goal. Instructions for these steps were either framed as eagerness strategies or as vigilance (prevention) strategies. Eagerness-related instructions included asking participants to a) imagine a convenient time to write the report, b) imagine a comfortable place to write, and c) imagine making their reports very interesting. Participants were also measured for their tendency to adopt either a promotion or a prevention focus. Promotion-focused individuals who were given the eagerness-related instructions (the prevention-focused individuals were given vigilance strategies) were 50% more likely to turn in their reports than those individuals whose regulatory state did not correspond with the strategic means. One's regulatory state can also be manipulated by situational factors such as instructions or feedback to induce a promotion or prevention focus. For example, framing goals in terms of gains or nongains will induce a promotion focus.

A second theory of behavioral self-regulation is Carver and Scheier's model of discrepancy-reducing (approach) and discrepancy-enlarging (avoidant) feedback loop systems. Discrepancy-reducing feedback processes attempt to move the individual closer to goal acquisition by assessing one's position relative to the goal and developing the steps to reduce the perceived distance. This is essentially an approach process toward positive goals.

Affect plays an integral role in the feedback process and is suggested to be reflective of the individual's perception of the rate of progress toward the desired goal as compared to a criterion. This comparison results in an error signal in the feedback loop and induces positive or negative affect depending upon whether the rate of progress is above (doing well) or below (not doing well) the criterion respectively. Carver and Scheier suggest that although it involves positive affect

in either case, doing well moving toward a goal (discrepancy-reducing) is not the same as doing well moving away from an anti-goal (discrepancy-enlarging). Therefore, they posit that affect is comprised of two bipolar dimensions, one associated with discrepancy-reducing behaviors and the other with discrepancy-enlarging behaviors. Emotions for discrepancy-reducing approach behaviors range from elation (doing well; positive affect) to depression (not doing well; negative affect). Outcomes of discrepancy-reducing systems appear to be to be associated with conformity whether that is to group norms, personal attitudes, *ideal selves*, or *ought selves* and, generally, to promote goal pursuit.

Another appetitive motivational system that promotes goal pursuit is that of learning orientation. Learning orientation is the appetitive form of achievement motivation or goal orientation (i.e., how one approaches a task or goal in an achievement setting). Individuals with a learning orientation seek to improve their competence by developing new skills and mastering new situations. They hold an incremental view of ability which posits that competencies grow and develop through effort, experience, and practice. As a result, those with a higher learning orientation tend to set challenging goals, seek new experiences, practice and evaluate their skills, and persevere in the face of obstacles. Errors and failures are considered a source of learning and feedback is actively sought in order to enhance performance. In learning and acquiring knowledge, a learning orientation promotes the utilization of a deep-processing method involving critical thinking and the ability to generalize concepts to new situations.

Whereas most bivariate systems posit one appetitive and one aversive subtype, goal orientation research provides evidence of a third subtype: that of an appetitive/aversive hybrid called *performance-approach orientation*. Individuals with a performance-approach orientation are concerned about comparisons with others and seek to obtain favorable judgments of competence. Whether an appetitive or aversive approach to a particular task or situation is taken depends on the individual's perception of his or her likelihood of success. In those areas where success and therefore favorable judgments are probable, an appetitive approach will be adopted. If the likelihood of failure is perceived to be greater, an aversive approach is taken so as to avoid a potential unfavorable judgment.

Recently, Gable offered a hierarchical model of approach and avoidance social motivation. Social motivation is the process of establishing and maintaining social bonds. The model posits that distal appetitive/aversive social motives prompt more proximal approach/avoidant social goals to produce positive or negative social outcomes which ultimately influence well-being and health. Approach social motives are based on the need for affiliation with others whereas avoidant social motives are predicated on a fear of rejection from others. The approach system seeks rewarding, positive outcomes (affiliation and intimacy) with pleasing relationships and social interactions characterized by such rewards as companionship, fun, and understanding. Not attaining these positive outcomes result in painful relationships and interactions.

Research findings supported the assumption that individuals with approach social motives are more likely to adopt approach goals and similarly, avoidant motives

were associated with avoidant goals. In addition, employing approach social goals predicted less loneliness, greater satisfaction with social relationships and more frequent positive social events compared with those who used avoidant social goals. Gable's model was supported in a related study of friendship goals. Friendship-approach goals also predicted less loneliness, greater relationship satisfaction, and more frequent positive relationship events. In addition, a positive longitudinal change in subjective well-being was found. Other social motivation research has shown that individuals higher in affiliation behaviors are less anxious, more self-confident, view themselves as similar to others and were judged positively by others.

SEE ALSO: ► Aversive motivational systems ► Positive affectivity ► Proactive coping ► Promotion focus

Applied Positive Psychology

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In the introductory remarks of *Positive Psychology in Practice*, editors P. Alex Linley and Stephen Joseph argued that the goal of applied positive psychology is to facilitate *optimal functioning* using positive psychology research as a foundation. This definition is broad, and appropriately so, for positive psychology can be applied at many different levels of analysis (individuals, groups, institutions, and societies); in many different settings (work, school, and home); via many different modes of administration (consultants, coaches, teachers, therapists, employers, and even online); for use in many different populations (non-distressed individuals, people coping with disabilities or physical illness, people at risk of developing or currently suffering from mental disorders); and with an interest in many different desired outcomes (subjective well-being, social cohesion, productivity, physical health, etc.).

Positive psychology covers a wide breadth of topics, and the number of potential avenues for application is massive. Furthermore, positive psychology is an interdisciplinary field; the arenas in which these applications might take place extend into the worlds of business, coaching, medicine, clinical practice, and so on. The literature is rife with proposed applications in all of these areas, but is for the most part lacking in actual implementation and empirical study of such applications. Four particularly prominent areas of applied positive psychology are highlighted below.

Increasing Happiness

One straightforward application of positive psychology, perhaps one of the most well researched thus far, is the development of methods for increasing happiness. Although there is evidence that each individual has a happiness set point – a

baseline level of happiness to which they are likely to return as they adapt to changes in their life – there is also evidence that individuals can achieve sustained increases in happiness by modifying their volitional behavior.

The majority of happiness-increasing interventions that have been empirically tested are single modifications to volitional behavior, often referred to as *exercises*. To date, several individual exercises have proven effective in randomized, controlled studies. Studies on individual exercises have several advantages over studies of more complex interventions. They allow researchers to disentangle which exercises do and do not work, and to determine the best way to administer a given exercise to optimize its effects. The use of individual exercises can also be more theoretically informative; if an individual is interested specifically in the role of gratitude in promoting happiness, using a gratitude intervention alone would be more informative than using a set of exercises containing a gratitude intervention.

This is not to say that there is no place in the science of applied positive psychology for more complex interventions. Indeed, in the world outside of research, it is far more likely that exercises will not be used in isolation, and may even be used in conjunction with other existing interventions. Research is certainly needed to evaluate the effects of positive exercises in real-world settings, as they may differ substantially from those observed when the exercises are administered alone. One potential avenue for research in this domain is through *life coaches* – some of whom apply these exercises in the context of their standard practice – although there is little research in this area to date.

Enhancing Clinical Practice

A related line of inquiry involves applications of positive psychology to clinical psychology, both as a way of modifying existing clinical practice, and as the basis for developing new treatments.

Positive Interventions as Adjuncts

At least two positive therapeutic interventions have been designed and implemented as adjuncts to existing therapy modalities.

Michael Frisch's quality of life therapy (QOLT) is designed primarily as a supplement to cognitive therapy; it offers the goal of increasing life satisfaction and, keeping this goal in the forefront throughout treatment, provides relevant cognitive and behavioral techniques for doing so. QOLT is fully manualized, but very little research has evaluated its efficacy for treating clinical populations.

Giovanni Fava and Chiara Ruini's well-being therapy (WBT) targets maladaptive thought patterns that prevent clients from achieving psychological well-being. It operates under the assumption that the amelioration of symptoms alone does not increase well-being, and that absence of well-being leaves remitted clients vulnerable to relapse. As such, WBT is primarily intended for individuals who

have undergone and responded to treatment for mood or anxiety disorders, but who remain at risk for relapse.

Standalone Positive Interventions

There are also positive psychology interventions intended as standalone treatments.

Throughout the positive psychology literature, mindfulness has been well-established as a source of well-being. Acceptance and commitment therapy (ACT), first proposed by Steven Hayes, is a standalone therapy that emphasizes the cultivation of mindfulness, taking stock of one's larger goals in life, and making a commitment to pursue those goals. Although the general focus of ACT remains on the negative aspects of the client's behaviors and circumstances, its integration of mindfulness and ultimate concern with well-being as an outcome makes it distinct from standard cognitive and behavioral approaches.

Lastly, positive psychotherapy (PPT) – originating from work by Martin Seligman, Tayyab Rashid, and Acacia Parks-Sheiner at the University of Pennsylvania – is a standalone intervention for mood disorders, the goal of which is to identify and foster the positive aspects of clients' lives. PPT seeks to help clients identify and use their strengths in order to create pleasure, engagement, and meaning in their lives, and to use these resources as a buffer against negative events.

Promoting Work Productivity and Satisfaction

Principles of positive psychology have been applied in the business world for decades through vehicles such as executive coaching and consulting towards the goal of increasing work productivity and satisfaction. Although the effectiveness of such tools is supported in many cases by anecdotal evidence, controlled research is, in many cases, sparse. One notable exception is the use of *strengths-based practice* by Gallup, pioneered by Donald Clifton. In a variety of settings over the past 30 years, Clifton and colleagues have examined the effects of structuring the work environment around employees' strengths. In addition to many qualitative findings suggesting the effectiveness of a strengths-based approach, they report quantifiable increases in productivity, engagement, and life satisfaction among employees.

Although there is a plethora of research on the many correlates of high work productivity and satisfaction, only a few studies assess whether these factors play a causal role via intervention. One such study, conducted by Adam Grant at the University of Michigan, found that employees are more motivated when the positive impact their work has on other peoples' lives is made more salient. There are several other research findings that could easily lend themselves to this sort of intervention. One notable example is Barbara Fredrickson's research on the relationship between positive emotion, creativity, and effective communication. Interventions designed to promote transformational leadership, a leadership style predictive of many positive work outcomes, would be another promising future direction.

Education

One arena in which applied positive psychology has thrived for many years is higher education. Undergraduate and graduate-level courses in positive psychology are offered at many academic institutions across the US, and many of these courses share the common goal of applying the principles of positive psychology as part of the learning process. The practice of positive interventions has been an integral aspect of many positive psychology syllabi beginning with Seligman's early courses on the topic. It was recently solidified as a standard method of the field in Chris Peterson's seminal introductory positive psychology textbook, *A Primer in Positive Psychology*, which provides positive exercises appropriate to the concepts in each chapter. A growing number of PhD programs allow a formal or informal specialization in positive psychology and, as of 2003, the University of Pennsylvania offers a formal Masters of Applied Positive Psychology (MAPP).

There are also some promising directions for the application of positive psychology in secondary schools. Researchers from Swarthmore College (Jane Gillham), the University of Pennsylvania (Martin Seligman, Karen Reivich), and the University of Michigan (Chris Peterson) are evaluating a positive psychology curriculum at Strath Haven High School in Wallingford, PA. The program, which focuses on character development and fostering positive emotion, is integrated with the ninth-grade language arts curriculum; it is currently undergoing rigorous empirical evaluation over a four-year period. The same research group is working with the Geelong Grammar School in Melbourne, Australia, to create a school-wide positive psychology curriculum and to help teachers and administrators use positive psychology principles in their day-to-day interactions with students. Although the results of these applications have not yet been evaluated, they represent two examples of positive psychology's potential for large-scale implementation at the institutional level.

Promising Directions

As mentioned previously, there are many potential applications of positive psychology that have been discussed in the literature, but have not yet been implemented. Such cases are far too plentiful to recount here; however, a few areas that are especially ripe for application are highlighted below.

First, Shelly Gable and colleagues have found that people who help their loved ones savor life's victories, and whose loved ones respond in kind, are more satisfied in their relationships. An important next step would be to determine whether it is possible to train individuals to respond more effectively to good news, and to assess whether doing so leads to greater relationship satisfaction.

Second, Angela Duckworth's work on non-IQ predictors of success suggests that positive individual characteristics – specifically, self-discipline and grit – are

more predictive of success in academic settings than are measures of intelligence for both children and adults. This begs the question of whether it is possible to teach grit and self-discipline, and whether doing so would lead to greater academic success.

Lastly, a recent meta-analysis by Sonja Lyubomirsky, Laura King, and Ed Diener suggests that happy people are healthier, live longer, have better social networks, and are more successful in their careers. In additional to being desirable characteristics for individuals, these sorts of variables are of interest to educators, employers, and policy makers. If it is, indeed, possible to affect outcomes of this magnitude by increasing happiness, the development of cost-effective happiness-increasing interventions – coupled with accurate methods of assessing happiness at the national level (per Ed Diener and colleagues' work on developing national indicators of well-being) – could change the face of public policy.

The Future of Applied Positive Psychology

Positive psychology has resulted in the creation of a variety of tools and interventions for facilitating optimal functioning in both individuals and institutions. Many happiness interventions are nonspecific to the contexts in which they are applied, making it easy to adapt interventions from one domain for use in other domains. The broad applicability of positive interventions to so many settings and populations is one of applied positive psychology's greatest strengths.

The field of applied positive psychology faces two major challenges. The first is the need for implementation; the number of proposed applications of positive psychology research is high, but the number of efforts to implement and test such applications is disproportionately low. Second, like many applied fields, applied positive psychology suffers from a lack of communication within and between relevant fields. There are a preponderance of disconnected theories and models with few efforts to synthesize them. Although texts like *Positive Psychology in Practice* (which assemble chapters by various individuals whose work is relevant to a general topic) are a good start, efforts must also be made to achieve an active integration of overlapping models and approaches.

Positive psychology is rapidly garnering interest from individuals, businesses, educators, and even policy-makers who want to know how best to enable people to reach their full potential. The future of applied positive psychology lies in conducting the research that will answer this question, and facilitating widespread implementation of interventions to enhance optimal functioning across all areas of life.

SEE ALSO: ► Character strengths (VIA) ► Happiness ► Positive psychotherapy ► Strengths perspective (positive psychology) ► Teaching positive psychology

Aristotle

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The ancient Greek philosopher and scientist Aristotle (384–322 BCE) lectured and wrote on a wide range of topics, including logic, metaphysics, physics, mathematics, biology, psychology, rhetoric, aesthetics, and ethics. One contemporary area in which Aristotle's influence remains prominent is that of moral psychology. There, his investigations covered everything from the nature of intentional action, to an account of the virtues of character and their place in a good life, to nuanced examinations of the gamut of emotions.

In the *Nicomachean Ethics*, Aristotle set out to examine a question we would regard as ethical but which he treated as a concern of politics (because it is the business of the politician to ensure a polis of thriving citizens): the question of what kind of life is a worthwhile one for us as rational creatures. Aristotle treated this as the question of what is the "highest" good for a person and he answered it by equating the highest good with *eudaimonia* (translated, alternatively, "happiness" or "flourishing").

Proceeding, as was his method, from the common beliefs (endoxa) concerning which lives are worth living, Aristotle argued that eudaimonia requires that we realize human excellences of character (ethos) and of intellect (wisdom, or phronesis).

Although the ethical virtues are required if a person is to flourish or be happy in Aristotle's view, he departed from the ancient Stoics in insisting that they are not sufficient. For one, some of Aristotle's virtues have the feature that a person cannot exercise the virtue without having access to certain resources. For example, a person simply cannot count as munificent without having great wealth to expend. Aristotle was also concerned to offer an account of voluntary action and responsibility that supports the view that we can be appropriately praised or blamed both for our characters and the actions that result from them.

In conjunction with other works, such as his *Rhetoric*, Aristotle offers the contemporary psychologist a rich conceptual sketch of attitudes, emotions, and feelings such as shame, pride, and anger. Aristotle's account of pleasure, in particular, offers a compelling alternative to some contemporary views. For Aristotle, though virtue is typically pleasant, pleasure is not the aim of virtue. Pleasure is the "bloom on the rose" of virtuous activity; it should not be taken to be our reason for cultivating the virtues and it would not be valuable were it not for the value of the activity.

While Aristotle considered himself a scientist, his moral psychology is more conceptual and normative than empirical. Certainly, his method of proceeding from the common beliefs served to anchor his investigations to the empirical phenomena in question, but ultimately his moral psychology was prescriptive. He urged his students to order their lives rationally so that all that fell within their domains of choice (including actions and affects) would be directed to their

proper objects at the proper time and in the proper proportion, as his "doctrine of the mean" prescribed.

SEE ALSO: ► Eudaimonia ► Flourishing ► Good life ► Moral development ► Virtues

Attachment Theory

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As a lifespan theory of personality development, attachment theory provides a framework for understanding how adaptive traits are formed in childhood interpersonal contexts. Of these traits, attachment security has been championed as a common process underlying many other positive attributes. In addition to studying childhood developmental processes contemporary attachment researchers now have extended the theory to adult personality, interpersonal functioning, and mental health. Primary strengths of the theory are that it: 1) can be applied equally well to childhood and adult functioning; and 2) juxtaposes positive and negative developmental trajectories. This juxtaposition enables researchers and clinicians to identify maladaptive patterns quickly and choose the best interventions or programs to more closely approximate positive development and maximize adaptive functioning.

Attachment theory has its roots in the seminal writings of John Bowlby. In the years following World War II, Bowlby became disillusioned with psychodynamic "object relations" theories, which asserted that the genesis of pathological development lay within children. He countered that factors present in the real external environment (i.e., parenting vs. childhood fantasy) were primarily implicated in personality development.

Drawing on the work of those in the natural sciences, Bowlby proposed that young humans are biologically predisposed to maintain attachments to groups and more powerful others because maintaining such attachments has basic survival value. If the child strays too far from the caregiver, the attachment system creates intolerably high anxiety levels that motivate the child to reestablish proximity. Because security comes from caregivers, however, children must adapt their proximity-seeking strategies to match the caregivers' parenting styles. For example, if parents are intolerant of emotional displays, children must avoid expressing strong emotions and find other ways to attain comfort while avoiding painful rejections. This example highlights that in order to adapt their proximity-seeking behaviors, children also must adapt their cognitive and emotional systems. It follows that across innumerable child/caregiver interactions the attachment system imbues individuals with characteristic ways of thinking, feeling, and behaving that remain relatively stable across the lifespan.

The means of assessing these cognitive-affective-behavioral patterns was developed by Mary Ainsworth and her colleagues and came to be known as the "Strange Situation" paradigm. In this procedure, young children are observed across a brief separation and reunion with their caregivers. Through their research Ainsworth and colleagues identified three prototypic patterns, or *attachment styles*, which they labeled *secure*, *anxious/ambivalent*, and *avoidant*. Main and Solomon later identified a fourth *disorganized* style.

The latter three attachment styles (anxious/ambivalent, avoidant, disorganized) were termed *insecure styles* to denote that security was not inherent in the parent–child relationship. Although the insecure styles relate to maladjustment, with the disorganized group having the worst outcomes followed by the anxious/ambivalent and finally the avoidant groups, these styles are positive adaptations in that they enable children to maximize feelings of security in the parent–child relationship. The price exacted for this initially positive adaptation is high, however, as insecure styles precipitate later deficits in affect regulation and interpersonal functioning.

In contrast to those who develop insecure styles, securely attached children are masters at regulating their emotions and thrive in interpersonal contexts. This is because, when parents consistently are available, warm, and responsive, while also maintaining high standards for their children's behaviors, the children do not have to worry about their security needs. Rather, they are free to explore their environments and interpersonal surroundings without excesses of fear or anxiety. These children learn through experience that when they encounter challenges or threats, they can retreat to the safety of the parental *secure base*. In their secure base function, parents provide support, comfort, and reassurances to the unsettled children. Secure children thus learn that negative emotions can be tolerated and managed effectively.

When their emotions are calmed in such parental "holding environments" children can be provided with new strategies to use in attempts to overcome previously encountered impediments. Thus, in their "coach" roles parents foster goal development, provide positive emotions and motivation, and teach effective problem-solving skills. As this cycle is repeated throughout childhood in what Bowlby termed the *goal corrected partnership* children come to view themselves as efficacious and worthy of support, others as available and responsive, and the world as a safe and predictable place.

Having had their early emotional experiences validated (i.e., perceptions are accurate and emotional reactions appropriate), and having experimented with various problem-focused coping strategies, children develop the causal linkages that enable them to gauge accurately the effectiveness of their behaviors and other people's reactions. Because of these good reality-testing skills, emotional balance, and positive expectations for interpersonal relationships, secure children are effective communicators and derive positive social-support perceptions. Aside from ameliorating loneliness, such positive social support perceptions are protective factors against the onset of depression and other negative mental-health outcomes.

These and other benefits of secure attachments are carried forward into adulthood because, once internalized, attachment styles take on lives of their own and become relatively fixed sets of beliefs and expectations about the world, the self, and others. Acting as self-fulfilling prophesies, the styles, which reflect underlying cognitive *schemas* or *working models*, lead the developing child to behave in ways that are consistent with how he or she expects to be treated by others. Such child behaviors, in turn, elicit reactions from others that are consistent with those expectations. In this way, attachment styles are reinforced throughout the developmental years and become road maps for perceiving, interpreting, and responding to environments into adulthood.

Mikulincer and his colleagues have applied cognitive research techniques in demonstrating how adults' internalized attachment working models can be activated by situational cues and influence adult emotions and behaviors. In this respect, adult attachment processes are similar to those observed in childhood, but adults rely more on symbolic cognitive representations (i.e., memories) of attachment figures as opposed to children's relying on real physical proximity to ameliorate distress under situations of mild to moderate distress.

Partially because of their abilities to regulate affect and sustain positive emotions, securely attached individuals consistently have better outcomes across a broad range of mental-health indicators relative to those with insecure styles. Moreover, secure individuals have internalized the aforementioned cause-and-effect linkages that enable them to anticipate outcomes accurately and develop alternate goal-pursuit strategies to use when encountering obstacles. These strengths and related positive outcome expectancies underlie many positive psychology constructs and associated outcomes. By extension, the published literature is rife with supporting citations.

The wealth of adult attachment research findings published over the past two decades largely was facilitated by the development of valid adult assessment procedures, including the Adult Attachment Interview (AAI) and numerous self-report measures. Whereas self-report measures are strong at assessing consciously held attachment-related attitudes and behaviors, the AAI may tap more subconscious attachment working models. It assesses attachment patterns not so much through scoring what people say, but, rather, how they say it. A secondary strength of the AAI is that it mirrors closely Ainsworth et al.'s initial attachment classification system, thereby facilitating investigations of the correspondence between infant and adult attachment styles (65% to 70% concordance rates). Learning to administer and score the AAI, however, can be an expensive and time-consuming process.

Self-report measures are less expensive and easier to administer. Since Hazan and Shaver published the first self-report attachment measure in the early 1980s, numerous self-report instruments, many with different classification systems, have appeared in the scholarly literature. Bartholomew and Horowitz developed a widely accepted measure and classification based on positive vs. negative *models of self* and *models of others*. More recently, Brennan, Clark, and Shaver took the best

items from all known self-report attachment scales and combined them in a new measure, the Experience in Close Relationships Scale (ECRS). The ECRS built on Bartholomew and Horowitz's classification system, but assigned styles not based on models of self and others, but, rather, on levels of attachment avoidance and attachment anxiety – the same two attachment dimensions that Ainsworth and colleagues found underlay the infant attachment styles.

In combining items from other self-report measures into a widely accepted classification, the ECRS has curtailed a major weakness in attachment research – namely too many measurement and classification systems. Nevertheless, assimilating information from across studies that have relied on different measures remains a daunting task to those who are new to the field. Moreover, responding to most self-report measure items necessitates experience in romantic relationships. Thus, some variance due to characteristics of romantic partners may be present in the measures. This additional source of measurement variance could partially explain the often weak correspondences between self-report measures and the AAI.

One way to address this latter dilemma is to heed Mikulincer and Shaver's call to move away from reporting results in term of styles and move toward assessment based strictly on the continuous attachment avoidance and anxiety dimensions. Although this recommendation makes sense from a methodological and statistical standpoint, many researchers continue to report results for the attachment styles because, as didactic devices, the styles communicate meaning in a simple way that makes intuitive sense to most readers.

As attachment theory continues to garner attention and grow across the coming decades, researchers and applied psychologists should continue to develop interventions and programs that promote the internalization of secure working models while increasingly taking into account cultural, gender, and age-related differences. Promoting secure attachment should translate into better achievement and mental-health outcomes for individuals as well as organizations, and attachment research may provide invaluable information on how to foster and promote the development of other positive psychology traits and attributes.

SEE ALSO: ► Adult attachment security ► Hope ► Optimism ► Self-efficacy ► Social support

Attribution Theory

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On an ongoing basis, people pose and answer questions about the causes of events, and the study of people's beliefs about causes has concerned psychologists for decades. A *causal attribution* is a belief about the cause of some event. The term *attribution* makes it clear that a particular explanation may or may not be

correct. What matters is that the person regards his or her causal attributions as true, and then acts accordingly. The attempt to explain the role played by causal attributions in social behavior is called *attribution theory*, of which several versions exist.

Attribution Theories

The first attribution theory emerged from Fritz Heider's descriptions of how people explain events in their everyday lives, particularly actions by others. The judgment that a given action was intentional or not is critical, according to Heider, and this judgment is often made by deciding whether people's behavior reflects their inner characteristics or the situational demands. In the former case, the theory addresses *internal attributions* and regards the behavior as intentional; in the latter case, it addresses *external attributions* and behavior regarded as unintentional.

Some psychologists have observed that the internal–external distinction makes most sense in Western cultures that exalt individuality and oppose the person and the world. In cultures that emphasize groups, for example India, causal attributions tend to be phrased in terms of the relationships between people, which include both internal and external factors.

Another version of attribution theory is Harold Kelley's account of how people arrive at a particular causal attribution for some event. Kelley's attribution theory prescribes how a reasonable person interested in the truth should think. Kelley suggested that people proceed exactly as a scientist would, by gathering information about how different factors relate to the event in question. To the degree that the presence or absence of a factor is associated with the subsequent occurrence or nonoccurrence of the event, then it is a likely cause.

For example, if a student is trying to explain why she performed poorly on a midterm exam, she would think of all the factors that might have influenced her performance on this exam and others. She decides that the only factor that consistently distinguishes good performances from bad performances is the amount of time devoted to reviewing course material. That becomes the causal attribution, and the process is clearly a rational one.

Another well-known attribution theory was proposed by Bernard Weiner, who proposed that causal attributions can be described along two independent dimensions: internal (pertaining to the self) versus external (pertaining to the situation) and stable (chronic) versus unstable (transitory). Yet another attribution theory is that of Carol Dweck, who was interested in children's beliefs about their own intelligence – whether intelligence is a fixed entity or is something more malleable.

Causal attributions affect how individuals respond to events. For instance, motivation is influenced by how one explains events. Suppose a student earns a D on a midterm examination in Spanish. He or she might attribute this outcome to an internal stable characteristic: "I have no ability at language." Or he or she might explain a poor grade with an unstable cause, saying: "I didn't study enough."

In the latter case, the student expects to do better on the final exam and hence prepares for it. In the former case, the student expects no change in his or her performance and does not bother studying at all.

Our emotional reaction to events is also influenced by how people explain them. In general, successes make people happy, whereas failures make them sad. But within these overall emotional reactions, attributions shape particular feelings. To the degree that they explain a success in terms of ability and effort, people feel pride. To the degree that they explain a failure in terms of task difficulty or bad luck, people preserve their own self-esteem.

The tendency to take credit for success but not failure is termed the *self-serving bias*. To call this tendency self-serving is to imply that people are motivated to enhance their self-esteem, but it is possible to explain this bias solely in terms of the information available to a person. When people undertake an activity at which they believe themselves competent, they expect to succeed. When they do succeed, explaining it in terms of their own characteristics makes sense. In contrast, when they fail, they look outside themselves and explain it in terms of external factors. Motivation is not responsible for the difference in how we explain our successes and failures – just the different information to which we pay attention.

There exist other attributional tendencies as well. One pervasive phenomenon in the United States is the tendency to explain other people's actions in terms of their internal characteristics: needs, drives, and traits. "Look at him carrying on over there! He must not have any inhibitions." People overlook the possibility that situational forces may be influencing his behavior. This tendency is sometimes called the *fundamental attribution error*.

When asked to explain personal behaviors, people more readily refer to environmental demands and influences. "I really carried on! The music was so loud that it put everyone in a great mood." The difference between how people explain their own behaviors versus how they explain the observed behaviors of other people is called the *actor-observer effect*. It is also widespread in the United States. For example, attributions made by employees and managers for employee absenteeism show the expected actor-observer differences. Employees excuse their own absences by citing extenuating circumstances, whereas employers interpret the same absences in terms of employee characteristics like laziness.

Whether or not causal attributions are strictly accurate, they are influenced by features of the events that being explained. Another influence on the sorts of causal explanations a person offers is *attributional style*, also called *explanatory style*, a cognitive personality variable that reflects how people habitually explain the causes of events that occur to them.

Attributional Style

The notion of attributional style emerged from the reformulation of the learned helplessness model of depression, where it was proposed as a distal influence on

the extent of emotional, cognitive, and behavioral deficits following experience with uncontrollability. Individuals who explain uncontrollable bad events in pessimistic terms, with causes that are internal ("it's me"), stable ("it's going to last forever"), and global ("it's going to undermine everything I do"), are hypothesized to experience greater disruption and more helplessness following uncontrollable bad events than their more optimistic counterparts, who offer external, unstable, and specific causal explanations.

Attributional style is measured with a self-report questionnaire that asks respondents to imagine good or bad events happening to themselves, to write in their own words a causal explanation for each event, and to rate the attributed cause along the dimensions of internality versus externality, stability versus instability, and globality versus specificity. Attributional style can also be measured by content analyzing written or spoken material in which good or bad events are described and explained. This assessment strategy is dubbed the CAVE technique, an acronym for the Content Analysis of Verbatim Explanations. However assessed, optimistic explanatory style has been linked to positive mood and good morale, to perseverance and effective problem solving, to achievement in a variety of domains, to popularity, to good health, and even to long life and freedom from trauma. In contrast to these benefits of an optimistic attributional style is the finding that individuals who offer optimistic explanations for bad events tend to underestimate their future likelihood.

A great deal is known about the consequences of an optimistic versus pessimistic style of explaining the causes of events. Less is known about the origins of explanatory style. Unaddressed by any study is whether the typical person is an optimist, a pessimist, or simply neutral. That is, whether something unusual in the course of development needs to occur in order to impart to someone an optimistic explanatory style; whether optimism is the developmental default, deep-wired into human beings by evolution or pessimism is the default. Perhaps the child is a blank slate, equally able to become an optimist or a pessimist, depending on the influences to which he or she is exposed.

Attributional style changes from pessimistic to optimistic during the course of cognitive therapy for depression, and this change occurs in lockstep with the alleviation of depressive symptoms. Intervention programs that teach individuals to offer more optimistic explanations for bad events effectively prevent future episodes of depression. Many researchers have been drawn to the study of pessimism and its consequences, although it is not clear if they are assuming that optimism needs no special explanation or instead that pessimism is a more pressing concern. Regardless, positive psychologists need to be concerned with how optimism and pessimism develop. We can assume neither that optimism is the simple opposite of pessimism nor that the determinants of optimism can be identified from the study of the determinants of pessimism.

In most attributional style research, the focus is on outcomes of interest to the learned helplessness model: depression, illness, and failure. These are important, but the typical way of measuring these outcomes assigns zero points that

correspond to *not* being depressed, *not* being ill, and *not* failing. This limitation can be glossed over by researchers describing what their data show. For example, if researchers find that pessimistic individuals are depressed and physically ill, they may summarize this result by saying that optimistic people are happy and healthy, even if the outcomes measures did not allow people to manifest happiness or health.

Perseverance is not the absence of helplessness, happiness is not the absence of depression, and health is not the absence of illness. But somehow these obvious points can be ignored when attributional style researchers interpret their findings. So long as outcome measures reflect only degrees of pathology, no conclusions can be drawn about well-being. This is an important lesson for positive psychology. It is not enough to study positive predictors like optimistic attributional style; one must additionally study positive outcomes or – even better – outcomes that range from negative to positive. Only with this strategy will there be a complete positive psychology.

SEE ALSO: ► Goals and goal-setting theory ► Learned optimism ► Locus of control ► Optimism ► Penn Resiliency Program

Authentic Happiness

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Authentic happiness, scientifically at best is an unwieldy concept. For ages sages and scientists have often considered it an inherently subjective, relative, fleeting and hence unmeasurable notion. Greek philosophers such as Socrates, Plato, and Aristotle essentially emphasized that the pursuit of a virtuous life makes one authentically happy. Utilitarians such as Bentham, following Epicurus, have argued that the presence of pleasure and absence of pain constitutes authentic happiness. Recent strides in happiness research have uncovered many secrets regarding what makes people authentically happy. First, roughly half of happiness is genetically influenced, if not determined. Second, life circumstances such as money, state-of-the art electronic and digital gadgets, safer neighborhoods, sunnier climes, gender, race, education and even objectively measured health status together add not more than 10% to the total tonnage of happiness. Third, people grossly overestimate the importance, intensity and duration of happiness derived from these factors. In particular, people systematically overestimate the amount of happiness extra money will bring them. In addition, larger cultural ethos, capitalistic zeitgeist and media influence perceptions and expectations about money and happiness. People devise complex cognitive reasoning to justify spending disproportionate amounts of time, energy and behavioral efforts in attaining more money and these resources – little realizing that gains from these are ephemeral.

At the millennium, compared to five decades prior, people earn significantly more money, live longer, have more social and civic liberties, have cured many diseases previously thought to be incurable – yet are not any happier. In fact, people are more depressed. It seems that authentic happiness remains a paradox. Some theoretical insights well supported by empirical research have tried to untangle this paradox. Human beings are phenomenally adaptable creatures. According to hedonic treadmill theory, once basic needs are met, additional material resources tend to have diminishing effect on happiness. Most lottery winners and recently turned quadriplegics adapt and return to their base level of happiness within six-months. The wealthiest few are slightly happier than average individuals are and in some cases, are unhappy indeed. In addition, people do not just adapt; they compare too. After achieving one goal, people compare themselves to where they want to be and with other individuals. As people attain the next goal, they recalibrate, creating another one for themselves and then just keep on changing the goalposts. Thus, adaptation, comparison and recalibration of material goals prevent people from enduring authentic happiness.

If socially desired, clearly defined, practically attainable material goals do not add to authentic happiness, what does then? Material resources, although ephemeral, are nonetheless important building blocks of authentic happiness. They satiate the senses and provide pleasure, which is quintessential to happiness. Seligman proposes that authentic happiness is a blend of hedonic and eudaimonic elements. He parses authentic happiness into three scientifically manageable components: the pleasant life, the engaged life and the meaningful life.

The pleasant life successfully pursues positive emotion about the present, past, and the future. The positive emotions about the past are satisfaction, contentment, and serenity. Optimism, hope, trust, faith, and confidence are future-oriented positive emotions. Positive emotions about the present are divided into two categories: pleasures and gratifications. The pleasures are momentary positive emotions, which satisfy the senses such as delicious tastes and smells, sexual feelings, moving the body well, delightful sounds and sights. Some are higher pleasures which are usually set off by more complicated and more learned mechanisms such as ecstasy, rapture, thrills, bliss, gladness, mirth, glee, fun, ebullience, comfort, amusement, relaxation, and the like. Pleasures are inherently subjective, and people habituate to them quickly. The gratifications are higher-order pleasures. These involve more intentional activities such as cooking, reading, writing, and dancing. The pleasant life is important because positive emotions change people's mindsets, widen the scope of their attention and broaden their thought-action repertoire, leading to increased happiness. Moreover, positive emotions contribute to resilience in crises and promote physical health. Contrary to the notions that positive emotions are merely derivative, defensive, or mere illusion, empirical evidence has suggested that positive emotions are real and valued in their own right. For example, the left prefrontal cortex in the brain has been associated with positive emotions. Authentic happiness, however, is not the experience of more intense positive emotions, rather it is mild-to-moderate positive emotions experienced more

frequently. One lesson from happiness research is that if people seek ecstasy much of the time, whether it be in a pastime, at work, or in relationships, they are likely to be disappointed as intense positive emotions are rare and present sharp contrast to more prevalent neutral and mildly pleasant emotions. In addition, pursuit of positive emotions does not mean Pollyannaish negation of negative emotions which serve many adaptive functions. To be authentically happy, one needs to strike a careful balance between the benefits of seeing a glass as half-empty and the advantages of seeing it as half-full since a utopian life completely devoid of pain perhaps will never be possible. The happiest individuals sometimes feel sad, and the saddest have their moments of joy. Authentic happiness thus is not static; it is dynamic and the secret lies in balancing its dynamics.

The second component of happy life in Seligman's theory is the engaged life, a life that pursues engagement, involvement, and absorption in work, love, and leisure. To pursue engagement, Seligman recommends creating *flow*, which is Csikzentmihalyi's term for the psychological state that accompanies highly engaging activities. Time passes quickly. Attention is completely focused on the activity and the sense of self is almost lost. Seligman recommends that one way to enhance engagement and flow is to identify people's highest character strengths and then help them to find opportunities to use these strengths more. He calls them *signature strengths*. This view resonates with Aristotle's *eudaimonia* and Maslow's *self-actualization* and *peak experiences*. One way to obtain gratifications, noted in the pleasant life, is to engage in activities that use one's signature strengths. Any thing from everyday, ordinary, normative, human experiences such as playing with a child, pottery, baking, painting, reading, focused listening and talking, socializing, making a slam dunk, helping others, savoring natural or artistic beauty, or rock climbing can create flow and fully engage a person. These activities do not necessarily rely heavily on modern digital gadgets and often involve long-cuts rather than short-ones, requiring a lot of thinking and interpretation. Compared to the pursuit of sensory pleasures which fade quickly, these activities last longer and do not habituate easily since these activities are temporary and offer numerous creative avenues. Engagement is a good candidate for authentic happiness because it brings focus to the process which is often more important than final outcome or accomplishment. In pursuit of authentic happiness, people probably want to *do* things which are deeply fulfilling and in doing so, want to *be* the certain sort of individuals they always aspired to be. Endeavors which use the highest strengths, talents and abilities are one of the best ways to be authentically happy, and perhaps explain 40% variance in the pie of authentic happiness.

The third component of authentic happiness in Seligman's theory is the meaningful life. It consists of attachment to, and the service of, something larger than oneself. People want to make for themselves a life that matters to the world and create a difference for the better. Victor Frankl observed that happiness cannot be attained by wanting to be happy – it must come as the unintended consequence of working for a goal greater than oneself. There are a number of ways to achieve a meaningful life: close interpersonal relationships, generativity, social activism or

service, and careers pursued as calling and missions. Institutions such as church, synagogue, mosque, temple, a professional association, leisure or sports club, a nonprofit organization, an environmental or a humanitarian group – all offer opportunities to connect with something larger. Regardless of the particular way in which a person establishes a meaningful life, doing so produces a sense of satisfaction and belief that life is well-lived. An important part of the meaningful life is social interaction. Countless studies document the association between close social ties and happiness. People who have close friends and confidents, friendly neighbors, and supportive coworkers are less likely to experience depression, low self-esteem, and health problems. Married people are consistently happier than people who are unattached, all else being equal. Similarly, religiously involved people are happier than their irreligious counterparts. Research, however, has not established a definite causal chain. For example, it is unclear whether marriage makes people happier, or happy people are likely to marry. Similarly, religious faith may lift the spirit or the community aspect of religious activities may promote happiness. Whether it is the close family, friends, community, or faith, the most salient feature shared by the 10% of the happiest people is a strong interpersonal life. These three lives are neither exclusive nor exhaustive. Activities such as writing or teaching could produce pleasure, engagement and meaning simultaneously. Nevertheless, these provide a useful conceptual framework to understand scientifically tested ingredients of authentic happiness. Authentic happiness, Seligman argues comes from the full life which consists of experiencing positive emotions, savoring positive feelings from pleasures, deriving abundant gratifications by using one's signature strengths, and creating flow and engagement through them as well as pursuing a meaning in life in the service of something larger than the self.

Much like specific psychological disorders can be treated, several lines of research are beginning to demonstrate that happiness, in terms of specific positive emotions and strengths, can be systematically enhanced. Despite causalities of genes and disadvantaged childhoods and introvert personality disposition, if one pursues a moderate amount of sensory pleasures, uses strengths and talents more often at work, in leisure, and in love, invests time and energy in family, friends, and community, does acts of kindness, counts blessing regularly, savors joys of life, experiences aesthetic and moral awe, lets go of anger and resentment and learns to forgive, takes care of body and intentionally engages in activities which yield pleasure, gratification, flow, engagement and meaning – authentic happiness may not be such an elusive pursuit, after all.

As the scientific pursuit of authentic happiness advances, many yet unknown routes will be discovered. For instance, researchers so far have mostly followed correlational lines. Causal, longitudinal, and prospective pathways have not been pursued to uncover individual differences, precise conditions, and proportions more conducive to authentic happiness: seeds which could be planted early on to foster it and variables which could safeguard it against habituation. Moreover, future research also needs to demonstrate authentic happiness contribution to physical health, academic and work success, gross national product, and whether

it effectively buffers against crimes, drugs, delinquency, and stress. Furthermore, how important factors like culture and sociopolitical conditions mediate authentic happiness is largely uncovered yet.

SEE ALSO: ► Eudaimonia ► Meaning ► Positive emotions ► Seligman, Martin ► Utilitarianism ► Well-being

Authenticity

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Psychological authenticity refers to emotional genuineness, self-attunement, and psychological depth. To be authentic is to live with one's whole being in the moment, without guile or hidden agendas. Although the concept of authenticity is a mainstay within humanistic theory and many kinds of psychotherapy, surprisingly little empirical research has focused on it, perhaps because of its abstraction and the philosophical difficulties it poses. Some historical and theoretical context is provided below, followed by consideration of contemporary empirical research relevant to authentic functioning.

Historical Background

The concept of psychological authenticity became prominent only recently in Western culture, because the concept of the psychological self, upon which the concept rests, emerged only within the last 500 years. The rise of the scientific method and the erosion of traditional class-based role structures in the enlightenment era promoted awareness of the self as a thinking agent somewhat independent of its environment (*cogito ergo sum*), and the romantic era went further by promoting self-discovery and the idea that the self is the hero of an important personal drama. However, the subsequent appearance of the Darwinian and Freudian perspectives suggested that this inner self can be radically self-deceived and inauthentic, a view also endorsed by the behaviorist perspective that dominated in the middle twentieth century. On the current scene, evolutionary, sociological, cultural, and cognitive perspectives upon human nature continue to evoke doubt concerning the possibility of true authenticity, arguing that we are inescapably motivated by social forces, self-serving interests and nonconscious processes. Also, to endorse the concept of authenticity may veer dangerously close to endorsement of an inner homunculus (i.e., little man in the head), long taboo in scientific theory. Even commonplace folk expressions raise difficult philosophical questions. "Be true to your self," people say, but it is unclear what the self is being true to, when it is being true to itself. "Be yourself," people say,

but it is unclear how the self could *not* be itself. Perhaps these statements are nonsensical.

Before addressing these questions, an appropriate definition of *self* is first needed. It has been suggested that the self is a mental representation of the underlying organism, an online simulation being run within the psyche. In somewhat different terms, the self is a lived character in an unfolding personal drama, one which is constantly being updated within the organism's brain. The conscious self is in an important sense a phenomenal fiction, both in that the content of the dominant self-narrative can be somewhat arbitrarily or randomly determined, and in that the self-narrative may be an inaccurate or even inadequate simulation of the underlying organism's actual condition. Rather than being powerless, however, this fiction has several important functions. In addition to supplying a more or less accurate read-out of the current state of the system, the self also supplies high-level goals and standards for the action system, supplies animated personas for effective social interchange, and supplies defenses against anxiety and mortality.

With this definition in mind, let us consider some theoretical and empirical attempts to conceptualize and legitimate psychological authenticity. The concept was given its most important expression by the humanistic and third force psychologists of the 1950s and 1960s. Rogers (1961) defined authenticity (or *congruence*) as occurring when "the feelings the person is experiencing are available to him, available to his awareness, and he is able to live these feelings, be them, and is able to communicate them if appropriate" (p. 61). Feelings can be subtle and difficult to detect online, and Rogers argued that they may be obscured precisely because people are committed to self-images inconsistent with these feelings. Thus, ironically, the conscious, cognitive self may be the very cause of its own deeper blindness or inauthenticity. Rogers' perspective also shows what it may mean for the conscious self to fail to be itself, or to be true to itself – specifically, the conscious self-character may fail to apprehend and express the more subtle thoughts and feelings occurring within its own organism and brain. An important Rogerian assumption is that societal failings and inadequate nurturing can push people to adopt false or inauthentic selves. Accordingly, Rogers argued that optimal therapeutic outcomes occur when therapists are able to accept their clients unconditionally. Also important is the therapist's ability to contact and appropriately express his or her own subtle feelings and reactions, modeling this process for clients and showing them how to go about integrating the new insights that emerge in therapy. This humanistic model of therapeutic change and the optimal helping relationship still predominates within typical counseling practice.

Despite the intuitive appeal of Rogers' ideas, they received little empirical scrutiny at the time. However, similar ideas have been developed within contemporary research psychology, under the aegis of self-determination theory (SDT). SDT is an organismic/dialectical theory built on the idea that people have inherent interests and passions that motivate behavior for its own sake (*intrinsic motivation*). Of course, not all important behavior can be enjoyable, and thus the

theory expanded to incorporate *identified motivation*, in which nonenjoyable behavior is nevertheless undertaken willingly because it expresses important identities and beliefs. Both intrinsic and identified motivations are said to be *autonomous* motivations, because both express the interests of a deeper, enduring self. In contrast, controlled motivations evoke behaviors that feel caused by the situation, or by unmastered introjects that overwhelm the person's sense of self. These ideas supply an interesting possible definition of authenticity – that it involves acting for reasons of interest and/or conviction, rather than with a sense of being compelled by uncontrollable forces.

The self-concordance model applied SDT to the domain of self-generated personal goals. The list of possible personal goals is infinite – people can choose to strive in countless directions. However, time and energy are very finite resources, and thus people can select only a very small set of goals from among the myriad of possibilities. This makes self-appropriate goal selection a crucial skill. Sheldon and colleagues showed that those who pursue goals for reasons of interest and identification rather than for reasons of pressures or guilt gain many functional benefits and as a result are higher in many forms of psychological well-being. Sheldon argued that because self-concordant goals properly represent the personality, attaining them nurtures the personality and satisfies its needs. In contrast nonconcordant goals, which are based on false self-premises and beliefs, may do people no good even when they are attained. From the self-concordance perspective, then, to be authentic is to select and pursue long-term life objectives and purposes that one really believes in and enjoys.

Other empirical approaches to authenticity also exist. For example, Sheldon, Ryan, Rawsthorne, and Ilardi compared true self and trait self-conceptions of optimal functioning, showing that feeling authentic and self-expressive within various life domains (such as student, child, friend, and romantic partner) predicted positive functioning within those domains, above and beyond the influence of the Big Five trait profiles expressed within those domains. More recently, Kernis and colleagues have presented a four-component conceptualization of authenticity, involving *awareness* of one's motives, feelings and desires, *unbiased* (i.e. nondefensive) *processing* of internal information, *behavior* consistent with one's values, preferences and needs, and a *relational orientation* in which one values openness and truthfulness in interpersonal relationships, even if it means letting others see unflattering sides of oneself. The consistency of this view with the Rogerian and self-determination theory perspectives, outlined above, should be clear. The Authenticity Inventory is specifically designed to measure these four facets of authentic functioning, and has already shown itself to be useful in predicting a variety of positive outcomes.

In sum, the ability to create, live in, and project a self-character, both to oneself and to others, may be one of the most defining human attributes – an attribute which allows us to make our way through the complex mental and social worlds in which we find ourselves. However, emerging research suggests that not all self-characters are equally successful at representing the entirety of the personality in

which they emerge. This ability, in conjunction with a commitment to express what is found moment-to-moment and also a commitment to treat others with caring and respect, appear to be defining characteristics of psychological authenticity. Notably, the Rogerian psychotherapy model discussed above suggests that authenticity is a skill, which people can develop over time. In other words, we can learn to create and live in selves that better express who we are, and better connect us to others.

The concept of psychological authenticity is an important one for positive psychology, because it epitomizes positive psychology's quest for the good, and also epitomizes positive psychology's need to put this quest on firm conceptual and philosophical footings. The concept of authenticity is also crucial for understanding the meaningful life, the most subtle but potentially important form of optimal functioning identified by Seligman.

SEE ALSO: ► Actualizing tendency ► Autonomy ► Rogers, Carl ► Self-determination

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Autonomy

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The concept of human autonomy has been an important and controversial one in the history of Western thought, particularly within the traditions of philosophy and of clinical and developmental psychology. *Autonomy*, which means to be self-governed, stands in contrast to *heteronomy*, which means to be governed by forces alien to the self. Autonomy has been variously portrayed both by its advocates, who at times have used different terminology to refer to the concept that we understand as autonomy, and by its adversaries, who at times have used the term autonomy to refer to different concepts.

Within philosophy, writers such as Kant, Hume, and Mill have disagreed about such matters as the centrality of emotion versus reason in the determination of behavior, while essentially agreeing with the view summarized by Pfander that autonomy means self-determination, or acting from one's "center," with the experience of choice and in accord with one's deeply held values, interests, and desires.

Within clinical psychology, the psychoanalytic tradition has emphasized the importance of regulation by the observing ego and has essentially aligned autonomy with acting from a true, as opposed to false, self. Developmental psychologists such as

Piaget have studied the organizational process and its resulting cognitive structures, which can be understood as providing the basis for autonomy.

In general, within these different approaches, the concepts have evolved from reasoned thought and systematic observations, but the approaches have failed to provide the means for an empirical or scientific examination of autonomy and closely related concepts. It was the work of Heider and deCharms that set the stage for a vigorous empirical examination of autonomy.

Heider, in his naïve psychology, emphasized the difference between *personal causation*, which is based in intentions, and *impersonal causation*, which is based in forces beyond the actor's control. deCharms, working with Heider's conception, differentiated two types of personal causation – namely, internal causation in which actions emerge from factors internal to the person, and external causation in which actions results from external forces acting on the person.

With this as a starting point, Deci and Ryan and their colleagues have engaged in a wide array of research programs, using both laboratory and field methods, to investigate many aspects of human autonomy. Self-determination theory (SDT), which has both emerged from this research and in turn guided it, encompasses the most extensive empirical examination of human autonomy within psychology.

Personal Autonomy in Self-Determination Theory

SDT views personal autonomy as one of three basic psychological needs, along with the needs for relatedness and competence, which are posited to be universal among humans. Basic psychological needs are defined as a necessary psychological nutrient for optimal development and psychological health. The need for autonomy concerns people's universal desire and urge to regulate their own behavior, act in accord with their interests and values, and behave in ways that they endorse at the highest level of their reflective capacity. The term autonomy refers not only to this basic need but also to the process of regulating one's behavior with a sense of choice and volition, what deCharms referred to as an *internal perceived locus of causality*.

SDT researchers have used a motivational approach to examine various aspects of human autonomy. More specifically, they have investigated intrinsic and extrinsic motivations, considering the degree to which the various forms of motivation represent autonomy.

Intrinsically motivated behaviors are performed out of interest in the activity itself and the inherent satisfaction that results from doing it. As such, when intrinsically motivated, the perceived locus of causality is invariantly internal and the activity is said to be autonomous. Indeed, intrinsic motivation is considered the prototype of autonomous activity. Such actions are experienced as volitional, spontaneous self-expression.

Extrinsically motivated behaviors are defined as those for which the behavior is not satisfying in its own right but rather is instrumental to some operationally

separable consequence. In other words, such behaviors are means to an end rather than ends in themselves. In their comprehensive 1985 book, Deci and Ryan suggested that extrinsically motivated behaviors vary in their degree of relative autonomy. In fact, the theory has proposed four types of extrinsically motivated behaviors that vary in their degree of relative autonomy because the regulation of these behaviors has, to differing degrees, been internalized and integrated with one's sense of self.

When instrumental motivation for an activity has *not* been internalized, so the person behaves in response to an external, coercive, or seductive contingency, regulation of the behavior is said to be *external*. That is, the external contingency controls the behavior, so the behavior is nonautonomous and the perceived locus of causality is external.

The first type of internalization, which is the least effective, is referred to as *introjection*. It involves taking in a behavioral regulation, with its implicit value, but not accepting it as one's own. Instead, people apply to themselves the contingency of approval or worth that had initially been external and applied by others. When a regulation has been introjected, people feel an inner compulsion to enact the instrumental behaviors. Such behaviors are thus controlled by contingencies even though those contingencies are now within the people. A second, fuller type of internalization is called *identification*. Here, people have identified with the importance of the activity for themselves, and thus their motivation to perform the behavior is relatively autonomous even though they do not find the activity interesting. Finally, when that identification has been reciprocally assimilated with other aspects of people's sense of self, *integration* has occurred. Integrated regulation is an autonomous form of extrinsic motivation.

In sum, identified and integrated forms of extrinsic motivation, along with intrinsic motivation, are the bases for autonomous actions, whereas external and introjected forms of extrinsic motivation are the bases for controlled or nonautonomous behaviors. Because these autonomous actions emanate from people's sense of self, such that their true interests and values are the guides for the behaviors, people who are behaving autonomously are being *authentic*.

Considerable research indicates that autonomous motivations tend to be associated with positive consequences, such as greater creativity, flexibility of thought, effective problem solving, and psychological health. Nonautonomous motivations tend to be associated with negative psychological consequences, including poorer performance on heuristic tasks, more maladaptive behaviors, and lower psychological well-being.

Other Definitions of Autonomy

Autonomy can have other definitions beyond that of volition and self-governance, and psychologists have at times used these other definitions in their discussions of autonomy. We briefly consider three.

Autonomy as Independence from Others

Oishi, among others, equates autonomy with independence from, or not relying on, others. According to this view the opposite of autonomy is dependence, which means turning to others for support. SDT, however, treats autonomy and independence as conceptually orthogonal. The theory maintains that it is possible to be either autonomously independent of others or autonomously dependent on them, just as it is possible to be heteronomously independent or heteronomously dependent. For example, people can quite volitionally be dependent on a partner for help with some task, or they can choose to do it quite independently. As well, they can feel forced either to take someone's help or to do the task with no help. We suggest that the experience of autonomy versus heteronomy is more important as a predictor of psychological well-being than is the experience of independence versus dependence.

The conceptual distinction between autonomy and independence is important in relation to theories of gender and cultural difference. Various writers have devalued the importance of autonomy and treated it as a masculine or Western phenomenon that should predict positive psychological consequences only for males in a Western society where independence is socially endorsed. This viewpoint may have some merit when autonomy is viewed as independence. However, Chirkov and his colleagues have shown that this viewpoint is wrong when autonomy is understood to mean volition, because across cultures, the extent to which people internalize and integrate cultural practices and values, thus embracing them autonomously, is strongly related to their mental health. Indeed, theorists who have confused independence with autonomy and argued against SDT's emphasis on autonomy have implicitly, though surely inadvertently, endorsed the subjugation of women and non-Western people.

Autonomy as a Stage

Various writers such as Erikson have portrayed the struggle for autonomy as being primarily evident at, or restricted to, particular developmental stages. These perspectives emphasize the importance of people's striving for autonomy, but they localize the struggle to specific developmental periods. When examined carefully, however, these theories also use the concept of autonomy to mean something other than volition, for example, being oppositional.

Autonomy as Independence from Environments

In his social cognitive theory of agency Bandura defined autonomy as an action that is entirely independent of the environment. Bandura thus portrayed autonomy as an empty concept, because people are always behaving in relation to environments that undoubtedly play some role in their behavior. SDT, of course, gives environmental supports an important role in promoting autonomy, so within SDT autonomy does not imply acting independently of the environment. As such,

Bandura's view of autonomy does not in any sense negate the importance of autonomy as volition; it merely defines autonomy differently. As pointed out by Dworkin, and endorsed by SDT, people can be fully autonomous when engaging in a behavior for which the objective source of causation is an environmental input.

Antecedents and Consequences of Personal Autonomy

Much of the research in the SDT tradition has indeed examined factors in the environment that either facilitate human autonomy or, alternatively, diminish it. The work has focused on how the social environment functions either to support or thwart satisfaction of the basic psychological needs, especially the need for autonomy.

Research has shown that people's autonomous motivation may be promoted by autonomy-supportive behaviors enacted by important others such as caregivers, teachers, managers, and romantic partners. *Autonomy support* is defined as the degree to which such socializing agents relate to people (e.g., children, students, employees, and partners) from those people's perspectives; act in ways that encourage choice, self-initiation, and participation in decision making; provide meaningful rationales and relevance; and refrain from using language or other behaviors that are likely to be experienced as pressure toward particular behaviors. Supporting autonomy in these ways has been found to enhance intrinsic motivation, facilitate well-internalized extrinsic motivation, prompt the experience of autonomy and authenticity, and result in effective performance and psychological well-being.

In contrast, substantial research that was reviewed by Ryan and Deci in 2000, has shown that events such as rewards, deadlines, threats, surveillance, and pressuring language tend to be experienced as controlling and thus tend to undermine both intrinsic motivation and the internalization of extrinsic motivation, resulting in poorer performance and ill-being. Research leading to these conclusions about autonomy-supportive versus controlling environments has been conducted with a variety of research methods and in domains as varied as politics, education, work, religion, health care, and aging. The implications of the large body of research devoted to exploring the antecedents and consequences of autonomy are of special importance for parents, educators, managers, therapists, and socializing agents in various other domains of life.

SEE ALSO: ► Agency ► Individualism

Aversive Motivational Systems

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Aversive motivational systems promote avoidant behaviors that seek to avoid punishment or a negative outcome. Aversive and appetitive motivational systems are

thought to be distinct and relatively independent as evidenced by neurophysiological research. This relative independence suggests the two systems are unique processes that are activated by different environmental stimuli and usually result in different outcomes. Every individual can vary as to sensitivity to each system with the level of sensitivity to one system not directly related to or predictive of the level of sensitivity to the other system. This can result in a multitude of diverse appetitive/aversive combinations among individuals.

Gray's theory of motivation posits an aversive behavioral inhibition system (BIS) in response to punishment, nonreward, or novelty cues and an appetitive behavioral activation system (BAS) in response to reward or nonpunishment environmental cues. BIS activation is suggested to inhibit movement toward goals and to generate negative emotions such as fear, anxiety, sadness, and frustration. Research has often associated negative affect with higher levels of BIS sensitivity. More recently, it has been suggested that whereas anxiety is associated with higher BIS scale scores, anger, sadness and frustration are associated with nonreward efforts related to BAS subscales. This is an interesting extension of Carver and Scheier's hypothesis of the bipolarity of affect dimensions, suggesting that both positive and negative affect are associated with appetitive systems and with aversive systems but that they take on different characteristics depending on the system.

Carver and Scheier's self-regulatory model posits discrepancy-enlarging (aversive) and discrepancy-reducing (appetitive) feedback loop systems. Discrepancy-enlarging systems appear to promote deviance from reference groups or from undesired selves. These feedback processes attempt to increase the distance from an anti-goal through avoidant, withdrawal, or escape behaviors. *Anti-goals* are those values which one tries not to embody and could represent a feared or disliked possible self. Anti-goals can also be things one tries to avoid such as getting fired from a job, getting a failing grade in a class, or getting a traffic ticket. Carver and Scheier suggest that at some point, moving away from a certain goal in a discrepancy-enlarging feedback loop will bring one closer to a positive goal. This initiates a discrepancy-reducing feedback process moving toward that desired goal and both systems are active simultaneously. They suggest this is what happens in Higgins' notion of resolving the actual-ought discrepancy as the individual seeks to avoid the disapproval of others and moves toward conforming to the duty or responsibility.

Consistent with the view of bipolar affective dimensions, as one performs well in discrepancy-enlarging behaviors and moves away from anti-goals, emotions reflect relief and security (positive affect). Conversely, if one is not doing well in avoiding anti-goals it is likely to result in increased fear, anxiety, and guilt (negative affect). The perception that one's feared self is relatively near has also been shown to be a predictor of depression.

In another model of self-regulation, Higgins posits a regulatory focus theory that involves the adoption of either a promotion (appetitive) or prevention (aversive) regulatory focus depending upon the survival needs to be addressed. A prevention focus stems from security-related concerns and the absence or presence of negative outcomes. In addressing the need for safety and protection,

this regulatory state focuses on *ought* goals such as duties, responsibilities, and obligations. Whereas these are positive goals, the process for attaining these goals involves trying to avoid a punishment such as another's disapproval. Attainment of these goals (absence of negative outcomes) results in quiescence-related emotions such as relaxing or calm. Nonattainment (presence of negative outcomes) results in agitation-related emotions such as unease or tension.

Regulatory fit theory matches an individual's regulatory state with the strategic means of accomplishing that goal resulting in enhanced motivational strength and improved goal performance. For prevention-focused individuals, this requires a vigilance-related strategy. An example of a vigilance-related strategy might be to imagine a negative situation and then try to avoid it. An individual's predominant regulatory state may also be temporarily manipulated by the environment in order to achieve regulatory fit. One way of eliciting a prevention focus is to frame goals in terms of nonloss or loss. Dependant on the regulatory state of the individual either as trait or state and/or how goals are framed, almost any goal can assume either a prevention or promotion focus.

Another motivational system concerned with avoiding the disapproval of others is that of performance-avoidance orientation. More specifically, individuals with higher levels of this aversive type of goal orientation (i.e., how one approaches a goal or task in an achievement situation) may adopt avoidant behaviors in order to inhibit others from negatively judging their competencies when compared to others. They incorporate a fixed view of their ability, believing their ability level is static and that no amount of effort will improve their performance. Their perception is that people with ability don't have to work hard to accomplish goals and therefore, expending effort is an indication of a lack of ability.

Individuals with a higher performance-avoidance orientation tend to set lower goals where they feel more certain of success and are more likely to avoid any potential negative evaluation of their ability. Since effort is believed to be an indicator of low ability, they have a tendency to give up easily and to view errors and failure as further indicators of low ability. Self-evaluation and feedback are avoided so as not to risk being confronted with negative information from either internal or external sources. In trying to maximize their performance, these individuals may employ a surface processing method of learning such as rote memorization. This inhibits the ability to understand the underlying concepts which in turn inhibits the ability to generalize information to new problems and situations.

A similar concern with other people's potential negative evaluation is found in Gable's model of social motivation. This theory posits that individuals with avoidance social motives and goals are fearful of rejection and conflict with others. These avoidance systems seek the absence of negative outcomes or security. Pleasing relationships and social interactions are characterized as those which lack anxiety, uncertainty, or disagreements. Conversely, negative outcomes are present in painful relationships and interactions. Whereas attempts are made to avoid these negative social outcomes, research findings suggest that social-avoidance goals predicted greater loneliness, less relationship satisfaction, fewer positive social events, and

a stronger impact of negative events (i.e., differential reactivity process). A study of friendship-avoidance goals showed similar results and also predicted an increase in reported physical health symptoms over time. Social motivation research has found that individuals with greater rejection sensitivity are more anxious, less confident, and judged more negatively by others.

Whereas it appears that avoidant social motives and goals are not as effective in achieving the desired results (e.g., less loneliness), some researchers suggest there are certain times when adopting an avoidant approach may be the wise course of action. For example, if a person has abused one's trust in the past, it may be wise to take a more cautious approach to that relationship.

There are some important commonalities among these motivational system theories. First, each motivational theory appears to recognize sensitivity to appetitive and aversive systems as both an individual difference dispositional trait and as an environmental state that can be manipulated to present either reward (appetitive) or punishment (aversive) signals. This ability to deliberately change the environment has some important implications. For example, manipulating the environment (i.e., instructions, feedback) to obtain regulatory fit between the individual and the means of achieving goals results in maintaining motivational strength and improved performance. Higgins suggests regulatory fit can be used by both policy-makers and researchers in designing campaigns to modify behavior.

Generating interest in the areas of education and business professional training is the manipulation of classroom or training environments to reflect learning goals (i.e., appetitive type of goal orientation). By presenting learning goals, individuals are encouraged to acquire knowledge and skills by learning the deeper, underlying concepts and principles rather than focusing on producing performance-related outcome goals. Understanding concepts promotes the ability to generalize information from one context to the next. Research findings have shown that individuals with an aversive goal orientation improve their performance when given learning goals and that learning goals contribute to translating knowledge to more complex tasks. Whereas the benefits to improving academic performance are fairly evident, businesses are also recognizing that having personnel with the ability to adapt knowledge and skills quickly is imperative in today's dynamic marketplace. It is also a potential cost benefit to companies in saving on professional training costs and to workers, as it improves their own marketability.

Most research has focused on the effects to the individual of either the appetitive system or the aversive system. Given the evidence that the systems are relatively independent, that individuals have some level of sensitivity to both systems, and that activity in one system does not necessarily translate to a lack of activity in the other system, some researchers in the area of goal orientation and social motivation are beginning to examine the interaction effects.

Finally, the appetitive/aversive distinction also appears to influence how individuals process information. For example, individuals with a prevention focus or

high in social avoidance were found to remember more negative information as compared to those individuals with appetitive orientations. Goal orientation is also posited to influence how one interprets information. These findings are similar to studies that suggest affect influences attention and information processing. Given the bivariate nature of both motivation and affect, this similarity is not surprising. This has implications in a wide range of areas including cognitive and social psychology, education, and business.

SEE ALSO: ► Appetitive motivational systems ► Prevention focus

Awe

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A classical definition of *awe* is Rudolf Otto's formulation of *mysterium tremendum* in response to an overwhelming Other – the "holy." A scientific model, proposed by Keltner and Haidt, defines awe in terms of perceived vastness and need for accommodation.

> The most profound and thorough labour of the intellect, the most assiduous and devoted professional toil, had gone to the construction of the great edifice, making it in all its significance and purposefulness a marvel of human achievement. . . . Utter meaninglessness seems to triumph over richest significance, blind "destiny" seems to stride on its way over prostrate virtue and merit. (Otto, 1970/1923, p. 81)

Rudolf Otto was not referring to the World Trade Center and its destruction in the September 11 tragedy, although he might as well. He was referring to one of the calamities in his own time – the destruction of human lives and the mighty bridge over the river Ennobucht by a raging cyclone. The writer Max Eyth wrote about his visit at the scene of the disaster:

> When we got to the end of the bridge, there was hardly a breath of wind; high above, the sky showed blue-green, and with an eerie brightness. Behind us, like a great open grave, lay the Ennobucht. The Lord of life and death hovered over the waters in silent majesty. We felt His presence, as one feels one's own hand. And the old man and I knelt down before the open grave and before Him. (cited in Otto, 1970/1923, p. 81)

This is an example of the phenomena referred to as awe. Corresponding to the two possible versions of any emotion, coarse versus refined (Frijda & Sundararajan, 2007), there are two theories of awe, one proposed by Keltner and Haidt, the other by Otto. These two models of awe are examined in turn.

A Prototypical Model of Awe

Keltner and Haidt posit that the prototypical cases of awe consist of two central themes: *perceived vastness*, defined as anything that is experienced as being much larger than the self; and *a need for accommodation*, defined as an inability to assimilate an experience into current mental structures. Keltner and Haidt's model also specifies *eliciting situations* consisting of social elicitors (such as powerful leaders), physical elicitors (such as grand vista), and cognitive elicitors (such as grand theory). In addition, the variety of awe-related experiences is hypothesized to be determined by five peripheral or "flavoring" features of the eliciting stimuli: threat, beauty, ability, virtue, and the supernatural. For instance, negative valence is an optional feature of awe, depending on whether the flavoring feature of threat is in the picture – and of all the eliciting-situations, only a tornado is unambiguously assigned the feature of threat. This model is long on the analysis of eliciting-stimuli, but short on the analysis of response – need for accommodation.

A case in point is what Keltner and Haidt refer to as the *primordial awe*. Following Weber and Durkheim, the authors propose that "the primordial form of awe is the feeling a low status individual feels towards a powerful other. This feeling is likely to involve reverence, devotion, and the inclination to subordinate one's own interests and goals in deference to those of the powerful leader" (Keltner & Haidt, 2003, p. 307). To the extent that fearful submission to power is a biologically based response to the cues of social dominance, as the authors have suggested, primordial awe seems to entail successful assimilation much more than accommodation (in the Piagetian sense of adjusting mental structures).

In more drastic scenarios, where there is "a challenge to or negation of mental structures when they fail to make sense of an experience of something vast" (Keltner & Haidt, 2003, p. 304), the trajectory from need for accommodation to prototypical awe is not clearly specified. Failure of assimilation has multiple pathways, some of which might lead to posttraumatic stress disorder (PTSD) instead of awe, for instance. A relevant question is raised by Averill concerning the mystical experience: When their mental structures fail to make sense of the world, "What tips the balance [for the mystic] so that spirituality [or awe in the present context] rather than anxiety or depression is experienced?" (1998, p. 117). Averill speculates that "When cognitive structures are threatened with collapse, a person can seek to escape; give up in despair; or embrace the dissolution as a sign of union with a more encompassing reality. Depending on which tendency predominates, the result may be anxiety, depression, or a spiritual experience" (1998, p. 117). To investigate the mediating variables such as self-avowal of the experience, referred to as "embracing the dissolution" above, it is necessary to go beyond the prototypical model of awe.

Beyond the Prototype

Over and above the prototype, all emotions are capable of further refinement. The notion of refined emotions is particularly pertinent to positive psychology that celebrates human excellence. Refined emotions, in contrast to their coarse or prototype versions, possess the following attributes: self-reflexivity, detachment, and second-order awareness.

Self reflexivity refers to self-referentiality of consciousness. It constitutes one of the foci of cognitive attention – inward toward the self instead of outward toward the world. *Second-order awareness* refers to a higher-level consciousness that renders first-level experiences reportable and articulate. *Detachment* refers to one pole of the mental attitudes and experiences continuum that varies from detachment to immersion. Instead of being immersed in experiencing and reacting to the eliciting event, one who is detached from the immediate experiences has the advantage of a mental distance, which renders possible reflections on the experience. When reflection takes a self-reflexive turn toward introspection, emotion becomes what is referred to by the German mystic Johannes Tauler (around 1300–61) as "an inward, contemplative desire" (Tauler, 1985, pp. 139–40). In sum, whereas prototypical cases of awe may be immersed, non-reflective, first order experiences, refined versions of awe are shaped by a self-reflexive and contemplative consciousness at a higher level of awareness.

For analysis of refined versions of awe, the prototypical model of awe is expanded to incorporate self-reflexivity along with its ramifications for levels of awareness and detachment. This expanded model of awe has the following advantages: Self-reflexivity provides a felicitous explanatory framework for the processes thereby failure of assimilation brings the self back to the drawing board for a radical revision of his or her model of the world (accommodation); self-reflexivity also calls for a shift of focus in scientific investigation from attributes of the eliciting condition to a person's subjective self-reflexive processing of his or her own responses; lastly, the expanded model calls attention to the possibility that extensive, self-reflexive processing of one's own responses may result in substantive accommodations that go beyond the transient need for accommodation. To demonstrate how perceived vastness and a need for accommodation play out with the addition of a self-reflexive, higher order, contemplative consciousness, the expanded model is applied to Otto's phenomenology of awe, which has been a classic and an authoritative source on the phenomena.

An Expanded Model of Awe

Awe lies at the core of Otto's phenomenology of mysticism, the defining characteristic of which is *self-annihilation*, which expresses "the note of submergence into nothingness before an overpowering, absolute might of some kind" (Otto,

1970/1923, p. 10). Otto claims that the flip side of this "nothingness" of the self is the overwhelming Other – the *holy* which refers to that which is an exception to law, or outside the natural order of things, and therefore far exceeds all known mental schemes to comprehend it with. Consider for instance Abraham's statement in Genesis: "Behold now, I have taken upon me to speak unto the Lord, which am but dust and ashes" (Gen. 18: 27). Otto's analysis of this passage is consistent with the prototypical model of awe, which we recall, consists of the dual appraisal of perceived vastness at the object pole and need for accommodation at the subject pole of perception: "Thus, in contrast to 'the overpowering' of which we are conscious as an object over against the self, there is the feeling of one's own submergence, of being but 'dust and ashes' and nothingness," writes Otto (1970/1923, p. 20). But Otto does not stop here with the observation of "the emotion of a creature, submerged and overwhelmed by . . . that which is supreme above all creatures." He goes on to say that Abraham is overwhelmed not only by the presence of the holy but also by his own "nothingness." He writes: "It is the emotion of a creature, *submerged and overwhelmed by its own nothingness* in contrast to that which is supreme above all creatures" (p. 10, emphasis added). Note the self-reflexive turn in Abraham's self-depreciation. Having been overwhelmed by the "wholly other," Abraham is now overwhelmed by his own feelings of "nothingness." A further illustration of the centrality of self-reflexivity in Otto's phenomenology of awe is found in the story of Job.

To recapitulate, the expanded model of awe adds another dimension – that of consciousness – to the appraisal model of Keltner and Haidt. The expanded model claims that in addition to perceived vastness and need for accommodation, as postulated by the appraisal model, the phenomenology of awe entails a self-reflexive, higher-order, contemplative consciousness. This point is in keeping with Otto's phenomenological account of Job. Since it is well known, the story of Job can be quickly adumbrated as follows: Job is a righteous man who suffered greatly. Having lost everything he had – property, children, and health – Job wanted to know why. Claiming his innocence, and rejecting the law of retribution professed by his pious friends, Job demanded an answer from God Himself. It was after rounds of futile debate between Job and his pious friends, "against the juridicalism of [their] accusation and justification, [that] the God of Job speaks 'out of the whirlwind,'" writes Ricoeur (1974, p. 309). What did God say? Otto points out that God did not argue along the lines of: "My ways are higher than your ways; in my deeds and my actions I have ends that you understand not . . ." (1970/1923, p. 78). Otherwise put, the divine revelation was not cast in the propositional or conceptual framework. Instead, it was cast in imageries that, as Otto puts it, "express in masterly fashion the downright stupendousness, the well-nigh daemonic and wholly incomprehensible character of the eternal creative power; how, incalculable and 'wholly other', it mocks at all conceiving but can yet stir the mind to its depths, fascinate and overbrim the heart" (p. 80).

A concrete example of the divine rebuttal may be helpful. Consider the following questions posed by God:

> Who has cut channels for the downpour
> And cleared a passage for the thunderstorm,
> for rain to fall on land where no man lives
> and on the deserted wilderness,
> clothing lands waste and derelict with green
> and making grass grow on thirsty ground? (*The New English Bible*, 1970, Job 38: 25–27)

In these rhetorical questions of God, Job is confronted with the vision of a world that concerns him not, a world that is totally irrelevant to his objectives and interests. It renders irrelevant the "main evaluative issues" of both "primary appraisal"–"Am I in trouble or being benefited, now or in the future, and in what way?" and "secondary appraisal"–"What if anything can be done about it?" (Lazarus & Folkman, 1984, p. 31). Similarly losing anchorage in relevance are all three "primary systems" of emotion (Oatley, 2004): the attachment system with its need for protection, the assertion system with its concern for power and dominance, and the affection system with its concern for affiliation. This scenario is the epitome of need for accommodation.

As predicted by the expanded model of awe, Job's response to this perceived vastness is self-depreciation, "I knew of thee then only by report, but now I see thee with my own eyes. Therefore I melt away; I repent in dust and ashes" (*The New English Bible*, 1970, Job 42: 5–6). Job's experience can be meaningfully compared with trauma, in which the self is also overwhelmed. The decisive difference seems to lie in the fact that Job's "melting away" is willingly avowed. Thus Otto draws the distinction between "inward convincement" and "impotent" submission to superior power:

> Job avows himself to be overpowered, truly and rightly overpowered, not merely silenced by superior strength. Then he confesses: "Therefore I abhor myself and *repent* in dust and ashes." That is an admission of inward *convincement* and conviction, not of impotent collapse and submission to merely superior power. (1970/1923, p. 78)

Job seemed to have been overpowered twice: the first time by external circumstances, under which he lost everything in his possession; the second time by the overwhelming encounter with God, on which occasion he lost his recriminating, judging consciousness. In the framework of the expanded model of awe, we may say that Job experienced failed assimilation twice: the first time when he lost everything in his possession; the second time when he was confronted with a vision that was as grand as it was absurd to the very core. As Otto has noted, there is a world of difference between these two traumatic episodes. In contrast to his first trauma, Job's second trauma was "avowed," which signifies a decisively self-reflexive turn in consciousness, shifting attention from the emotion eliciting stimuli to his own responses. The upshot of all this is a new vision, which according to Otto entails a reconciliation: "this strange 'moment' of experience that here operates at once as a vindication of God to Job and a reconciliation of Job to God"

(1970/1923, p. 78); and healing: "For latent in the weird experience that Job underwent in the revelation of Elohim [Yahweh] is at once an inward relaxing of his soul's anguish and an appeasement . . ." (p. 78).

The fulcrum through which vindication and reconciliation, anguish and hope converge is the self-reflexive consciousness. This point can be illustrated by Fingarette's analysis of Job. He starts with the usual perceived vastness – self-annihilation theme: "We are allowed [in the *Book of Job*] a vision of existence as inexhaustibly rich in creative energies. We see life and death, harmonies and discords, joys and terrors, grace and monsters, the domestic and the wild. We are as nothing as measured against the whole; we are puny, vulnerable, and transient" (Fingarette, 1991, p. 215). Then as self-reflexivity enters the picture, our consciousness turns around, along with Job, to another plane of being, resulting in a dramatic transformation of ourselves from rags to riches, from awe to wonder: "As mere beings we can only be humble. But as beings who *are conscious of* this miracle, who participate however humbly in it, we are transcendently elevated and exhilarated. We are like unto the angels" (p. 215, emphasis added).

A Contemporary Scene

Awe, like any other emotion, is capable of two types of presentations, prototypical and refined. While examples of the prototypical awe may be found in the submission to raw power, or the unreflective devotion of the masses to charismatic leaders, refined awe found an eloquent expression in the following statements of E. Mark Stern, a psychology professor and resident of New York City:

> The sight of the ruin of the World Trade Towers is so very fresh. It is as fresh as a makeshift graveyard suddenly called into service. . . . Allow me to relate a tale from Elie Wiesel's memoirs: "In my dream I am looking for my father, who is no longer looking for anyone. I see him leaning against the cemetery wall. He sees me and begins to cry, weakly, like the child he is becoming. He comes closer and rests his head on my lap. . . . A stranger goes before us and blows out the candles. Now it is dark. I no longer know where I am. 'Father,' I whisper, 'where are you?' He takes a deep breath and bends down as if to examine the plowed soil. I no longer see his face. Yet while I still know who he is, I no longer know who I am." When I no longer know who I am, when the disappearance is so out of proportion. . . . When the darkness glares so absolutely . . . that absence of knowing is where the sacred begins. (cited in Sundararajan, 2002, pp. 185–6)

The experience of Stern meets all the criteria for refined awe as postulated by the expanded model: the perceived vastness (the sight of ground zero), need for accommodation due to failure of assimilation (the absence of knowing), and self-reflexivity ("I no longer know who I am"). This response to terrorism is tinged with so much pain, yet so refreshingly free from anger and vengeance. Although this type of response to calamities may not be representative of the general population today nor of any age, it shows the potential of refined types of awe to help

nations and individuals to transcend the mindset of the zero-sum games that have loomed large since 9/11.

Future Directions in Research

Both theories of awe generate testable predictions. The prototypical model predicts autonomic responses as markers of awe and life-transforming consequences of awe. The expanded model of awe also predicts the transformative power of accommodation as a consequence of awe. But the two models make contradictory predictions on the following issues: on the frequency of experiencing awe, the prototypical model predicts less frequency for people in the upper echelons than those in the lower strata, whereas the expanded model makes the opposite prediction that those with more cognitive and affective resources are likely to experience refined versions of awe more often. Furthermore, the prototypical model predicts that the appraisal of threat or beauty should lead to more negative or positive experiences respectively. The expanded model predicts in contrast that the dichotomy of positive and negative experiences is transcended in refined emotions such that threat and beauty can co-exist in refined appraisals of awe. Both models are amenable to narrative recall studies and laboratory experiments. In addition, testing the expanded model needs to include fMRI analysis and other methodologies for consciousness studies. Lastly, individual difference measures, such as Emotional Creativity Inventory, may be used to test the differential frequency between standard and refined awe.

SEE ALSO: ► Admiration ► Haidt, Jonathan ► Positive emotion ► Religiousness ► Spirituality

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