A

abasement
n. Unfavorable comparison to some other person or some standard. Henry Murray suggested abasement was a basic human need to lower one's self relative to those other people a person considers superior to himself or herself, to give power to that superior person, or to atone for perceived errors or sins.

abasia
n. The state of being unable to walk due to an absence or deficiency in motor coordination. There are numerous causes of abasia including muscle, joint, nerve, or bone problems in the legs; damage or malformation of the spinal cord; and damage or malformation of the brain.

aberration
n. **1.** A deviation from what is normal or expected. **2.** A temporary deviation in behavior by an individual from what is usual for him or her. **3.** An astigmatism, dioptric variation, or any other defect of the lens of the eye which brings about a scattering of light so that it does not appropriately project on the retina. **4.** A chromatic aberration is one caused when the lens differently refracts different wavelengths of light so that their projection on the retina does not perfectly overlap, causing blurred perception. **5.** A spherical aberration is one in which the lens is imperfectly shaped, causing light from different parts of the lens to have different focal lengths, leading to blurred perception.

ability
n. A capacity to accomplish a task at the present moment. This implies that any learning or developmental process necessary to the task has already been accomplished. Ability often contrasts with aptitude or potential or inherent but unrealized capacity which needs further learning or development to become an ability. Intelligence tests measure ability and are sometimes used to infer aptitude for future learning.

ability test
n. Any test which measures a mental or physical competence to perform certain actions and is used to infer native capacity to learn or to perform. Such tests are usually referenced to specific age or group norms and are sometimes used to predict future academic or vocational achievement. Examples include all intelligence tests, the Scholastic Aptitude Test (SAT), and the Raven Progressive Matrices Test.

ablation
n. The surgical removal of part of an organ. Ablation of portions of the brain was often used as a method of investigating brain function in the 20th century.

Abney effect
n. **1.** A perceptual distortion that occurs when a large surface is suddenly illuminated such that the center appears to be lighted before the edges. When a large surface which has been illuminated is suddenly darkened, the center appears to be illuminated longer than do the edges. **2.** A perceived change in the hue of light when white light is added to monochromatic light, thus increasing total illumination.

abnormal
adj. Differing from the usual, expected, or mean. In psychology this term is used both in the statistical sense of deviation from the central tendency of a distribution and in the sense of behavioral deviation from the social norm. Confusion often arises as a result of failing to specify which use of the term is meant. So a person with a very high IQ is abnormal in the statistical sense but not the pathological one.

abnormal psychology
n. The study of persons whose behavior causes significant distress to them or others; the behavior's cause is believed to be the pathological functioning of the mind. This field includes the development, classification,

diagnosis, treatment, and prevention of mental disorders. The term *abnormal psychology* is not applied in a statistical sense to both the highest and lowest functioning persons but only to the lowest functioning ones, and so the term is usually used in a pejorative sense rather than a statistical one, causing significant confusion among laypersons.

abortion
n. The early termination of a pregnancy by means of either a surgical procedure or biological processes. A slight majority of first human pregnancies are aborted by biological processes and referred to as spontaneous abortions or miscarriages.

abreaction
n. A psychoanalytic term used to describe the release of anxiety and tension after completely remembering or reliving a repressed memory. This was important in early psychoanalytic treatment and several modern therapies.

absolute error
n. In psychophysics absolute error refers to the difference between a consensual measurement and the judgment of it by a subject without respect to whether the error is above or below the consensual measure.

absolute limen
n. The lowest level of a sensory stimulus to which a subject can give any indication of perception of a stimulus. Originally psychophysicists believed there was some absolute level which corresponded with human consciousness which defined this limit, but close study revealed variability in subject responses which were partially random and partially dependent on the instructions given to the subject. Subsequent study revealed that there is a gradual onset of stimulus detection which is usually described using signal detection methods which give probabilities of response to a stimulus at different intensities or levels of the stimulus.

absolute pitch
n. The human capacity to recognize and name any given pure tone without reference to another tone. It is also called perfect pitch or perfect ear in music.

absolute refractory period
n. **1.** A brief period while an electric impulse is traveling down the axon in which the neuron is completely unable to generate another such impulse. **2.** A short period after orgasm in which the organism is unresponsive to sexual stimuli or even finds such stimuli aversive.

absolute scale
n. Another name for a ratio scale. An absolute scale has a meaningful zero point, unlike nominal, ordinal, and interval scales.

absolute thinking
n. A cognitive error in which events are interpreted in total or absolute ways; thus failure at a particular task might lead to the thought "I cannot do anything right." Absolute thinking is assumed to be a cause of errors in judgment about the self which lead to depression, anxiety, and other psychological problems.

absolute threshold
n. The lowest level of a sensory stimulus to which a subject can give any indication of perception of a stimulus. Originally psychophysicists believed there was some absolute level which corresponded with human consciousness which defined this limit, but close study revealed variability in subject responses which were partially random and partially dependent on the instructions given to the subject. Subsequent study revealed that there is a gradual onset of stimulus detection which is usually described using signal detection methods which give probabilities of response to a stimulus at different intensities or levels of the stimulus. ▶ *See also* **ABSOLUTE LIMEN**

absolute value
n. The difference between a value and zero regardless of whether the difference is above or below zero. The absolute value of −3 is 3 and the absolute value of +3 is 3.

absolute zero
n. **1.** The complete absence of a thing or a characteristic. **2.** In the measurement of

temperature absolute zero is the point at which something can get no colder and at which Brownian motion ceases; 0 degrees Kelvin, −273.15 degrees Celsius, and −459.67 degrees Fahrenheit.

abstract attitude
n. The capacity to use conceptual categories to classify objects or ideas by means of their particular characteristics. The ability to think abstractly and to move between thinking about particular things and things in general.

abstract intelligence
n. The capacity to make meaning out of experience as opposed to the kind of intelligence that allows the recall or juxtaposition of previously learned material. It is also called fluid intelligence.

abuse
n. Abuse refers to harmful and/or injurious treatment by one individual toward another. It is commonly accepted that specific instances of abuse can result from deliberate intent, ignorance, or negligence. The study of abuse began in the 1950s with regard to children; it is now widely understood that adults also experience violence. Both children and adults suffer various types of abuse including physical, sexual, verbal, and emotional/psychological abuse; recently, intellectual/spiritual abuse has also been identified. Different categories of abuse often serve as umbrella terms and include various types of actions. The most common categories are child abuse, elder abuse, partner abuse, wife abuse, financial abuse, workplace violence, stalking, and abusive professional relationships.

Theories regarding the causes and/or risk factors for abuse are usually specific to the category of abuse in question. Proposed causal factors across the various categories include sociocultural explanations including cultural values and belief systems, individual personality and/or psychopathological factors, economic stressors, and, increasingly, biological factors.

Effects of abuse can be life-altering and, in extreme cases, deadly. Nonfatal effects include physical, neurobiological, cognitive, emotional, social, and educational repercussions. It is widely recognized that treatment options for abused individuals must be tailored to individual needs and can include medical, psychological, and legal interventions.

Psychologists are increasingly seeking ways both to intervene in and to prevent various types of violence. Changing underlying attitudes in communities and educational, societal, and legal systems is central to prevention and intervention efforts. – HLa

ABX paradigm
n. An experimental method in psychophysics in which two stimuli (A and B) that are different are presented to someone, followed by a third (X), which is the same as either of the first two and, the subject is then asked whether the third stimulus matches A or B. This is usually used in a series to find out how much difference there has to be between the first two stimuli for a person to recognize the difference.

academic achievement tests
n. Tests designed to measure knowledge acquisition after a specific course of study. Because the goal of academic achievement tests is to determine whether or not students have gained the knowledge targeted by a specific course of instruction, content validity is the primary focus. Academic achievement tests are valid when the items selected for the test adequately represent the complete subject domain. For example, an academic achievement test in math may be concerned with students' understanding of basic mathematical calculations; therefore to sample the content domain completely, it is important to include questions targeting addition, subtraction, multiplication, and division. While there are standardized academic achievement tests (such as the Stanford Achievement Test or the Metropolitan Achievement Test), most academic achievement tests are nonstandardized measures developed explicitly for a class, topic, or training module (such as most classroom tests). – BJM

academic aptitude tests
n. Tests designed to measure an individual's potential for learning. In contrast to academic

achievement tests, which examine what a student already knows, academic aptitude tests target what a student is capable of learning under the appropriate instructional conditions. As such, academic aptitude tests cover a more variable range of topics, experiences, and abilities. Since the goal of academic aptitude tests is to measure potential for knowledge acquisition, they are primarily concerned with predictive criterion validity. For example, college entrance exams (such as the American College Test) are often considered academic aptitude tests as they are designed to predict a student's success in college as a function of his or her intellectual capacity for understanding advanced material. – BJM

academic skills disorders (now known as learning disorders, LDs)

n. Learning disorders are diagnosed when an individual's achievement, as determined by the administration of standardized tests in reading, mathematics, or writing, is substantially below what would be expected for the age, schooling, and level of intelligence of that individual. Learning problems must significantly interfere with academic achievement or activities of daily living that require academic skills. "Substantially below" is usually defined as a discrepancy of two standard deviations between IQ and achievement. There are three types of learning disorders: reading disorders, mathematics disorders, and disorders of written expression. The DSM-IV-TR states that if a child meets the criteria for more than one learning disorder, he or she should be diagnosed with all of them. It is important to note that LD differs from mental retardation in that the achievement deficit is not due to a lack of intelligence. The idea is that the individual is intellectually capable of achieving higher than he/she currently is. It is also necessary to take background into account, as LD is not diagnosed if the deficit is due to lack of opportunities to learn. – EF

academic underachievement

n. Academic underachievement results when a student is not academically performing to the best of his/her abilities. This can be due to failure to complete assignments and/or lack of motivation. In addition, heightened levels of anxiety may interfere during tests, and poor organization or study skills may also lead to problems. Depression and low self-esteem have also been found to affect academic performance. This phenomenon can occur in gifted students and/or in students who have a disability. In addition, it has been noted that minority students often underachieve in the academic arena. Among other possibilities, this may be due to lack of opportunity, stereotype threat, discrimination, or possible cultural differences. Once it has been discovered that a student is underachieving academically, it is necessary to determine the cause to apply the appropriate treatment or intervention. – EF

acalculia

n. Impairment in numerical abilities as a result of brain pathology. It is also known as acquired dyscalculia. The developmental defect in the normal acquisition of numerical abilities is usually referred to as developmental dyscalculia or simply dyscalculia. Two major types of acalculia can be distinguished: primary acalculia (also referred to as anarithmetia) and secondary acalculia. Primary acalculia represents a fundamental defect in understanding the numerical system. Patients present a loss of numerical concepts, inability to understand quantities, defects in using syntactic rules in calculation (e.g., "to borrow"), and deficits in correctly understanding numerical signs. The failure in calculation tasks has to be found in both oral and written operations. Secondary acalculia, on the other hand, refers to the calculation defects resulting from a different cognitive deficit (such as language defects or attention impairments). Several subtypes of secondary acalculia can be distinguished: aphasic acalculia, alexic acalculia, agraphic acalculia, spatial acalculia, and frontal acalculia. – AA

accessibility of knowledge in memory

n. Knowledge accessibility is the ease with which a unit of previously acquired knowledge comes to mind. This knowledge could

consist of a single concept or a configuration of interrelated concepts (a schema), a proposition or social norm, a past experience and the affect associated with the experience, or a procedure for attaining a particular goal. The accessibility of a particular unit of knowledge can be inferred from the time required to perform a task in which the knowledge is required or, alternatively, the likelihood that it is used rather than other knowledge that is equally or more applicable.

The importance of knowledge accessibility derives from the fact that when individuals are called upon to make a judgment or decision, they rarely consider all of the knowledge they have accessible in memory that potentially bears on it. Rather, they typically use the subset of relevant knowledge that comes to mind most easily without considering other, less accessible concepts and information that might also be applicable. Thus, when several units of knowledge are equally applicable for accomplishing a particular purpose (interpreting a piece of information, making a judgment, performing a certain task, etc.), the knowledge that is most accessible in memory is most likely to be used.

Theoretical underpinnings. Conceptualizations of the impact of knowledge accessibility are rooted in more general theories of memory. These theories are typically metaphorical and do not pretend to describe how knowledge is actually represented in memory. Connectionist models, which assume that knowledge is distributed throughout the memory system rather than stored in a specific location, may ultimately provide more valid descriptions of knowledge accessibility phenomena. At this writing, however, these models have not been sufficiently well developed to generate clear a priori predictions.

One conceptualization of knowledge accessibility is based on a spreading activation model of associative memory. According to this model, units of knowledge are connected in memory by associative pathways, with the length of the path (an indication of the strength of the association) decreasing with the number of times that the units have been thought about in relation to one another. When one knowledge unit is activated (i.e., thought about), excitation spreads from the unit along the pathways that connect it to other units, and when the excitation that accumulates at one of these locations exceeds a given activation threshold, it is activated as well. When a unit of knowledge is no longer thought about, the excitation that has accumulated at the unit gradually dissipates. However, as long as some residual excitation still exists, less excitation from other sources is required to reactivate it. Thus, it is more likely to come to mind.

A second conceptualization assumes that units of knowledge about a particular referent are stored in memory in a stack (e.g., a bin) pertaining to this referent. Whenever a unit of knowledge about the referent is used, a copy of it is deposited in the bin that pertains to its referent. Thus, the more often it is used, the more copies of it exist. Moreover, recently deposited copies are on top of the stack. When information about the referent is required, the bin is identified and a probabilistic, top-down search is performed. Thus, the more recently deposited knowledge units are more likely to be retrieved. Because the search is imperfect, however, relevant units of knowledge can often be missed. Therefore, the number of times a unit of knowledge has been used in the past (and thus the number of copies that are contained in the bin) is also a determinant of the likelihood of retrieving it.

Determinants. Two determinants of knowledge accessibility are implied by the theories of memory just described: the recency with which a unit of knowledge has been used in the past and the frequency with which it has been used. First, concepts or units of knowledge that have been used a short time before people are called upon to make a judgment or decision may influence this judgment, whereas other cognitive material, although equally applicable, may be ignored. To give an example, people who are asked to form an impression of someone who wants to cross the Atlantic in a sailboat are more likely to interpret the behavior as foolhardy, and to evaluate the person unfavorably, if they have recently encountered the term *reckless* in the course of performing an unrelated activity than if they have encountered the term *adventurous*.

The effect of recency is short lived, however, whereas the effects of frequency are more enduring. Concepts and knowledge that have been drawn upon frequently can become chronically accessible in memory and thus may have a disproportionate influence on judgments and behavior in situations in which they are applicable. Cultural and social factors that influence the frequency of encountering a concept or normative standard may increase the likelihood of applying it in making judgments and decisions despite the fact that alternative criteria are available in memory and equally applicable. The effect of recently activated knowledge can override the effect of chronic accessibility a short time after the knowledge has been activated. However, activation frequency is likely to predominate after time has elapsed.

Other factors can also influence the accessibility of knowledge in memory. For example, thinking extensively about stimuli at the time they are encountered, because of their novelty, vividness, or inconsistency with expectations, can increase the ease with which they later come to mind.

Effects. The accessibility of concepts and knowledge can affect judgments and decisions through their mediating influence at several stages of processing. When new stimulus information is received, an existing concept whose features are similar to those of the information is likely to be retrieved from memory for use in interpreting it. When more than one such concept is applicable, however, the one that is most easily accessible is the more likely to be used. Similarly, people who are asked to report their belief about an event or the existence of a particular state of affairs, or to indicate their attitude toward a person, object, or event, may often search memory for information with implications for this judgment. In these cases, the first relevant information that one identifies is most likely to be applied, and other, equally relevant but less accessible information may have less effect. (As a simple example, people are more likely to report that drinking coffee is desirable if they are asked in the morning, when thoughts about the desirability of being alert are likely to be activated, than if they are asked late at night when they are trying to fall asleep. Alternatively, they are more likely to evaluate a U.S. president favorably if they are asked a short time after hearing a speech in which he/she has espoused a position they like than if time has elapsed and other, less desirable positions come to mind.)

The use of various cognitive procedures (e.g., the disposition to focus on positive as opposed to negative consequences of a behavior when deciding whether or not to engage in it) can also depend on the accessibility of these procedures in memory. On the other hand, concepts that happen to be accessible in memory can have a direct impact on behavior. John Bargh and his colleagues, for example, found that exposing college-age participants to concepts associated with the elderly led them to walk more slowly to the elevator after leaving the experiment.

Demonstrations of the effects of knowledge accessibility have generally focused on the impact of semantic concepts and knowledge. However, the affective reactions that are associated with this knowledge can have similar effects. For example, people who feel happy or unhappy as a result of recalling a pleasant or unpleasant past experience might misattribute these feelings to a stimulus they encounter subsequently, leading them to evaluate the stimulus either more favorably or more unfavorably than they otherwise would.

The role of awareness. People who are called upon to make a judgment or decision typically assume that the knowledge that comes to mind is determined by the type of judgment or decision they have to make and do not consider the possibility that other, objectively irrelevant factors might also have an influence. In some cases they may not be aware of these factors at all. Several studies show that subliminally exposing participants to a specific set of concepts, thereby increasing the concepts' accessibility in memory, increases the likelihood that these concepts are applied to information they later encounter in an unrelated situation. Even when people are aware of the concepts they have employed in a situation, however, they may not attribute the accessibility of these concepts to this situation when they come to mind at a later point

in time. Consequently, for example, experimental participants report stronger beliefs in a hypothetical event if they have previously encountered a statement about the event in an opinion questionnaire they completed some time earlier. Alternatively, they are more likely to judge a fictitious name to be that of a well-known public figure if they have encountered the name in a different experiment 24 hours earlier. In each case, people may attribute the ease of retrieving this knowledge to having encountered it in other, nonlaboratory contexts, thus inferring that the event or name is generally well known. In fact, people may often base their judgment of the frequency of occurrence of an event on the ease with which an instance of the event comes to mind, independently of other considerations. By the same token, experiencing difficulty in retrieving knowledge in support of a particular proposition may be used as an indication that the proposition is invalid.

When people are aware that the accessibility of knowledge in memory might be due to factors that are irrelevant to a stimulus they are judging, they may sometimes discount it or seek alternative bases for the judgment. However, this may occur only if they are both motivated and able to conduct this search. Individuals who are aware they have used a trait concept in performing an initial task might sometimes avoid using the concept to interpret the information they receive in an unrelated task they perform subsequently. If they are distracted from thinking about the judgment they are asked to make, however, or if they are chronically unmotivated to devote thought to the task, they might use the activated concept as a basis for judgment despite their awareness that its use may be biased by extraneous factors. – RSW

accessibility, principle of

n. A unit of knowledge cannot be activated, or brought to a person's mind, unless it is present in that person's memory. Knowledge *availability* refers to whether or not a knowledge unit is actually stored in memory. Knowledge *accessibility* refers to the activation potential of an available knowledge unit. The term *potential* in the definition of accessibility captures the fact that accessible knowledge is capable of being activated (and then used), but it exists in a latent rather than in an active state. The word *potent*, the root of *potential*, captures the property of accessibility that it contributes to the likelihood that the knowledge will be used in judgments, inferences, and other responses. The term *potential* also includes notions of energy or effectiveness from chemical or electrical properties or from the position of a piece of matter in an arrangement, and these notions cover the major models that have been proposed for understanding the nature and functions of accessibility.

Two basic types of models have been used to understand the nature of knowledge accessibility and its effects – mechanistic models and excitation transmission models. Mechanistic models understand accessibility in terms of the arrangement and the working of stored component parts. In contrast, excitation transmission models understand accessibility in terms of the heightening and the dissipation of excitation (or energy levels) from stimulation and decay. These models differ in their assumptions about the interrelations among accessibility, activation, and stimulus input.

In mechanistic models, a knowledge unit that has been recently or frequently activated has a position within the structural arrangement of categories that makes it likely to be retrieved first. Once activated, the knowledge unit is then compared to the stimulus input and its use in judgment or inference depends on there being a reasonably good fit between the knowledge unit and the input. In excitation transmission models, the accessibility of the knowledge unit and the input features that match the category both contribute to the excitation level of the knowledge unit, which determines whether it becomes activated in the first place. If a knowledge unit has very low accessibility, then the fit between it and the input must be very good for it to become activated. On the other hand, if a knowledge unit has very high accessibility, then the fit between it and the input need not be good for it to become activated because the accessibility will compensate for the poor fit.

The accessibility of an available knowledge unit can be increased temporarily by priming or recently activating the unit prior to the situation in which the knowledge might be used. Many studies have found that prior exposure to a knowledge-related word in one situation, even subliminally, increases the likelihood that the knowledge will be used several minutes later to make a judgment in a different situation. Such priming effects on judgment can occur automatically outside people's conscious awareness.

A stored knowledge unit can also be primed frequently over an extended period, causing it to have relatively high accessibility for a long time afterward – a property called high *chronic accessibility*. There are personality, developmental, and cultural differences in chronic accessibility. The most common measure of individuals' chronically accessible social knowledge involves asking a person to list the traits or characteristics of a type of person whom he or she likes, dislikes, seeks out, avoids, and frequently encounters. Chronic accessibility is defined in terms of output primacy and/or frequency. A person has high chronic accessibility for a given knowledge unit if he or she lists that unit first in response to one or more questions and/or lists it frequently in response to the questions. A person has low chronic accessibility for a given knowledge unit (i.e., nonchronic) if he or she does not list the category in response to any question. Studies have found that chronically accessible social knowledge units can be relatively stable for months or even years, and they influence memory, impressions, and behavior. Another important kind of knowledge is attitudes, which also vary in their chronic accessibility. The most common measure of attitude accessibility involves asking people about their attitudes, such as asking them to evaluate whether each attitude object is "good" or "bad" and measuring the speed with which each person responds to the inquiry. The faster the response, the higher the accessibility. Higher attitude accessibility, in turn, predicts greater consistency between a person's attitude toward some object and his or her behavior toward that object. – ETH

accessory nerve

n. The 11th of the 12 pairs of nerves which leave the skull independently of the spinal cord. The accessory nerve has two branches, one of which controls the large muscles on the side (sternocleidomastoid) of the neck and upper back (trapezeus) and another which joins with the vagus nerve.

accommodation

n. A term used by Jean Piaget to explain one way in which we confront new information. Accommodation occurs when we are faced with new information that we cannot incorporate in our existing knowledge or schemes. Thus, we must alter our existing knowledge to integrate this new information. Accommodation is a process that works in conjunction with the process of assimilation. – SRB

accountability

n. Accountability is the implicit or explicit pressure to justify one's beliefs and actions to others. Unlike most research on cognition, the accountability literature posits that individuals do not operate in a social vacuum but rather are immersed in interdependent relationships and pressures to adhere to culturally shared norms and practices. As such, accountability can be viewed as a critical norm enforcement mechanism – the social-psychological link between individuals and social systems. Failure to act in ways for which one can construct acceptable explanations will lead to varying degrees of censure and punishment. Accountability pressure is rooted in people's fundamental need for social approval, whether as an end in itself or as a way to procure power over scarce resources. Different kinds of accountability motivate distinctive social and cognitive coping strategies. Ultimately, the benefits of accountability depend on the interpersonal and institutional goals that people are trying to achieve. – CTT, PET

acculturation

n. Acculturation refers to the process of change in a person as a result of extended contact with another cultural group. At

some point or another in their lives, virtually all people have contact with people from other cultural groups and hence can potentially undergo cultural change. Some groups of people, however, are more likely to experience acculturation than others. To distinguish these groups, John Berry provides a useful classification system which employs three dimensions: **(1)** the mobility of the group, **(2)** the voluntariness of the intercultural contact, and **(3)** the permanence of the intercultural contact. Various models have been proposed to capture the pattern of change experienced by acculturating individuals. Acculturation is a process that occurs over time, and hence longitudinal research designs, consisting of several assessments at multiple points in time, are the ideal method to understand the experience. – KN

acculturative stress
n. Stress caused among migrants or other long-term sojourners by having to deal with a culture different than one's own. Humans, like most organisms, react with stress to uncertain situations, and new cultures present many situations in which both the social definition of the situation and appropriate behavior are unknown to the individual new to the culture.

accuracy motivation
n. A need or desire to make no or few errors in accomplishing a task. This is important to subjects in psychology experiments asked to perform tasks in which accuracy is used as a dependent measure. A subject who lacks the motivation to do the task accurately may skew results. This is particularly important in boring and/or repetitive tasks.

accuracy test
n. A test in which the score is derived from the accuracy of answers rather than from the speed at which answers are given. Also called a power test by some. An accuracy test is in some ways the opposite of a speed test, in which the primary measure is the speed at which a subject performs a task up to a predetermined level of accuracy.

acetylcholine
n. (ACh) The first neurotransmitter to be scientifically identified. ACh is the primary neurotransmitter secreted by efferent (motor) axon terminals in the central nervous system. ACh is active in an ionic form at nicotinic receptors, including the neuromuscular junction, and in a metabolic form at muscarinic receptors in the postganglionic parasympathetic system, such as in the activity of the vagus nerve affecting the heart, as well as at sympathetic ganglia in the spinal cord.

In the brain itself, most cholinergic neurons (neurons using acetylcholine as a neurotransmitter) have excitatory muscarinic metabotropic sites, initiating actions such as rapid eye movement (REM) sleep (dream sleep). ACh in the forebrain facilitates learning, while ACh in the limbic system facilitates memory functions. – VS

acetylcholinesterase
n. (AChE) The enzyme present at neuromuscular synaptic junctions, in the parasympathetic system and in the brain, which inactivates excess acetylcholine (ACh). AChE thus reduces or halts the activity of ACh by breaking it down into choline and acetate, which are not neurotransmitters. Because of the presence of AChE at the synapse, cholinergic-initiated activity is brief in duration, easily interrupted, rather than prolonged, as with adrenergic (epinephrinergic) transmission. When AChE is pharmacologically blocked, cholinergic activity is more robust and prolonged. – VS

achievement motivation
n. A desire to achieve social status, recognition, and rewards through the accomplishment of difficult goals, competition, and independent effort which has been linked with academic and vocational success in the United States and some other cultures. This has been found to be correlated with a combination of high parental support, high parental demand, and childhood autonomy training.

achievement motive
n. An inferred drive to accomplish difficult tasks at a high standard of competence and overcoming all obstacles. A desire to master

tasks, to manipulate and control objects and other human beings, and to do so better than others are able to do. A desire to surpass one's previous accomplishments and to be recognized as better than others. It includes a need to increase one's self-esteem by the successful exercise of one's own talents.

achievement need
n. An inferred drive to accomplish difficult tasks at a high standard of competence and overcoming all obstacles. A desire to master tasks, to manipulate and control objects and other human beings, and to do so better than others are able to do. A desire to surpass one's previous accomplishments and to be recognized as better than others. It includes a need to increase one's self-esteem by the successful exercise of one's own talents.

achievement test
n. Any test which measures a mental or physical competence to perform certain actions and is used to infer learning, usually in a particular setting such as a school or vocational training program. Such tests are usually referenced to specific age or group norms and are sometimes used to predict future academic or vocational achievement. The Iowa Tests of Basic Educational Skills are an example. Achievement tests may measure ability/competence or performance.

achromat
n. A person or other organism that is able to see no color and is unable to distinguish either color or saturation of colored light. This is also called total color blindness.

achromatic
adj. **1.** Without color (hue) or saturation, containing only black, white, and shades of gray. **2.** The capacity to refract light without separating the colors of the spectrum. **3.** An achromatic color is a neutral shade of gray without any admixture of other hue or color.

achromatic interval
n. **1.** Eyes are able to see light at a lower level than they can see the color of light. The achromatic interval is the difference between the brightness a light of a particular wavelength needs to have to be seen and the brightness it needs for a subject to be able to recognize the color of the light. **2.** In hearing it is the difference between the minimal loudness at which sound can be detected and the loudness at which the tone of the sound can be recognized.

achromatism
n. **1.** Lack of both hue and saturation of color. **2.** Total color blindness; in human beings it is a lack of the capacity to perceive either color or saturation of color. Many species lack this capacity.

achromatopsia
n. Inability to distinguish colors (color blindness). It is also known as monochromatism. Congenital achromatopsia (daltonism or *maskun*) is a hereditary vision defect found in 1/33,000 persons in the United States (incidence is different in different world areas). People may have congenital achromatopsia as a result of having a low number of cells, an absence of cells, or morphologically malformed cone cells. Individuals who have achromatopsia may be either totally color-blind or almost totally color-blind; visual acuity is poor. Different subtypes are distinguished: complete rod monochromats, incomplete rod monochromats, and blue cone monochromats. Achromatopsia appearance requires two recessive genes and it is more frequently found in men than in women. Achromatopsia can also be due to an acquired brain condition (acquired or cerebral achromatopsia), associated with stroke, trauma, or some other cause. Persons who develop cerebral achromatopsia report that they only can see shades of gray. Usually, ventro-medial occipital lobe damage involving the lingual and fusiform gyri is observed in patients who have acquired achromatopsia. – AA

acoustic
adj. Of or about sound or pressure waves in air or other mediums.

acoustic confusion
n. Any confusion in perception or memory related to similarities in sound, as in hearing