
GLOSSARY

A

A posteriori: “From the effect to the cause”; from what comes after. Denotes an argument based on experience or observation.

A priori: “From the cause to the effect”; from what goes before. Denotes an argument that posits a general principle or admitted truth as a cause and deduces from it the effect that must necessarily follow.

Ab initio: “From the first act”; from the beginning, referring to the validity of statutes and so forth. In contrast to *ex post facto*.

Abnormal: Maladaptive behavior detrimental to the individual and/or the group.

Abrogate: To cancel annul or destroy; to repeal a former law by a legislative act or by usage.

Absence seizures: Petit mal seizures in children, shown by brief altered states of consciousness.

Absolute refractory phase: A period of complete unresponsiveness.

Acalculia: Impaired calculation abilities, more often associated with left parietal or occipital lesions.

Acapnia: A marked diminution in the amount of carbon dioxide in the blood.

Acceptance: An agreement to the act or proposal of another person.

Acetone bodies: Acetoacetic acid, β -hydroxybutyric acid, and acetone; found in blood and urine in increased amounts whenever too much fat in proportion to carbohydrate is being oxidized. Also called ketone bodies.

Acetylcholine (ACh): One of the best-known synaptic transmitters. Acetylcholine acts as an excitatory transmitter at synapses between motor nerves and skeletal muscles but as an inhibitory transmitter between vagus nerve and heart muscle.

Acetylcholinesterase (AChE): An enzyme that inactivates the neurotransmitter acetylcholine, thus halting its effects.

Achromatopsia: Impaired perception of colors due to cerebral dysfunction. Can be hemianopic or involve both visual fields.

Acidosis: Diminution in the reserve supply of fixed bases (especially sodium) in the blood.

Acquit: To set free or release from an obligation, burden, or accusation; to certify legally the innocence of a person charged with a crime.

Action: A formal proceeding or complaint brought within the jurisdiction of a court to enforce any right.

Action potential: Nerve impulse that flows along the membrane of the neuron. The membrane is receptive to potassium ions in the resting state and sodium ions when excited. The reversal in permeability causes the impulse.

Actuarial approach: Application of probability statistics to human behavior, as in insurance.

Actus reus: “Guilty act”; a wrongful act. As opposed to guilty, *mens rea*.

Acute alcohol hallucinosis: State of alcoholic intoxication characterized by hallucinations.

Acute paranoid disorder: Psychoses characterized by transient and changeable paranoid delusions, usually related to an identifiable stressor and transient in nature.

Acute post-traumatic stress disorder: Disorder in which symptoms develop within 6 months of an extremely traumatic experience instead of entering the recovery state.

Ad hoc: “For this”; for a special purpose or particular action.

Adaptation: Adjustment to a stimulus; also used to denote changes in the retina on exposure to different intensities of light. A progressive loss of receptor sensitivity as stimulation is maintained.

Adenohypophysis: See Anterior pituitary.

Adequate stimulus: The type of stimulus for which a given sense organ is particularly adapted (e.g., light energy for photoreceptors).

Adhesion: Abnormal union of two surfaces as a result of inflammation.

Adipsia: A condition in which an individual refuses to drink.

Adjustment disorder with depressed mood: Moderately severe affective disorder behaviorally identical to a dysthymic disorder or depressed phase of a cyclothymic disorder but having an identifiable, though not severe, psychosocial stressor occurring within 3 months prior to the onset of depression.

Admissible evidence: Evidence that can be received by the court or judge.

Adventitia: The outermost covering of a structure that does not form an integral part of it.

Adversarial system: A legal system in which opposing parties contend against each other by presenting arguments and information in the interest of their clients. The judge acts as a decision maker. In contrast to the inquisitorial system.

Adversary process: Having two opposing parties. In contrast to an *ex parte* proceeding.

Adverse party: A person whose interests are opposed to the interests of another party to an action.

Adverse witness: A witness who gives evidence that is prejudicial to the party examining the witness at the time. Commonly refers to a witness whose testimony is prejudicial to the party that called the witness.

Afferent fibers/traits: Data going toward the brain through neuronal pathways from the peripheral area of the central nervous system.

Affidavit: A written or printed statement of fact, made voluntarily, signed and sworn before a person having the authority to administer such an oath (e.g., a notary public).

After potentials: Positive and negative changes of membrane potential that may follow a nerve impulse.

Aggregation theory: Proposed by Halstead, this theory held that discrete sensory areas within the cortex were joined by a multitude of cortical connections. The aggregation produces an integration of cortical function.

Aggression: Behavior aimed at hurting or destroying someone or something.

Agitation: Marked restlessness and psychomotor excitement.

Agnosia: Defect in object recognition not due to primary sensory system dysfunction.

Agrammatism: Speech deficits characterized by language abbreviation such as omission of articles, prepositions, and inflectional forms. Language is essentially reduced to substantives.

Agraphia: Disturbances in writing skills (not motor execution). Usually seen with aphasia.

Akathisia: A general motor restlessness together with elevated inner tension, subjectively reported by the patient.

Akinesia: Inability to move due to brain dysfunction.

Alarm and mobilization reaction: First stage of the general adaptation syndrome, characterized by the mobilization of defenses to cope with a stressful situation.

Albuminuria: Presence of albumin in the urine.

Alcoholic intoxication: State reached when alcohol content of the blood reaches or exceeds a legally prescribed level (0.08 to 0.1% or above in many jurisdictions).

Alcoholism: Dependence on alcohol to the extent that it seriously interferes with life adjustment.

Aldosterone: A mineralocorticoid hormone that helps maintain homeostasis in the concentrations of ions in blood and extracellular fluid.

Alexia: Inability to read due to brain dysfunction. Refers to total loss of ability to read due to a brain lesion, typically located in the posterior cerebral cortex.

Alexia without agraphia: Inability to read in the absence of other language deficit.

Alien hand syndrome: Also termed the “Dr. Strangelove effect,” intermanual conflict between the two hands is seen, with patients learning to use their “obedient” hand to control the alien hand. Contralateral supplementary motor area (SMA) and corpus collosum lesions have been implicated.

Alkalosis: Increased bicarbonate content of the blood; may be the result of ingesting large amounts of sodium bicarbonate, prolonged vomiting with loss of hydrochloric acid, or hyperventilation.

All-or-none: Refers to the fact that the amplitude of the nerve impulse is independent of stimulus magnitude. Stimuli above a certain threshold produce nerve impulses of identical magnitude (although they may vary in frequency); stimuli below this threshold do not produce nerve impulses.

Allesthesia: Sensation of being touched on the side ipsilateral to a lesion when contralateral stimulation was, in fact, presented.

Alpha motoneurons: Motoneurons that control the main contractile fibers (extrafusal fibers) of a muscle.

Alpha rhythm: A brain potential that occurs during relaxed wakefulness, especially at the back of the head; frequency 8 to 12 Hz.

Alzheimer's disease (AD): A degenerative disease characterized by the presence of neurofibrillary tangles and senile plaques. The disease is progressive in that it starts with memory and affect problems, then goes on to speech and motor problems, and eventually to an immobile and confused bedridden status. The disease lasts from 1 to 15 years.

Amblyopia: Reduced visual acuity not caused by optical or retinal impairment.

Amenorrhea: The absence of the menses.

Amicus curiae: "Friend of the court." A person who petitions the court for permission to provide information to the court on a matter of law that is in doubt, or one who is not a party to a lawsuit but who is allowed to introduce evidence, argument, or authority to protect his or her interests.

Amnesic syndrome: Inability to remember events more than a few minutes after they have occurred coupled with the ability to recall the recent and remote part.

Amoeboid movement: Movement of a cell by extending from its surface processes of protoplasm (pseudopodia) toward which the rest of the cell flows.

Amorphosynthesis: Loss of ability to synthesize more than a few properties of a stimulus. Multiple sensory stimuli cannot be simultaneously processed. Ascribed to parietal lobe dysfunction. Damage to part of one sensory system causing an inequality in the overall cerebral system. The hemisphere receiving the decreased stimulation due to damage now needs increased input to balance the level of awareness.

Amorphous: Without definite shape or visible differentiation in structure; not crystalline.

Ampulla: A saccular dilation of a canal. An enlarged region of each semi-circular canal that contains the receptor cells (hair cells) of the vestibular system.

Amusia: A temporal lobe deficit associated with inability or reduced skill in perception of tonal patterns, individual tones, singing or humming to a rhythmical pattern, or even enjoying music.

Amygdala: A structure of a limbic system associated with flight/fight and other primitive responses. Located at the base of the temporal lobe. A group of nuclei in the medial anterior part of the temporal lobe.

Analgesia: Loss of sensitivity to pain.

Anaphylactic: Increasing the susceptibility to the action of any foreign protein introduced into the body; decreasing immunity.

Anarithmetria: Impaired primary calculation skills due to brain damage. Left hemisphere lesions are implicated.

Anastomose: To open one into the other; used in connection with blood vessels, lymphatics, and nerves.

Anergia: Decreased or absent motivation or drive.

Anesthesia: Loss of sensation.

Aneurysm: A dilation or bulging of a blood vessel that fills with blood. A sac formed by the dilation of the walls of an artery and filled with blood.

Angiogram: A technique for examining brain structure in intact humans by taking radiographic images after special dyes are injected into cerebral blood vessels. Inferences about adjacent tissue can be made by examining the outline of the principal blood vessels.

Angiography: Radiography of the head subsequent to injection of a radio-paque contrast medium into a major artery. Designed to enhance images of the cerebral vasculature.

Angiotensin II: A substance produced in the blood by the action of renin; may be involved in control of thirst.

Angular gyros: A cortical convolution on the parietal lobe, associated with speech functions.

Anions: Negatively charged ions, such as protein and chloride ions.

Anomia: Inability to name objects due to brain dysfunction.

Anomic aphasia: A fluent aphasia characterized by difficulty in naming objects or words. Comprehension and articulation may be unimpaired.

Anorexic: Lacking in appetite for food.

Anosmia: Absence of the sense of smell.

Anosodiaphoria: Unconcern over, but admission of an actual neurological impairment. *See also* Anton's syndrome.

Anosognosia: Denial of those affected with neglect syndrome that their paretic extremity belongs to them. Total ignorance with denial of obvious disability. Examples include Anton's syndrome with denial of blindness, and denial of amputation, amnesia, and hemiplegia. Usually accompanied by confusion or clouding of awareness.

Anterior aphasia: Primarily indicating a left frontal lesion, these include Broca's aphasia, transcortical motor aphasia, and supplementary motor area (SMA) disturbance.

Anterior cerebral artery (ACA): One of the two major vascular networks of the frontal lobes, the ACA and its branches feed the medial aspects of the anterior portion of the brain.

Anterior pituitary: The front lobe of the pituitary gland, which secretes tropic hormones; also called adenohypophysis.

Anterograde amnesia: Inability to recall life events from the time of a previous trauma or condition. Inability to learn and poor short-term memory are associated features.

Anterograde degeneration: Loss of the distal portion of the axon resulting from injury to the axon; also called Wallerian degeneration.

Antidiuretic hormone (ADH): A hormone from the posterior pituitary that controls the removal of water from blood by the kidneys; also called vasopressin.

Antigen: Any substance that, when introduced into the blood or the tissues, incites the formation of antibodies, or reacts with them.

Anton's syndrome: *See also* Anosognosia. Adamant denial of blindness, often associated with bilateral posterior cerebral vascular accident (CVA).

Antrom: A cavity, or chamber, especially one within a bone, such as a sinus; the pyloric end of the stomach.

Apathetic-akinetico-abulic behavior: Produced by massive damage to the prefrontal areas, among others. This syndrome is characterized by low drive and reduced motor output. Ongoing behavior may be disorganized. The effector aspect of action seems to be impaired in what has been termed the "pathological inertia of existing stereotypes."

Aperture: An opening or orifice.

Aphagia: Refusal to eat, often related to damage to the lateral hypothalamus.

Aphasia: Impairment in language understanding and/or production due to brain injury.

Aphemia: A poorly articulated, slow, hypophonic, breathy speech with no syntax deficits. Usually follows initial mutism and is associated with Broca's area lesions, or a subcortical undercutting of Area 44.

Apoplexy: A sudden loss of consciousness, followed by paralysis resulting from cerebral hemorrhage, or blocking of an artery of the brain by an embolus or a thrombus.

Appellant: The party who appeals a decision from one court or jurisdiction to another.

Appellate court: A court having jurisdiction of appeal and review.

Appellee: The party against whom an appeal is taken in a cause; the party who has an interest opposed to the setting aside or reversing of a judgment.

Apperceptive visual agnosia: The inability to synthesize or integrate visual input. Awareness of discrete parts may be intact. Inability to perceive meaning in or visually recognize objects, due to cerebral dysfunction, most likely in posterior areas. Patients act blind but can avoid obstacles, indicating preserved ability to see.

Apraxia: Refers to impaired goal-directed motor behavior in individuals with unimpaired comprehension and primary motor skills (e.g., coordination, strength).

Apraxia of speech: Known also as verbal apraxia or Broca's aphasia. Speech movement/articulation problems may include (1) articulation errors; (2) phoneme substitution; (3) greater latency of response; (4) greater trouble with initial than subsequent phonemes; (5) no major vocal musculature problems; (6) sparse output; (7) poor melody; and (8) articulation with much effort.

Apraxic graphia: Deficit in forming graphemes when writing to dictation or spontaneously. Lesions are in the parietal lobe contralateral to the dominant (writing) hand.

Apraxic graphia without apraxia: Preserved oral spelling with illegible graphemes in spontaneous and dictated writing. Normal praxis is apparent, including the ability to hold and use a writing instrument. Associated with parietal lobe lesions.

Aprosodias: Deficits in the comprehension and expression of affect and emotion, traditionally associated with right hemisphere dysfunction.

Aqueduct: A canal for the conduction of a liquid; the cerebral aqueduct of Sylvius connects the third and fourth ventricles of the brain.

Arachnoid space: Allows for cerebrospinal fluid to move about the cerebrum. Filled with fibroid matter and considered one of the three layers of the meninges.

Arbitration: A method of resolving a dispute by using an impartial third party by whose decision both parties agree in advance to abide.

Arteriovenous malformation (AVM): Involving the frontal lobe preferentially and focally, AVMs are usually unrecognized until one or more episodes have occurred. Subsequent attacks by AVM hemorrhage widens the area of deficit.

Articulate: To join together so as to permit motion between parts; enunciation in words and sentences. Divided into joints.

Asphyxia: Unconsciousness owing to interference with the oxygenation of the blood.

Assertiveness training: A behavior therapy technique for helping individuals become more self-assertive in interpersonal relationships.

Association areas: Part of the cortex next to the motor or sensory cortex, involving an overlap of functions. Allows for integration of data; damage causes patterned rather than specific deficits.

Associative visual agnosia: Inability to recognize objects visually with intact ability to copy, draw, or match to sample.

Astereognosis: Inability to identify objects placed by touch in spite of intact appreciation of tactile sensation. Also called tactile agnosia.

Asthenia: Weakness.

Astrocyte: A star-shaped glial cell with numerous processes or extensions that run in all directions. Their extensions provide structural support for the brain and may isolate receptive surfaces.

Astrocytoma: Neoplastic disease arising from the astrocyte cells. Usually unencapsulated, intracerebral, and fatal.

Ataxia: Muscular coordination and balance problems due to brain dysfunction. A loss of the power of muscular coordination. Impairment in the direction, extent, and rate of muscular movement; often due to cerebellar pathology.

Athetosis: Slow, involuntary, twisting movements of the arms and legs. May occur either during movement or when at rest. Associated with lesions of the cortex and subcortex (especially globus pallidus and thalamus).

Atresia: Congenital absence, or pathologic closure, of a normal opening or passage.

Atrophy: A wasting, or diminution, in the size of a part of the body or brain.

Atropine: An alkaloid obtained from atropa belladonna; it inhibits the action of the parasympathetic division of the autonomic system.

Attention deficit disorder: Maladaptive behavior in children characterized by impulsivity, excessive motor activity, and inability to focus attention for appropriate periods of time; also called hyperactive syndrome or hyperkinetic reaction.

Attest: To bear witness to; to affirm as true or genuine.

Attribution theory: The theory of social psychology in which people explain causes of the behavior of others based on unseen or unrecognized qualities in themselves.

Auditory affective agnosia: Impaired ability to recognize or comprehend affectively intoned speech due to a cerebral disorder.

Auditory agnosia: Impaired hearing due to cerebral dysfunction with intact receptive abilities, as measured by audiometry or other means.

Auditory cortex: A region of the temporal lobe that receives input from the medial geniculate nucleus.

Auditory sound agnosia: Impaired ability to recognize nonspeech sounds due to cerebral dysfunction.

Auscultation: The act of listening for sounds within the body; employed as a diagnostic method.

Automated assessment: Psychological test interpretation by electronic or mechanical means.

Automatism: Producing without effort or delay material learned by rote in childhood for a given temporal period (e.g., alphabet, number series). Errors reflect attention, disturbances; nonacute condition-related errors may indicate significant memory dysfunction.

Autonomic nervous system: Part of the peripheral nervous system that supplies neural connections to glands and to smooth muscles of internal organs. Composed of two divisions (sympathetic and parasympathetic) that act in opposite fashions.

Autosome: Any ordinary paired chromosome as distinguished from a sex chromosome.

Autotopagnosia: Disorientation of personal space. Associated with left frontal aphasic signs. The subject is typically assessed for ability to touch, name, or imitate the examiner in touching body parts. Associated with parietal lobe damage.

Axon hillock: A cone-shaped area from which the axon originates out of the cell body. Depolarization must reach a critical threshold here for the neuron to transmit a nerve impulse.

Axoplasmic streaming: The process that transports materials synthesized in the cell body to distant regions in the dendrites and axons.

Azygos: An unpaired anatomic structure; the azygos vein arises from the right ascending lumbar vein and empties into the superior vena cava.

B

Bailiff: An officer or attendant of the court who has charge of a court session in matters such as keeping order and having custody of the jury and of prisoners while in court.

Balint's syndrome: A syndrome consisting of (1) oculomotor apraxia, of focus from a near to a distant stimulus; (2) optic ataxia, shown by impaired visually guided movements; and (3) impaired visual attention in the absence of general attentional deficits, with initial random gaze until a stimulus is fixated upon.

Ballism: Uncontrollable violent tossing of the limbs due to basal ganglia dysfunction.

Ballistic: Classes of rapid muscular movements thought to be organized or programmed by the cerebellum. Contrast to ramp.

Bar: The entire body of attorneys, or the collective members of the legal profession.

Basal ganglia: Forebrain nuclei including those in the amygdala, caudate nucleus, claustrum, globus pallidus, and putamen. A group of forebrain nuclei found deep within the cerebral hemispheres.

Bases: Components of a DNA or RNA molecule. DNA contains four bases (adenine, thymine, cytosine, and guanine), a pair of which forms each rung of the molecule. The order of these bases determines the genetic information of a DNA molecule.

Basic neuroglial compartment: A level of brain organization that includes a single nerve cell with all its synaptic endings, associated glial cells surrounding extracellular space, and vascular elements.

Basilar artery: An artery formed by the fusion of the vertebral arteries; its branches supply blood to the brain stem and to posterior portions of the cerebral hemispheres.

Basilar membrane: A membrane in the cochlea containing the principal structures involved in auditory transduction.

Behavioral teratology: Impairments in behavior produced by early exposure to toxic substances.

Bench: A seat of judgment for the administration of justice; the seat occupied by the judge in court; the aggregate of the judges that comprise the court.

Berry aneurysm: A small sac formed by the dilation of the wall of a cerebral artery. The anterior portion of the circle of Willis is the site of about 90% of berry aneurysms.

Bifurcated trial: A two-phase trial in which issues are tried separately, e.g., guilt is determined in the first phase and punishment in the second, or in sanity cases, guilt is determined in the first phase and sanity in the second.

Bill of particulars: A written statement setting forth the demands for which a legal action is brought. Designed to inform the defendant of the specific information regarding the cause of action stated in the complaint.

Binocular disparity: The slight difference between the views from the two eyes, important in depth perception.

Bipolar neurons: Nerve cells with a single dendrite at one end of the nerve cell and a single axon at the other end. Found in some vertebrate sensory systems.

Bitemporal hemianopsia: Optic chiasm damage resulting in visual field loss in both temporal (as opposed to nasal) areas.

Blind spot: A place through which blood vessels enter the retina. Because there are no receptors in this region, light striking it cannot be seen.

Blindsight: Denial of recognition in the face of previous correct recognition and stimulus responses.

Blood-brain barrier: The mechanisms that make the movement of substances from capillaries into brain cells more difficult than exchanges in other body organs, thus affording the brain a greater protection from exposure to some substances found in the blood.

Body schema: Body image.

Bolus: A rounded mass of soft consistency.

Bona: Good or virtuous.

Bradycardia: Abnormal slowness of the heart or pulse.

Bradykinesia: Motor slowing.

Brain stem: Thalamus, hypothalamus, ganglia, midbrain, hindbrain, and associated structures.

Brain stem reticular formation: Part of the brain stem involved in arousal.

Brandeis brief: A form of appellate brief that includes social science principles along with legal arguments. Takes its name from late Supreme Court Associate Justice Louis D. Brandeis, who used such briefs.

Brief: A written statement prepared by the attorney arguing a case in court, including a table of relevant cases, a summary of issues and facts, and an argument of law as it supports a litigant's position.

Broca's aphasia: An expressive speech disorder with relatively intact auditory comprehension. A nonfluent speech is noticed that is slow, labored, dysarthric, incomplete, and concrete. Agrammatism consists of missing grammatical words and inflectional endings. Considered an anterior aphasia.

Broca's area: An area in the frontal region of the left hemisphere involved in the production of speech.

Brown–Peterson distractor technique: Counting backward by twos or threes upon presentation of a verbal or nonverbal stimulus. Rehearsal is prevented by the counting.

Bruit: A sound or murmur heard in auscultation, especially an abnormal one.

Buccolinguofacial apraxia: An oral apraxia affecting voluntary movements of the larynx, pharynx, tongue, lips, and related suborgans in which simple, automatic movements are intact. Commanded tasks may yield deficits (e.g., no swallowing, laughing) in the presence of noncommanded, contextual responses (e.g., swallowing food after eating, smiling). Deficit in performing voluntary buccofacial motor activities (e.g., chewing, swallowing, raising eyebrows) with intact ability to perform reflexive movements with the same muscle groups.

Buffer: Any substance that tends to lessen the change in hydrogen ion concentration, which otherwise would be produced by adding acids or bases.

Burden of proof: In the law of evidence, the duty of a party to affirmatively prove a fact in dispute. The obligation of a party to convince the trier of fact as to the truth of a claim by establishing by evidence a required degree of belief concerning a fact. In civil cases, proof must be by a preponderance of the evidence. In criminal cases, all crime elements must be proved by the government beyond a reasonable doubt. In some equity issues and more recent decisions of the Supreme Court, the standard of proof is clear and convincing evidence.

C

Calcitonin: A hormone released by the thyroid gland.

Calculus: A stone formed in any portion of the body.

Calorie: A unit of heat. A small calorie (cal.) is the standard unit and is the amount of heat required to raise 1 g of water from 15 to 16°C. The large calorie (Cal.) is used in metabolism and is the amount of heat required to raise 1 kg of water from 15 to 16°C.

Canaliculus: A small canal or channel; in bone, minute channels connect with each lacuna.

Capgras syndrome: Involves the reduplication of relatives, friends, possessions, and the like, and is often viewed as a psychiatric, as opposed to neurological, problem. The target person, almost always a close relative, is considered an imposter.

Carcinoma: A malignant tumor or cancer; a new growth made up of epithelial cells, tending to infiltrate and give rise to metastases.

Case law: The sum of reported cases forming a body of law. The law of a certain subject as evidenced or formed by the adjudged case, as opposed to statutes or other sources of law.

Catabolism: Reactions in a plant or animal that result in the degradation, or exudation, of molecules.

Catalysis: Change in the speed of a reaction produced by the presence of a substance that does not form part of the final product.

Catalyst: Any substance that brings about catalysis.

Cataract: A loss of transparency of the crystalline lens of the eye or of its capsule.

Catastrophic reaction: Intensely negative but temporary emotional reaction, associated with left hemisphere lesions. Often occurs when subjects are informed of their limitations or shortcomings, in response to task demands. A heightened sensitivity to one's limitations.

Caudal: An anatomical term meaning toward the tail end. Opposed to rostral.

Caudate nucleus: One of the basal ganglia with a long extension or tail.

Cell differentiation: The prenatal stage in which neuroblasts acquire the distinctive appearance of cells characteristic of a region of the nervous system.

Cell proliferation: The production of nerve cells.

Cellular fluid: *See* Intercellular fluid.

Central deafness: Hearing impairments related to lesions in auditory pathways or centers, including sites in the brain stem, thalamus, or cortex.

Central nervous system (CNS): The portion of the nervous system that includes the brain and the spinal cord.

Central sulcus: Known also as the fissure of Rolando, this sulcus divides the anterior from the posterior areas of the brain (frontal from parietal).

Cephalic: An anatomical term referring to the head end. Also called rostral.

Cerebellar cortex: The outer surface of the cerebellum.

Cerebellar fits: Not really seizures, these movements consist of periods of decerebrate rigidity. Associated with large midline cerebellar lesions.

Cerebellar syndrome: Due to a lesion in the cerebellum, ambulation is unsteady with side-to-side swaying. Equilibrium is adversely affected.

Cerebellum: A structure located at the back of the brain, dorsal to the pons; it is involved in the central regulation of movement.

Cerebral contusion: A brain bruise. Refers to superficial damage to gyri or other crests of the cortical convolutions.

Cerebral cortex: The outer bark or cortex of the cerebral hemispheres, which consists largely of nerve cell bodies and their branches.

Cerebral hemispheres: The right and left halves of the forebrain.

Cerebrospinal fluid: The fluid filling the cerebral ventricles.

Certiorari: “To be informed of.” An action or writ issued by a superior court requiring an inferior court to produce a certified record of a particular case tried by the latter. The purpose of this action is to enable the higher court to inspect the proceedings to determine whether or not there were any irregularities. Most commonly used by the U.S. Supreme Court as a discretionary device to choose the cases it wishes to hear.

Corveau isole: An animal with the nervous system transected at the upper level of the midbrain (between the inferior and superior colliculus). Contrast with the encephale isole.

Cervical: Pertaining to the neck region.

Chalazion: A small tumor of the eyelid; formed by the distention of a meibomian gland with secretion.

Character Disorder: *See* Personality disorder.

Cheiro-oral: Refers to the simultaneous twitching of the thumb and same-sided corner of the mouth. Occurs in epilepsy due to close proximity of motor execution zones for these body parts (i.e., the motor homonculus has its thumb in its mouth).

Chiasma: A crossing; specifically, the crossing of the optic nerve fibers from the medial halves of the retinae.

Child abuse: The infliction of physical damage upon a child by parents or other adults.

Child advocacy: A movement concerned with protecting the rights and ensuring the well-being of children.

Chlorpromazine: An antipsychotic drug, one of the class of phenothiazines.

Cholinergic: Refers to cells that use acetylcholine as their synaptic transmitter.

Chorda tympani: A portion of the facial nerve that serves as taste receptor in the anterior two-thirds of the tongue.

Choreic movements: Uncontrollable, brief, and forceful muscular movements related to basal ganglia dysfunction.

Chromidial substance: Pertaining to granules of extranuclear chromatin seen in the cytoplasm of a cell.

Chromosome: A body of chromatin in the cell nucleus that splits longitudinally as the cell divides, one half going to the nucleus of each of the daughter cells; the chromosomes transmit the hereditary characters.

Ciliary: Relating to (1) any hairlike process, (2) the eyelashes, or (3) certain of the structures of the eyeball.

Cingulate bodies: Limbic system tissue above or superior to the corpus callosum.

Cingulum: A region of medial cerebral cortex lying dorsal to the corpus callosum. Also called cingulate cortex.

Circadian rhythms: Behavioral, biochemical, and physiological fluctuations during a 24-hour period.

Circle of Willis: A structure at the base of the brain formed by the joining of the carotid and basilar arteries.

Circumlocution: Often seen in fluent aphasia, the substitution of an incorrect word for another word. The substitution may itself demand a specific but unobtainable word, thus producing a convoluted output.

Circumventricular organs: Organs lying in the walls of the cerebral ventricles. These organs contain receptor sites that can be affected by substances in the cerebrospinal fluid.

Cistern: A closed space serving as a reservoir for fluid.

Civil: Of or pertaining to the state of the citizenry. Relates to an individual's private rights and remedies sought through civil action, in contrast to criminal proceedings.

Civil commitment: Procedure whereby an individual certified as mentally disordered can be hospitalized, either voluntarily or against the person's will.

Civil law: The body of law, concerned with civil or private rights and remedies, established by every particular municipality for itself; as opposed to the "law of nature."

Civil rights: The body of law pertaining to personal, natural rights that are guaranteed and protected by the Constitution, such as freedom of speech and press, freedom from discrimination.

Clarendon jury: In a procedure established by Henry II of England, at least 12 "good and lawful" men, reporting to the king's representative, were summoned as jurors to determine if a trial should be held and to decide actual innocence or guilt.

Clear and convincing: A standard of proof greater than preponderance but less rigorous than reasonable doubt. Proof that should leave the trier of fact with no reasonable doubt about the truth of the matters in issue.

Clear and present danger: A standard used to determine when one's First Amendment rights to freedom of speech and press may be curtailed. Pursuant to a doctrine in constitutional law, if necessary, government restrictions will be upheld to prevent grave and immediate danger to interests which government may lawfully protect.

Clinical neuropsychology: That which deals with the psychometric or other objective psychological methods in the assessment of higher cortical functions in humans.

Coactivation: A central nervous system control program that activates or inhibits the skeletal motoneurons at the same time as it alters the sensitivity of the muscle spindles.

Cochlea: A snail-shaped structure in the inner ear that contains the primary receptors for hearing.

Cochlear duct: One of the three principal canals running along the length of the cochlea.

Cochlear microphonic potential: An electrical potential produced by hair cells that accurately copies the acoustic wave form of the stimulus.

Cochlear nuclei: Brain stem nuclei that receive input from auditory hair cells and send output to the superior olivary complex.

Coenzyme: A nonprotein substance that is required for activity of an enzyme.

Cognitive dissonance: Condition existing when new information is contradictory to one's assumptions.

Collateral: Accompanying; running by the side of; not direct; secondary or accessory; a small side branch of an axon.

Colliculus: One of two pairs of structures on the dorsal midbrain. *See* Inferior colliculus, Superior colliculus.

Colloid: A state of subdivision of matter in which the individual particles are of submicroscopic size and consist either of large molecules, such as proteins, or aggregates of smaller molecules; the particles are not large enough to settle out under the influence of gravity.

Collusion: The making of an agreement between two or more persons with the purpose of defrauding another of his or her rights by the forms of law, or to obtain an object forbidden by law.

Coma: A state of profound unconsciousness from which one cannot be roused.

Coma vigil: Immobility and unresponsiveness with eyes open and moving, associated with posteromedial-inferior frontal and/or hypothalamic damage.

Common carotid arteries: Arteries that ascend the left and right sides of the neck. The branch that enters the brain is called the internal carotid artery.

Common law: The body of legal principles and rules of action that derives its authority from customs and general usage and rules of conduct existing among the people. In contrast to civil law. Originated in England.

Complaint: The original or initial charge by which a legal action is begun, naming a person by whom the offense was committed. In criminal law, a written statement containing the essential facts and legal theory on which the charge is based.

Complex cortical cells: Cells in the visual cortex that respond best to a bar of a particular width and direction anywhere within a particular area of the visual field.

Complex partial seizures: Epileptic seizures in which consciousness is altered (complex) and which are restricted or at least arise from a circumscribed area of the brain (partial).

Compos mentis: Being sound of mind; mentally competent.

Compulsion: An irrational and repetitive impulse to perform some act.

Compulsive gambling: See Pathological gambling.

Compulsive personality: A personality disorder characterized by excessive concern with rules, order, efficiency, and work.

Computer assessment: Use of computers to obtain or interpret assessment data.

Computer axial tomography: A technique for examining brain structure in intact humans through a computer analysis of x-ray absorption at several positions around the head. This technique affords a virtual direct view of the brain.

Computer model: Use of computers to simulate psychological functioning.

Conciliation: The mode of adjusting and resolving a dispute through voluntary and unantagonistic settlement of the issues between opposing parties with a view toward avoiding litigation.

Concordance rates: Rates at which a diagnosis or a trait of one person is predictive of the same diagnosis or trait in relatives.

Conduct disorders: Childhood disorders marked by persistent acts of aggressive or antisocial behavior that may or may not be against the law.

Conduction aphasia: A constellation of behaviors produced by a lesion in the white matter fibers connecting the posterior/anterior portions of the brain (near the arcuate fasciculus). A severe repetition deficit is apparent relative to good auditory comprehension and expression of speech. A language disorder, involving intact comprehension but poor repetition of spoken language, related to damage of the pathways connecting Wernicke's area and Broca's area.

Cones: Receptor cells in the retina that are responsible for color vision. The three types of cones have somewhat different sensitivities to light of different wavelengths.

Confabulation: Production of bizarre, false, or unverifiable verbal/written responses, usually in association with amnesia. A close correlation exists between confabulatory tendencies and impairment in self-correction.

Congenital: Born with a person; existing at or before birth.

Consideration: The cause, price, or motivating factor that induces a party to enter into a contract.

Consolidation: A state of memory formation in which information in short-term or intermediate-term memory is transferred to long-term memory.

Conspiracy: A combination of two or more persons who propose to commit an unlawful or criminal act, or to commit a lawful act by criminal means.

Constructional disorders: Deficits in constructional tasks (e.g., drawing, assembling) in which the spatial form of the target object may be lost. Associated with pathology of the nondominant (nonspeech) hemisphere.

Contempt of court: An act or an omission that is calculated to obstruct or interfere with the orderly administration of justice or that is calculated to lessen the authority or dignity of the court.

Contingent negative variation (CNV): A slow event-related potential recorded from the scalp. It arises in the interval between a warning signal and a signal that directs action.

Contract: A binding agreement between two or more competent parties, based on mutual assent and made for a lawful purpose, which creates an obligation to do or not to do a specified thing.

Contralateral: Situated on, or pertaining to, the opposite side.

Contrast sensitivity function (CSF): A psychophysical function determined by finding the contrast necessary for perceiving different spacings of dark and light bars. Used to measure spatial acuity of the visual system.

Contrecoup: Refers to the contusion (bruise) in the area opposite the point of impact (coup).

Conversion disorders: Neurotic condition in which symptoms of organic illness appear in the absence of any related organic pathology; previously called hysteria.

Coronal (plane): The plane dividing the body or brain into front and back parts. Also called frontal or transverse. The band of axons that connects the two cerebral hemispheres.

Corpus callosum: Intracerebral white matter connecting the right and left cerebral hemispheres.

Corpus delicti: The body or material substance of a crime that provides objective proof that a crime has been committed.

Corpus juris: A body of law. A term signifying a comprehensive book of several collections of law.

Cortical deafness: *See also* Cortical auditory disorder. Difficulty recognizing both verbal and nonverbal stimuli due to cerebral dysfunction. Most often associated with cardiovascular accident.

Corticotropin-releasing hormone (CRH): A releasing hormone from the hypothalamus that controls the daily rhythm of ACTH release.

Cortisol: A glucocorticoid hormone of the adrenal cortex.

Court martial: An *ad hoc* military court that is convened under the authority of government and the Uniform Code of Military Justice, that has penal and disciplinary jurisdiction in trying and punishing offenses committed by members of the armed forces. The type (e.g., general, summary, special) and composition vary according to the seriousness of offenses.

Cranial nerves: Originating from the brain, these are 12 pairs of nerves that transmit motor and/or sensory impulses to and from peripheral central nervous system sites. One of the three main subdivisions of the peripheral nervous system, composed of a set of pathways mainly concerned with sensory and motor systems associated with the head.

Cretinism: Reduced stature and mental retardation caused by thyroid deficiency.

Creutzfeldt–Jakob disease: A rare, transmittable (i.e., through a virus that has a 2-year incubation) dementia with a relatively short clinical course (9-month average). Similar to “mad cow” disease. Of cases, 10% may be inherited. Anxiety and memory loss first appear. Myoclonic jerking appears in conjunction with motor neurocerebellar, basal ganglion, or pyramidal tract lesions. Dementia with progressive rigidity and mutism are end-stage symptoms.

Criminal responsibility: Legal question of whether an individual should be permitted to use insanity as a defense after having committed some criminal act.

Cross-examination: The questioning of a witness during a trial, hearing, or deposition by the party opposing that which originally produced the witness to testify. Generally, the scope of cross-examination is limited to matters addressed in direct examination.

Crossed aphasia: Aphasic symptoms occurring, usually temporarily, in right-handed person with a right hemisphere lesion.

Cruel and unusual punishment: Punishment found to be unfair, shocking, or offensive to the ordinary person’s reasonable sensitivity. The Eighth Amendment states that “excessive bail shall not be required nor excessive fines imposed nor cruel and unusual punishment inflicted.”

Crystalloid: A body that, in solution, can pass through an animal membrane, as distinguished from a colloid, which does not have this property.

Culpable: Blame worthy; deserving of moral blame. Addresses fault rather than guilt.

Curare: A highly toxic extract that paralyzes muscle; it acts on the motor end plates.

Custody: The caring for, keeping, guarding, preserving of a thing or person. Implies responsibility for the protection and preservation of the thing or person in custody. When applied to a person, may mean lawfully authorized detention by means of restraint and physical control.

Cutaneous: Pertaining to the skin.

Cyanosis: A dark, purplish coloration of the skin and the mucous membrane caused by deficient oxygenation of the blood.

Cyclic adenosine monophosphate (cyclic AMP or cAMP): A second messenger involved in the synaptic activities of dopamine, norepinephrine, and serotonin.

Cyclothymic disorder: Mild affective disorder characterized by extreme mood swings of nonpsychotic intensity.

Cytoarchitectonics: The study of anatomical divisions of the brain based on the kinds of spacing of cells and distribution of axons.

D

Dacrystic epilepsy: Seizures where crying is the predominant ictal event.

Damages: A monetary compensation that may be recovered in court by any party who has suffered a loss or injury to person, property, or rights as the result of an unlawful act or negligence.

Damages, actual: The amount awarded in compensation for a complainant's actual and real losses or injury that can readily be proved to have been sustained.

Damages, compensatory: A monetary award to the injured party strictly for the loss of injury sustained.

Damages, double (or treble): An award for certain statutorily authorized kinds of injuries in an amount two to three times the damages normally awarded by a court or jury.

Damages, nominal: A trivial sum awarded to a plaintiff in an action where there is no substantial loss or injury for which to be compensated. Or, in a case where there has been real injury, but the plaintiff's evidence fails to show its amount.

Damages, punitive (exemplary): Compensation in an amount greater than actual damages in cases where the wrong done to a plaintiff was aggravated by malice, violence, or fraud on the part of the defendant.

Damages, special (consequential): An award not arising directly or immediately from the act of a party, but only from the consequences or results of such an act.

De bene esse: Conditionally or provisionally; in anticipation of future need. Applies to proceedings taken provisionally and allowed to stand for the present but which may be subject to future challenges.

De facto: In fact, actually, in reality. Characterizes an officer, government, past action, or state of affairs that is illegal or illegitimate, but for all practical purposes, must be accepted.

De novo hearing: A new hearing or a hearing for the second time in which the judgment of the trial court is usually suspended, with the reviewing court determining the case as though it originated in the latter court.

Decerebrate (rigidity): Extension and rigidity of the limbs caused by brain stem or cerebellar injury.

Deep dyslexia: Deletion of grammatical morphemes with the presence of semantic paralexias, due to cerebral dysfunction. The loss of grapheme-to-phoneme processing is seen during reading.

Default judgment: A decision of the court against a defendant because of his or her failure to respond to a plaintiff's action.

Defendant: The person from whom relief or recovery is sought in an action or suit. In a criminal case, the accused.

Defense: That which is offered and alleged by the party against whom an action or suit is taken, such as the lawful or factual reasons against the plaintiff recovering or establishing that which he seeks.

Delirium: State of mental confusion characterized by clouding of consciousness, disorientation, restlessness, excitement, and often hallucinations.

Delirium tremens: Acute delirium associated with prolonged alcoholism; characterized by intense anxiety, tremors, and hallucinations.

Delusion: Firm belief opposed to reality but maintained in spite of strong evidence to the contrary.

Delusion of persecution: False belief that one is being mistreated or interfered with by one's enemies. Often found in schizophrenia.

Delusion system: An internally coherent, systematized pattern of delusions.

Dementia pugilistica: The "punch drunk" syndrome. Symptoms associated with repeated head trauma include dysarthria, tremor, seizures, and frontal signs. Memory and concentration problems are marked.

Dendrites: Receptor structures of a neuron that project out in branchlike fashion. Extensions of the cell body that are the receptive surfaces of the neuron.

Dendritic branching: The pattern and quantity of branching of dendrites.

Dendritic spines: Outgrowths along the dendrites of neurons.

Dendritic tree: The full arrangement of a single cell's dendrites.

Deoxyribonucleic acid (DNA): A nucleic acid present in the chromosomes of cells containing hereditary information.

Dependent personality: A personality disorder marked by lack of self-confidence and feelings of acute panic or discomfort at having to be alone.

Dependent variable: In an experiment, the behavior that is measured to determine whether changes in the independent variable affect the behavior being studied.

Depersonalization disorder: A dissociative neurotic disorder, usually occurring in adolescence, in which individuals lose their sense of self and feel unreal or displaced to a different location.

Depolarization: A reduction in membrane potential (the inner membrane surface becomes less negative in relation to the outer surface); this is caused by excitatory neural messages.

Deponent: One who testifies to the truth of certain facts; one who gives a written state deposition; a witness.

Deposition: A witness's testimony taken under oath outside of the courtroom in question-and-answer form, reduced to writing and authenticated. Intended to be used at a civil or criminal trial.

Depressive disorder: Neurotic reaction characterized by persistent dejection and discouragement.

Depressive neurosis: Depression of intermediate severity with little or no evidence of personality breakdown or loss of contact with reality.

Depressive stupor: Extreme degree of depression characterized by marked psychomotor underactivity.

Derepression: The mechanism through which regions of the DNA molecule that are repressed from transcription become unblocked. This process allows for the selection of genetic information that will be utilized by a particular cell.

Dermatome: A strip of skin innervated by a particular spinal root.

Desensitization: Therapeutic process by means of which reactions to traumatic experiences are reduced in intensity by repeatedly exposing the individual to them in mild form, either in reality or in fantasy.

Deterrence: The premise that punishment for criminal offenses will deter that criminal and others from future criminal acts.

Dexedrine: An amphetamine drug; a stimulant used to curb appetite or elevate mood.

Dextral: Refers to right-handedness. Opposed to sinistral, or left-handedness.

Dialysis dementia: Chronic, degenerative intellectual problems (aphasia, memory difficulties), seizures, and motor signs (e.g., facial grimacing) seen occasionally as the result of long-term dialysis. The pathogenesis is unknown although the accumulation of aluminum in the brain has been implicated.

Dialysis disequilibrium syndrome: A consequence of the dialysis procedure itself, encephalopathy characterized by development of intermittent slowing speech, stuttering, and word-finding problems. Progression of dyspraxia, memory loss, concentration problems, and (occasionally) psychosis. Shifts in sodium and potassium are associated with the disorder.

Diapedesis: The passage of blood cells through the unruptured walls of the blood vessels.

Diaschisis: Reduction of neuronal activity in brain sites outside the immediate perimeter of the lesion. Associated with acute, focal conditions.

Diastole: The rhythmic period of relaxation and dilatation of the heart, during which it fills with blood.

Diathesis: A predisposition or vulnerability toward developing a given disorder.

Diathesis-stress model: View of abnormal behavior as the result of stress operating on an individual with a biological, psychosocial, or sociocultural predisposition toward developing a specific disorder.

Dichotic: Refers to studies where different stimuli are simultaneously presented to both ears and eyes, or tactilely to the subject.

Dictum (pl. dicta): A statement, remark, or observation of the law made by the court, not necessarily relevant or essential to the outcome of a case.

Diencephalon: The central core of the brain, which, together with the telencephalon, forms the cerebrum. Consists of the thalamus, subthalamus, hypothalamus, and epithalamus. The posterior part of the forebrain; it includes the thalamus and hypothalamus.

Differential reinforcement of other behavior (DOR): Behavior modification technique for extinguishing undesirable behavior by reinforcing incompatible behaviors.

Digitalis: The dried leaves of purple foxglove; used in the treatment of certain cardiac disorders.

Dilantin: An anticonvulsant medication often used in controlling epileptic seizures.

Diopter: The unit of refracting power of a lens; denoting a lens whose principal focus is at a distance of 1 m.

Diploid: Having two sets of chromosomes, as normally found in the somatic cells of higher organisms.

Diplopia: Double vision, due to eye muscle imbalance, metabolic disturbances, or other causes.

Direct examination: The initial questioning or examination of a witness by the party who originally called the witness to testify.

Directed verdict: A verdict ordered by the judge when, as a matter of law, the judge rules that the party with the burden of proof has failed to present a prima facie case. The judge orders the jury to return a verdict for the opposing party.

Disconnection syndromes: Disrupted neuronal transmission through the white matter that cuts cortical pathways, thus disconnecting a cortical area from the rest of the brain. Corpus callosum disconnections are the most dramatic.

Discovery: A pretrial procedure by which one party can obtain vital facts and information material to the case to assist in preparation for the trial. The purpose of discovery is to make for a fair trial and to allow each party to know what documents and information the opponent possesses.

Disinhibition syndrome: Inability to stop actions or impulses once initiated. Often attributed to frontal system deficits in exerting an inhibitory effect on ongoing mental or behavioral processes.

Disintegration: Loss of organization or integration in any organized system.

Disorganized schizophrenia: Subtype representing most severe disintegration of personality and poor prognosis for recovery; characterized by marked incoherence, silly or inappropriate responses.

Dissociation: Separation or “isolation” of mental processes in such a way that they become split off from the main personality or lose their normal thought–affect relationships.

Dissociative disorder: Psychoneurotic disorder characterized by amnesia, fugue, somnambulism, or multiple personality.

Distal: An anatomical term meaning toward the periphery or toward the end of a limb.

Diurnal: Daily.

Divergence: A system of neural connections that allows one cell to send signals to many other cells.

DNA: *See* Deoxyribonucleic acid.

Docket sounding: A meeting between the judges and attorneys for the purpose of determining the schedule of cases for a specific period of time.

Dopamine (DA): A neurotransmitter produced mainly in the basal fore-brain and diencephalon that is active in the basal ganglia, the olfactory system, and limited parts of the cerebral cortex. For location of dopaminergic fibers.

Dopaminergic: Refers to cells that use dopamine as their synaptic transmitter.

Dorsal: An anatomical term meaning toward the back of the body or the top of the brain; opposite of ventral.

Dorsal root: Root at the back of the spinal cord.

Double-dissociation: Differential effects of lesions, allowing for comparison of both independent and dependent variables. Lesion x causes x but not y , whereas lesion y causes y but not x .

Double tracking: The simultaneous operation of two mental operations. Digits backward on the Wechsler Adult Intelligence Scale (WAIS), for example, calls for memory and reversing operations at the same time.

Down syndrome: A form of mental retardation associated with an extra chromosome.

Due process of law: The regular course of law as administered through courts of justice. In each particular case, refers to the legal proceedings in accordance with the rules and principles established in our legal system to enforce and protect private rights.

Duplex theory: A theory of pitch perception combining the place theory and volley theory. Volley theory operates for sounds from about 20 to 1000 Hz, and place theory operates for sounds above 1000 Hz.

Duplication of DNA: A process through which a cell duplicates (or replicates) its genetic information during mitosis.

Dura: First or outermost layer of the three layers of the meninges.

Durham rule: The “irresistible impulse” test of criminal responsibility deriving from a 1954 decision of the U.S. Court of Appeals. States that a defendant is not criminally responsible if he suffered from a mental disease or defect at the time the unlawful act was committed if it is determined beyond a reasonable doubt that the act was a product of the mental disease or defect.

Duty: A legal or moral obligation or responsibility to perform an act or service.

Dyad: A two-person group.

Dynamic formation: An integrated evaluation of a patient’s traits, attitudes, conflicts, and symptoms that attempts to explain the individual’s problem.

Dysarthria: Refers to speech disorders based on peripheral motor deficits. The quality of speech is affected, as in hyphenasalinity, breathy phonation, and stridor (flaccid paretic dysarthria), slow, low pitch, harsh and difficult phonation (spastic paretic dysarthria), or explosive speech (ataxic or cerebellar dysarthria).

Dysfluency: Difficulty in generating words.

Dysmetropia: Defects in the visual appreciation of object size discrimination. Also called “past-pointing phenomenon” (i.e., in finger-to-nose examination). Associated with cerebellar lesions.

Dysnomia: Word-finding disability. Shown by failure to correctly name objects or by choosing words that are “off center.” Associated with temporal lobe dysfunction.

Dysphagia: Difficulty in swallowing.

Dysthymic disorder: Moderately severe affective disorder characterized by extended periods of nonpsychotic depression and brief periods of normal moods.

Dystonia: Prolonged abnormal posture as a consequence of involuntary muscle tension. Often a side effect of neuroleptic medication.

E

Echopraxia: The mimicking of another’s motor movements. Indicates that extant motor problems are not due to lack of inactivity.

Ectoderm: The outer cellular layer of the developing fetus; this layer gives rise to the skin and to the nervous system.

Ectopic: Out of the normal place.

Edema: An abnormal accumulation of clear, watery fluid in the lymph spaces of the tissues. The swelling of tissue, especially in the brain, in response to brain injury.

Effusion: The escape of fluid from the blood vessels or the lymphatics into the tissues or a cavity.

Ego-dystonic homosexuality: Category of “mental disorder” in which the individual wishes to change his or her homosexual orientation.

Ejaculatory incompetence: A male’s inability to ejaculate.

Electric synapse: Junctional region where the presynaptic and postsynaptic membranes approach so closely that the nerve impulse can jump to the postsynaptic membrane without being translated into a chemical message.

Electroencephalography (EEG): The recording and study of gross electrical activity of the brain recorded from large electrodes placed on the scalp.

Electrolyte: Any substance that, in solution, conducts an electric current.

Embolism: Obstruction, or occlusion, of a vessel by a transported clot, a mass of bacteria, or other foreign material.

Emotional inoculation: Therapeutic procedures designed to prepare persons who face stressful situations, such as surgery, by providing the person with adaptive techniques.

Empiricism: The philosophical view based on the belief that knowledge is acquired through experience and observation.

Empyema: The presence of pus in any cavity.

Encephale isole: An animal in which the brain stem is separated from the spinal cord by a cut below the medulla. Contrast with cerveau isole.

Encephalitis: A generalized viral infection of the brain’s neurons or glial cell bodies.

Encephalomalacia: Cerebral tissue softening.

Encephalopathy: Brain degeneration.

Encoding: A process of memory formation in which the information entering sensory channels is passed into short-term memory.

Endocrine: Refers to glands that secrete products into the bloodstream to act on distant targets; opposite of exocrine.

Endorphins: Neurotransmitters that have been called the body's own narcotics.

Endothelial cells: The tightly fitting cells that make up the walls of the capillaries in the brain.

Enhancement: Independent of behavior, the increase in activity of some posterior parietal neurons by motivationally important visual stimuli. Responses to those stimuli are enhanced.

Enjoin: To command or require that a person perform or desist from a certain act.

Enuresis: Involuntary passage of urine after the age of 3 years.

Enzyme: A protein that catalyzes a biochemical reaction.

Epiphratic: Sensory experiences that can be located on the body of the organism and are of brief duration (e.g., a sharp pain in the foot). Opposed to protocritic.

Epinephrine: A compound that acts both as a hormone (secreted by the adrenal medulla) and as a neurotransmitter; also called adrenaline.

Episodic dyscontrol syndrome: Totally unprovoked violence associated with an aura, consisting of rising anxiety, headaches, illusions, numbness, drowsiness, and hyperacusis. The attack lasts 15 minutes to 2 hours and is very violent, often directed toward property or persons. May be due to temporal-limbic structure dysfunction. Associated features include hypersensitivity to alcohol, multiple traffic accidents, and sexual impulsiveness, the last rising to the level of forensic concern.

Episodic memory: Recall for events in one's life and experiences. It is therefore unique and anchored to distinct points in time and space.

Equilibrium potential: The state in which the tendency of ions to flow from regions of high concentration is exactly balanced by the opposing potential differences across the membrane.

Equipotentiality: Notion that a lesion anywhere on the cortex will produce equivalent deficits. This holistic approach was espoused by Lashley.

Equity: A system of law and courts administered according to fairness and justness. Based on a system that originated in England as an alternative to common law.

Estrogen: A hormone produced by female gonads.

Estrus: The period during which female animals are sexually receptive.

Eustress: Positive stress.

Evagination: A protrusion of some part of an organ.

Event-related potentials: Gross electrical potential changes in the brain that are elicited by discrete sensory or motor events.

Excitatory postsynaptic potentials (EPSPs): Depolarizing potentials in the postsynaptic neuron caused by excitatory presynaptic impulses. These potentials may summate to trigger a nerve impulse in the postsynaptic cell.

Exclusionary rule: The rule that defines whether evidence is admissible in a trial. In cases where evidence has been illegally obtained, it must be removed from consideration by the fact finders.

Exculpatory: Clearing or excusing a party from alleged fault or guilt.

Exemplary damages: A monetary award in an amount over and above what is required to compensate a plaintiff for a loss in a case where the wrong was aggravated by violence, malice, or fraud on the part of the defendant.

Exhaustion and disintegration: The third and final phase in the general adaptation syndrome, in which the organism is no longer able to resist continuing stress; at the biological level, may result in death.

Exner's area: Formally seen as a "frontal writing center," located at the base of the second frontal convolution. Lesions in this area produce agraphia.

Exocrine: Refers to glands that secrete their products through ducts to the site of action; opposite of endocrine.

Exophthalmos: A protrusion, or prominence, of the eyeball.

Experimental research: A research approach in which the experimenter manipulates the independent variable, controls outside conditions, and determines the effect on a dependent variable to test for causal linkages.

Expert witness: A witness who has special knowledge in a field, obtained from education or personal experience.

External validity: The degree to which experimental findings can reasonably be generalized to nonlaboratory situations.

Extinction: One of a stimulus pair simultaneously presented to different parts of the body visual fields, etc., is not perceived.

Extinction to double simultaneous stimulation: Failure to report the stimulus presented to the contralateral side of a lesion upon bilateral simultaneous stimulation.

Extracerebral: Extrinsic to or outside of the brain hemispheres, for example, between the skull and the brain on one of the three layers of meninges.

Extrapunitive: Characterized by a tendency to evaluate the source of frustrations as external and to direct hostility outward.

Extrapyramidal system: A motor system that includes the basal ganglia and some related brain stem structures.

Extravasation: The act of escaping from a vessel into the tissues; said of blood, lymph, or serum.

Extrinsic: Originating outside of the part where it is found or upon which it acts.

F

5HT: *See* Serotonin

Fabrication: Relating imaginary events as if they were true without intent to deceive; confabulation.

Face–hand test: Touching the face simultaneously with another body part, particularly same-sided. Suppression or displacement of the more peripheral stimulus indicates possible parietal lobe dysfunction.

Facial nerve: A cranial nerve that innervates facial musculature and some sensory receptors.

Fasciculation: Localized contraction of muscle fibers, or an incoordinated contraction of skeletal muscle in which the fibers of one motor unit contract.

Feature detector model: A model of visual pattern analysis in terms of linear and angular components of the stimulus array. Contrast with spatial frequency filter model.

Felony: A crime of a more serious or harmful nature than a misdemeanor. Under federal law and many state statutes, any offense punishable by imprisonment for a term of more than 1 year or by death.

Fetal alcohol syndrome: Observed pattern in infants of alcoholic mothers in which there is a characteristic facial or limb irregularity, low body weight, and behavioral abnormality.

Fiduciary: A person having the duty to act in a relationship of high trust and confidence for another's benefit in the capacity of trustee, executor, or administrator.

Field properties: Characteristics of the environment surrounding a living system.

Finger agnosia: Inability to identify the fingers of one's own hand, or those of another person, due to brain damage.

Fistula: A pathologic, or abnormal, passage leading from an abscess cavity or a hollow organ to the surface, or from one organ to another.

Fixed action patterns: Complex preprogrammed species-specific behaviors triggered by particular stimuli and carried out without sensory feedback.

Flaccid: Relaxed, flabby, soft.

Flashback: The recurrence of a drug experience, usually in a negative manner, without further ingestion of the drug.

Flatus: Gas or air in the stomach or the intestine; commonly used to denote passage of gas by rectum.

Flexion reflex: Abrupt withdrawal of a limb in response to intense stimulation of the foot.

Flooding: Anxiety-eliciting technique involving placing the client in a real-life, anxiety-arousing situation.

Fluent aphasia: Speech difficulty with incomprehension, jargon speech, and other signs such as lack of awareness. Often associated with posterior lesions. Nonfluent aphasia is associated with anterior lesions and almost always involves expressive speech deficits.

Folia: Folds or convolutions of the cerebellar cortex.

Folie a deux: A psychotic interpersonal relationship involving two people; e.g., husband and wife both become psychotic with similar or complementary symptomatology.

Follicle-stimulating hormone (FSH): A tropic hormone released by the anterior pituitary that controls the production of estrogen and progesterone.

Forcible rape: An act of violence in which sexual relations are forced upon an unwilling partner who is over the age of 18.

Forebrain: The frontal division of the neural tube that contains the cerebral hemispheres, the thalamus, and the hypothalamus. Also called the prosencephalon.

Forensic psychiatry: Branch of psychiatry dealing with legal problems relating to mental disorders.

Fornix: A fiber tract that runs from the hippocampus to the mammillary body.

Fovea: A cup-shaped depression or pit.

Fovea centralis: Small central pit in the retina, packed with cones, where vision is sharpest and color accuracy most developed.

Frontal amnesia: Difficulty in switching from one set of memory traces to another in the face of intact operating memory. “Forgetting to recall,” as in disregarding instructions, is an illustration.

Frontal gait disturbance: See Magnetic apraxia and Utilization behavior.

Frontal inattention: A contralateral visual field defect caused by damage to particular frontal sites (arcuate sulcus in monkeys). Associated features may include conjugate deviation of the eyes and forced circling, the latter in the direction of the lesion.

Frontal psychosurgery: Includes leukotomies aimed at severing frontal-thalamic connections, orbital undercutting, for example, by placement of radioactive yttrium pellets in the orbital tissues, cingulotomy, stereotactic destruction of focal sites, and topectomy, ablation of selected frontal areas.

Frontal “release” signs: These are primitive reflexes that long have been considered frontal signs. The grasp reflex is associated with midline frontal pathology. Frontal system problems are indicated by rooting, sucking, and snout reflexes indicating a brain stem diencephalic lesion.

Frye test: A test emphasizing the subject of an expert witness’s testimony must conform to a generally accepted explanatory theory. Named after the case in which the determination was made.

Fugue: A neurotic dissociative disorder that entails a loss of memory accompanied by actual physical flight from one’s present life situation to a new environment or less-threatening former one.

Functional psychoses: Severe mental disorders attributed primarily to psychological stress.

Fundus: The bottom of a sac or hollow organ; the farthest removed from the opening.

Future shock: A condition brought about when social change proceeds so rapidly that the individual cannot cope with it adequately.

G

Gambling: Wagering on games or events in which chance largely determines the outcome.

Gamma efferents: Motor neurons by means of which the central nervous system controls muscle spindle sensitivity.

Ganglion: A collection of nerve cell bodies. Also called a nucleus.

Ganglion cells: Cells in the retina whose axons form the optic nerve.

Gangrene: A form of necrosis combined with putrefaction; death of the tissue.

Gel: A colloidal system comprising a solid and a liquid phase that exists as a solid or semisolid mass; a jelly or solid or semisolid phase.

Gelastic epilepsy: Seizures where laughter is the predominant ictal behavior.

Gene: An ultimate, ultramicroscopic, biologic unit of heredity; self-reproducing; located in a definite position on a particular chromosome.

General adaptation syndrome: Reaction of the individual to excessive stress; consists of the alarm reaction, the stage of resistance, and the stage of exhaustion.

General paresis: A progressive mental deterioration due to syphilitic invasion of the central nervous system. Changes include deterioration of the entire range of mental

Gerstmann's syndrome: The symptom cluster of ocalculia, agraphia, left-right disorientation, and finger agnosia. Traditionally considered to involve the parietoccipital region of the brain.

Glabellar tap sign: The subject is tapped lightly just above and between the eyebrows to see whether blinking will normally and quickly habituate. Patients with Parkinson's disease will continue to blink with each tap.

Glial cells: Nonneural brain cells that provide structural, nutritional, and other support to the brain. Also called glia or neuroglia.

Glioblastoma (multiforma): A neoplasm arising from the glial cells, characterized by a high degree of lethality and malignancy.

Gliomas: Brain tumors resulting from the aberrant production of glial cells.

Global alexia: Inability to read letters or words.

Global aphasia: Severe comprehension and articulation deficits associated with a large lesion of the entire perisylvian area of the frontal, temporal, and parietal lobes. Prognosis is grim.

Global stereopsis: Depth perception in the presence of ambiguous stimulus forms. Presumed to be mediated by right hemisphere and is differentiated from a stereoacuity.

Glossopharyngeal nerve: A cranial nerve that serves taste receptors in the tongue.

Glucocorticoids: Hormones released by the adrenal cortex that affect carbohydrate metabolism.

Golgi tendon organs: Receptors located in tendons that send impulses to the central nervous system when a muscle contracts.

Gonadotropin-releasing hormone (GnRH): A hypothalamic hormone that controls release of luteinizing hormone (or interstitial-cell-stimulating hormone). Also called luteinizing-hormone-releasing hormone.

Graded potentials: Potentials that can vary continuously in size; also called local potentials; contrast with all-or-none potentials.

Gradient: An ascending or descending slope. In the body, gradients are determined by the difference in concentration or electric charges across a semipermeable membrane.

Grand mal seizures: A type of generalized epileptic seizure that involves nerve cells firing in high-frequency bursts. These seizures cause loss of consciousness and sudden muscle contraction.

Grandfather clause: Certain legal provisions permitting those engaged in a business or profession before the passage of an act regulating them to receive a license, power, or privilege without meeting the criteria established for those new to the field.

Grievance: A denial of legal right or an injury, injustice, or wrong that is grounds for a complaint due to being unjust, discriminatory, and oppressive.

Growth hormone: A tropic hormone secreted by the anterior pituitary that influences the growth of cells and tissues. Also called somatotropic hormone (STH).

Guardian *ad litem*: A person appointed by the court to represent the interests of a minor or an incompetent person in a litigation and to act on the person's behalf until the conclusion of the case.

Guilt: Feelings of culpability arising from behavior or desires contrary to one's ethical self-devaluation and apprehension growing out of fears of punishment.

Gyri: The ridged or raised portions of a convoluted brain surface. Contrast with sulci.

H

Habeas corpus: "You have the body." A writ or order commanding the authority that is detaining an individual to produce the body of the detainee before the court to determine whether the detainment is lawful.

Health psychology: Subspecialty within the behavioral medicine approach that deals with psychology's contributions to diagnosis, treatment, and prevention of behaviorally caused physical illnesses.

Hearsay: A statement made during a trial or hearing that is not based on the personal, firsthand knowledge of the witness.

Hearsay rule: The regulation making a witness's statement inadmissible if it is not based on the witness's personal knowledge.

Heat of vaporization: The heat energy required to convert 1 g of liquid into a vapor without a change in temperature of the substance being vaporized.

Hebephrenic schizophrenia: Type of schizophrenia characterized by severe personality decompensation or disintegration.

Hematoma: An accumulation of blood within the meninges of the brain. Most often caused by head trauma.

Hematosiis: The arrest of bleeding; the checking of the flow of blood through any part of a vessel.

Hematuria: The presence of blood in the urine.

Hemiparesis: Weakness on one side of the body.

Hemiplegia: Weakness or paralysis of one side of the body.

Hemispatial neglect: Neglect of the hemisphere contralateral to a lesion. Also termed visuospatial agnosia or neglect, unilateral spatial neglect, or hemispatial agnosia.

High-risk: Individuals showing great vulnerability to physical or mental disorders.

Hilus: A depression or pit at that part of an organ where the vessels and nerves enter or leave.

Hippocampus: Actively concerned with memory consolidation functions, located at anterior temporal lobe.

Histrionic personality: Personality pattern characterized by excitability, emotional instability, and self-dramatization.

Holistic: A systematic approach to science involving the study of the whole or total configuration; the view of human beings as unified psychobiological organisms inextricably immersed in a physical and sociocultural environment.

Homeostasis: Tendency of organisms to maintain conditions making possible a constant level of physiological functioning.

Homologous: Corresponding; having similar relations.

Homonymous field cuts: Loss of vision in the same part of both visual fields.

Homonymous hemianopsia: Loss of one half of the visual field in each eye, right or left sided (e.g., right temporal/left nasal; right nasal/left temporal).

Huntington's disease: A progressive, hereditary, dementing condition that affects the basal ganglia with atrophy of the frontal lobes and corpus callosum. Involuntary and spasmodic movements are associated features, along with declining cognitive and personality/social skills.

Hyaluronidase: An enzyme causing breakdown of hyaluronic acid in protective polysaccharide barriers, promoting invasion of cells and tissues by the invading agent; it is a spreading factor.

Hyperacusis: The perception of sounds as abnormally loud.

Hypergraphia: Overwriting, as when too many words are written in response to task demands.

Hyperplasia: The abnormal multiplication, or increase, in the number of normal cells in normal arrangement in a tissue.

Hypertrophy: The morbid enlargement, or overgrowth, of an organ or part, resulting from an increase in size of its constituent cells.

Hypnosis: Trancelike mental state induced in a cooperative subject by suggestion.

Hypnotherapy: Use of hypnosis in psychotherapy.

Hypnotic regression: Process by which a subject is brought to relive, under hypnosis, early forgotten or repressed experiences.

Hypochondriacal delusions: Delusions concerning various horrible disease conditions, such as the belief that one's brain is turning to dust.

Hypochondriasis: Condition dominated by preoccupation with bodily processes and fear of presumed diseases.

Hypophonia: Lowered voice volume. Contrasted to aphonia, or total lack of voice. The most common cause of both disorders is laryngitis.

Hypothalamus: Involved in homeostatic, motivational activities such as sexual activity, eating, drinking, and emotions, this structure is located in the limbic system, dorsal to the thalamus.

Hypothermia: Low temperature; especially a state of low body temperature induced for the purpose of decreasing metabolic activities and need for oxygen.

Hypotonia: The state of muscles tiring easily. Associated with cerebellar lesions.

Hypoxia: Refers to insufficient blood oxygen to the brain. Contrasted to anoxia, which refers to a total lack of blood oxygen to brain structures.

Hysterical amnesia: Loss of memory for emotional/psychological reasons without a known organic basis.

Hysterical disorder: Disorder characterized by involuntary psychogenic dysfunction of motor, sensory, or visceral processes.

I

Iconic memory: A very brief type of memory that stores the sensory impression of a scene.

Ideographic methodology: A method of study emphasizing the individual case and the uniqueness of each personality.

Ideomotor apraxia: Simple execution of motor responses (e.g., hitchhiking sign, salute, whistling) is impaired or absent in the presence of intact comprehension. Implies deficits in planning and initiation. Associated with left hemisphere lesions.

Idiopathic epilepsy: A seizure disorder of unknown origin. Opposed to symptomatic epilepsy whose cause is known.

Illusion: Misinterpretation of sensory data; false perception.

Impeachment: A criminal proceeding against a public official before a quasi-political court. In regard to the testimony of a witness, to question the veracity of the evidence offered.

In bank (*en banc*): “In the bench.” Refers to a court session in which the entire membership of the court participates in making a decision instead of the regular quorum or one judge and jury.

In camera: In chambers; in private. The hearing of a case before a judge in his private chambers, when all spectators are excluded from the courtroom, or when the judge performs a judicial act while the court is not in session.

In loco parentis: In place of a parent. A party charged to legally act in behalf of the parents.

In re: In the matter of; concerning or regarding. The usual method of assigning a title to a case in which there are no adversary parties.

***In situ* research:** Research in which real-life social situations are the emphasis of study.

In vivo: Taking place in a real-life situation as opposed to the therapeutic or laboratory setting.

Inattention: Decreased/absent awareness of events occurring on the side of the body contralateral to the hemispheric lesion.

Incompetency: Lacking the physical, intellectual, or moral capacity or qualification to perform a required duty.

Independent variable: The variable in an experiment that is controlled or manipulated by the experimenter.

Indifference reaction: Denial, unawareness, or minimizing psychological/neuropsychological deficits, traditionally associated with right hemisphere lesions. Inappropriate elevated affect may be present.

Infarct: Impoverished or dead brain tissue associated with vascular occlusions.

Inferior colliculus: The auditory center in the midbrain; it receives input from the brain stem auditory nuclei and sends output to the medial geniculate nucleus.

Inflammation: A series of reactions produced in the tissues by an irritant; marked by an afflux of blood with exudation of plasma and leukocytes.

Informed consent: A person's agreement to the occurrence of a specified event based on a full disclosure of facts needed to make an intelligent decision.

Infra: Below, under, following; the opposite of *supra*.

Infundibulum: A funnel-shaped structure or passage. The stalk of the pituitary gland.

Inhibitory postsynaptic potentials (IPSPs): Hyperpolarizing potentials in the postsynaptic neuron caused by inhibitory connections. These potentials decrease the probability that the postsynaptic neuron will fire a nerve impulse.

Innervation ratio: The ratio expressing the number of muscle fibers innervated by a single motor axon. The fewer muscle fibers an axon innervates (the lower the ratio) the finer the control of movement.

Inquisitorial system: A system in which the judge, as the primary figure in a trial, conducts his or her own investigation. The judge generally maintains more control over the proceedings than in the adversarial system.

Insanity: A social or legal term indicating a condition in which a person is unfit and lacks legal responsibility or capacity due to mental illness. As stated in the American Law Institute Penal Code, "A person is not responsible for criminal conduct if at the time of such conduct as a result of mental disease or defect he lacks substantial capacity either to appreciate the criminality or wrongfulness of his conduct or to conform his conduct to the requirements of the law."

Insanity defense: "Innocent by reason of insanity" plea used as a legal defense in criminal trials.

Instrumental use of empirical data: The application of concrete social science information of concepts to a case.

Integration: Organization of parts (psychological, biological functions) to make a functional whole.

Intent: A state of mind (inferred from the facts or from a person's actions) showing purpose, design, or resolve to act in a certain manner.

Intention tremor: Also called kinetic tremor, this anomaly occurs at the end of a movement. Contrasted to “rest” tremor, which occurs when no movement is present. A tremor that occurs only during a voluntary movement, e.g., when the person reaches out to grasp an object.

Interictal: Refers to behaviors/events between the time seizures occur. Adversive personality traits (e.g., irritability, obsessional traits) are associated features.

Intermediate coup lesions: Scattered areas of focal tissue damage in line with the point of trauma impact (coup) and possible terminal point of the damage (contrecoup).

Intermediate-term memory: A form of memory lasting longer than short-term memory, and requiring no rehearsal, but not lasting as long as long-term memory.

Internal carotid artery: See Common carotid artery.

Internal validity: A measure of the lack of confounding variables.

Interstitial policy making: Laws that may be “made” by judges when the issues in a case fall “between the gaps” — interstices — of previous decisions.

Intracerebral: Intrinsic to or inside of the brain hemispheres, usually referring to brain dysfunction caused by neoplasms or cardiovascular accidents.

Intracranial steal: Complicating the finding of an arteriovenous malformation (AVM) location, here blood is shunted away from normal brain tissue to the AVM site. Thus, the unaffected area may show evidences of neuropsychological deficit.

Intravascular: Within a vessel or vessels.

Intropunitive: Responding to frustration by tending to blame oneself.

Invagination: The pushing of the wall of a cavity into the cavity.

Involution: The return of an enlarged organ to normal size; retrograde changes.

Ion: An electrically charged atom or group of atoms formed by the loss or gain of electrons.

Ipsilateral: Same side; homolateral; opposed to contralateral (opposite side), bilateral (both sides), unilateral (one side).

Ischemia: Cutoff of blood flow to an area of the brain or body organ.

Ischemic infarction: A disruption of blood flow (infarction) creating dead or damaged tissue (infarct), resulting more from impaired or absent blood flow rather than from insufficient nutrients in the blood.

Isotope: An element that has the same atomic number as another but a different atomic weight. Radioactive isotopes, used clinically, usually refer to elements rendered radioactive by artificial means.

J

Jargon aphasia: A form of paraphasias that has no meaning to those who hear the sounds.

Judicial notice: The act by which a court, during a trial or while framing its decision, recognizes the existence and truth of certain facts that judges and jurors may take into consideration and act upon without proof because the facts are already known to them.

Jurisdiction: The authority and power by which courts and judicial officers hear and decide cases; the geographic area in which a court has authority.

Just-world hypothesis: The hypothesis stating that the world is fair and that victims deserve what happened to them and, therefore, do not deserve help.

Juvenile courts: A court system, established in the late 19th century, having special jurisdiction over delinquent, dependent, and neglected minors. Set up to treat youthful offenders separately from adults. The court acts in a parental, protective role.

Juvenile delinquency: Legally prohibited behavior, such as disobedient, indecent, or immoral conduct, committed by minors.

K

Ketosis: The condition marked by excessive production of ketone bodies in the body.

Kinesthetic: Pertaining to muscle sense, or to the sense by which muscular movement, weight, and position are perceived.

Kinesthetic afferentiation: Gathering data concerning one's own current muscle tone, body position, oral status, etc. Considered a function of the posterior association areas.

Kinetic afferentiation: Integration of input from parietal–occipital tertiary zones, basal ganglia, and premotor areas producing sequential and integrated actions. Depends initially on kinesthetic afferentiation.

Kinetic apraxia: Disorganized transition of single movements (*see also* Apraxia, Echopraxia, Apraxia of speech). Associated with lesions in basal ganglia–premotor areas. Subordination of movements to intentions is impaired.

Kluver–Bucy syndrome: A condition manifested by hyperorality, hypersexuality, labile emotions, and inability to form new memories. Associated with temporal lobe or limbic system lesions.

Korsakoff’s psychosis: A progressive dementia considered subcortical in focus and associated with a nutritional deficiency of vitamin B₁ (thiamine). The condition is considered secondary to alcohol abuse. Memory impairments are paramount with associated confabulation, blandness, and passivity. Hippocampus lesions have been associated with this condition. A memory disorder, related to a thiamine deficiency, generally associated chronic alcoholism.

Kuru: A slow virus of the brain, which produces trembling and, eventually, paralysis of the limbs.

L

Labeled lines: A view of stimulus coding stating that particular nerve cells are intrinsically labeled for particular sensory experiences such as cold, touch, pain, and so forth.

Labile memory: An early state of memory formation during which formation of a memory can be easily disrupted by conditions that influence brain activity.

Lacunar state: Multiple but small infarctions in the subcortical regions leaving lacunae. One of the end stages of hypertensive cerebrovascular conditions.

Laminar (form of organization): The horizontal layering of cells found in some brain regions.

Lateral: An anatomical term meaning toward the side; opposite of medial.

Lateral geniculate nucleus: Part of the thalamus that receives information from the optic tract and sends it to visual areas in the occipital cortex.

Lateral hypothalamus (LH): A hypothalamic region involved in facilitating eating.

Lateral inhibition: A phenomenon produced by interconnected neurons that inhibit their neighbors, producing contrast at the edges of the stimulus.

Law of effect: Principle that responses that have rewarding consequences are strengthened and those that have aversive consequences are weakened or eliminated.

Leading question: A question posed by a trial lawyer that is improper because it suggests the desired answer to a witness.

Lecithin: A monoaminomonophosphatide found in animal tissues, especially nerve tissue, semen, egg yolk, and in smaller amounts in bile and blood.

Legal fiction: An assumption of fact or a situation contrived by the law to decide a legal question.

Lethality scale: Criteria used to assess the likelihood of an individual's committing suicide.

Leukemia: A disease of the blood marked by persistent leukocytosis, associated with changes in the spleen and the bone marrow, or in the lymphatic nodes.

Level of aspiration: Standard by which the individual judges success or failure of his behavior.

Lexical agraphia: Impaired ability to spell irregular or unknown words with an intact ability to spell regular words. Associated with lesions in the parieto-occipital lobule.

Limb-kinetic apraxia: Complex/serial movement impairment in the presence of intact simple, repetitive movement. Brodman areas 4 and 6 are implicated in almost all cases.

Limbic system: Interconnected and primarily subcortical structures that are involved in emotional responses and memory.

Literal paraphasia: Production of off-target sounds with effortless articulation. Associated with postrolandic lesions.

Litigant: One who is party to a lawsuit.

Local circuit neurons: Small neurons that make contact only with neurons that are within the same functional unit.

Localization of function: The concept that specific brain regions are responsible for various types of experience, behavior, and psychological processes.

Locked-in syndrome: Also known as deafferentiation; due to bilateral pontine lesions and characterized by aphonia and quadriplegia. The patient is aware of his or her surroundings.

Logical positivism: A philosophy that emphasizes the creation of knowledge and its verification through observation and experiment.

Long-term memory: An enduring form of memory lasting for weeks, months, or years.

Lumbar: Referring to the lower part of the spinal cord or back.

Lumen: The space in the interior of a tubular structure such as an artery or the intestine.

Luteinizing hormone (LH): A tropic hormone released by the anterior pituitary that influences the hormonal activities of the gonads. In males, this hormone is called interstitial-cell-stimulating hormone (ICSH).

Luteinizing hormone-releasing hormone: *See* Gonadotropin-releasing hormone.

M

M'Naughten rule: In most jurisdictions, the test applied for the defense of insanity. Under this test, an accused is not criminally responsible if he or she was suffering from a mental disease or defect at the time of committing the act and does not understand the nature and quality of the act or that what he or she was doing was wrong. To be considered "sane" and therefore legally responsible for the act committed, the defendant must know and understand the nature and quality of the act and have been able to distinguish between right and wrong at the time the offense was committed.

Macula: A spot.

Magnetic apraxia: Compulsive exploration of the immediate environment in the usual presence of intact comprehension skills. Forced hand grasping with difficulty "letting go" is an example. Prefrontal, mesial, and contralateral lesions are implicated.

Major affective disorders: Category of affective disorders in which a biological defect or other aberration renders a person liable to experience episodes of a more or less severe affective disorder.

Major depression (unipolar disorder): A severe affective disorder in which only depressive episodes occur.

Malaise: A feeling of general discomfort or uneasiness; an out-of-sorts feeling, often the first indication of an infection.

Malfesance: The commission of an unlawful, wrongful act; any wrongful conduct that affects, interrupts, or interferes with the performance of official duties.

Malleus Malleficarum: Infamous handbook prepared by two monks dealing with the “diagnosis” and “treatment” of witches and witchcraft.

Mammillary bodies: Paired nuclei at the base of the brain slightly posterior to the pituitary stalk.

Mandamus: A writ or order issued from a superior court to a lower court or to a private or municipal corporation commanding that a specified act be performed. Used when other judicial remedies have failed.

Manic–depressive psychoses: Older term denoting a group of psychotic disorders characterized by prolonged periods of excitement and overactivity (mania) or by periods of depression and underactivity (depression) or by alternation of the two.

Masked fascies: An unblinking, bland, expressionless stare.

Masochism: Sexual variant in which an individual obtains sexual gratification through being subjected to pain.

Mass action: Proposed by Lashley, this notion stated that the degree of deficit shown by a lesion was a function of how much cortical tissue was destroyed.

Meatus: A passage, or channel, especially the external opening of a canal.

Medial: An anatomical term meaning toward the middle; opposite of lateral.

Medial geniculate nucleus: A nucleus in the thalamus that receives input from the inferior colliculus and sends output to the auditory cortex.

Mediation: A way of resolving disputes by using a third party to intervene between contending parties to bring them to a satisfactory settlement without resorting to litigation.

Medulla: The lowest part of the brain, also called myelencephalon.

Melokinetic apraxia: Deficit in speech, skill, and coordination of movement, usually confined to a small muscle group. Unilateral and contralateral to lesion in premotor area.

Memory traces: Persistent changes in the brain that reflect the storage of memory.

Meninges: Thin membranes on the brain dura mater, pia mater, and arachnoid, which provide a venous drainage system.

Meningioma: Neoplastic growth arising from the meninges.

Meningitis: Inflammatory disease of the meninges with associated signs of fever, headache, and stiff neck.

Mens rea: A guilty mind; having a guilty or wrongful purpose or criminal intent.

Mental anguish: A compensable injury including all forms of mental, as opposed to physical, injury. In connection with a physical injury, includes the mental sensation of pain and accompanying feelings of distress, grief, anxiety, or fright.

Mesencephalon: The midbrain.

Mesmerism: Theories of “animal magnetism” (hypnosis) formulated by Anton Mesmer.

Messenger RNA (mRNA): A strand of RNA that carries the code of a section of a strand of DNA to the cytoplasm.

Metabolism: The sum of the chemical changes whereby the function of nutrition is affected; consists of anabolism, or the constructive and assimilative changes, and catabolism, or the destructive and retrograde changes.

Metamorphosias: Visual illusions where objects are distorted in size, shape, distance, and color. May occur with lesions anywhere in visual system, with substance intoxication, or in conjunction with psychological disorder.

Metencephalon: A subdivision of the hindbrain that includes the cerebellum and the pons.

Meter: A measure of length, 100 cm, the equivalent of 39.371 inches.

Methadone: An orally administered narcotic that replaces the craving for heroin and weans the individual from heroin addiction.

Microglia: Extremely small glial cells that remove cellular debris from injured or dead cells.

Microgram: One one-millionth of a gram, or 1/1000 of a milligram.

Micron: One one-millionth of a meter or 1/1000 of a millimeter.

Microtubules: Hollow cylindrical structures in axons that are involved in exoplasmic streaming.

Midbrain: The middle division of the brain. Also called mesencephalon.

Middle cerebral artery (MCA): The MCA and its branches are one of the two major vascular networks of the frontal lobes. The lateral convexity is fed by anterior branches of the MCA.

Milieu: The immediate environment, physical or social or both; sometimes used to include the internal state of an organism.

Millimeter: One one-thousandth of a meter; about 1/25 inch.

Misdemeanor: An offense less serious than a felony, typically punishable by a fine or short-term incarceration.

Misfeasance: The improper performance of an act a person has the right or duty to perform.

Misoplegia: A type of unilateral inattention where the lesioned individual, usually hemiplegic, exhibits a strong dislike for the affected limbs or portions of the body. Intense hatred resulting in self-mutilation may be expressed.

Mistrial: A trial that is terminated before its normal conclusion and declared invalid prior to the returning of a verdict. A judge may declare a mistrial due to an extraordinary event (e.g., death of a juror), for a fundamental, prejudicial error that cannot be corrected by instructions to the jury, or because of the jury's inability to reach a verdict (hung jury). In a criminal case, may prevent a retrial under the doctrine of double jeopardy.

Mitochondria: Organelles in the cytoplasm of cells; contain enzymes that make possible the reactions whereby energy is liberated from food and stored temporarily in the chemical bonds of ATP.

Mitosis: The process of division of somatic cells that involves duplication of DNA.

Model psychoses: Psychotic-like states produced by various hallucinogenic drugs such as LSD.

Modulation of formation of memory: Facilitation or inhibition of memory formation by factors other than those directly involved in memory formation. Also called modulation of memory storage processes.

Modus operandi: Manner or mode of behavior; a criminal's typical pattern of performing crimes.

Monopolar neurons: Nerve cells with a single branch leaving the cell body, which then extends in two directions — one end is the receptive pole, the other end the output zone.

Moot: A subject for debate; unsettled; undecided. A case is “moot” when a determination of a matter is sought that, when rendered, has no practical effect on the matter under dispute.

Moral nihilism: Doctrine that denies any objective or real ground for moral beliefs, and holds that the individual is not bound by obligation to others or society.

Moral therapy: Therapy based on provision of kindness, understanding, and favorable environment; prevalent during early part of the 19th century.

Motion: An application made to a court or judge, orally or in writing, requesting that a rule or order be given in favor of the applicant.

Motivational selectivity: Influence of motives on perception and other cognitive processes.

Motive pattern: Relatively consistent cluster of motives centered around particular strivings and goals.

Motoneurons: Nerve cells in the spinal cord that transmit motor messages from the spinal cord to muscles.

Motor aprosody: Inability to sing or to change pitch or voice tempo with intact ability to recognize melodies.

Motor cortex: A region of cerebral cortex that sends impulses to motoneurons.

Motor extinction: Increased contralateral limb akinesia when simultaneously using ipsilateral extremities, due to cerebral dysfunction.

Motor impersistence: Inability to maintain an initiated, voluntary (motor) behavior chain. Implies distraction due to interference factors. Common impersistences include lack of tongue protrusion, eyelid closure, mouth opening, breath holding, hand-grip pressure, and central gaze.

Motor neuron: Spinal cord neurons involved in movement that extend to effector muscle sites.

Motor unit: A single motor axon and all the muscle fibers it innervates.

Multi-infarct dementia: A vascular disease that has a progressive, stepwise course caused by multiple strokes and arteriosclerosis. Cognitive symptoms usually precede personality problems. Motor anomalies are distinctive of this condition and reflect subcortical involvement.

Multiple personality: Type of dissociative disorder characterized by the development of two or more relatively independent personality systems in the same individual.

Multiple sclerosis (MS): A degenerative condition involving deterioration of the myelin sheath on nerve fibers. This disease therefore affects primarily the white matter. Multiple cognitive and emotional deficits are noted. The rate of progression of MS is extremely variable.

Multipolar neurons: Nerve cells with many dendrites and a single axon.

Muscarinic: A cholinergic receptor (one responsive to acetylcholine) that mediates chiefly the inhibitory activities of acetylcholine.

Myasthenia gravis: A neurological disease characterized by easy fatigability and weakness of muscles.

Myelencephalon: A subdivision of the hindbrain; the medulla.

Myelin: The fatty insulation around an axon, formed by accessory cells; this improves the speed of conduction of nerve impulses.

Myelin sheath: A thin cover on the axons of many neurons.

Myelination: The process of formation of myelin.

N

Narcolepsy: A disorder involving frequent, intense episodes of sleep, which last from 5 to 30 minutes, and can occur anytime during the usual waking hours.

Narcosis: Stupor, or unconsciousness, produced by some narcotic drug.

Narcotherapy (narcoanalysis, narcosynthesis): Psychotherapy carried on while the patient is in a sleeplike state of relaxation induced by a drug such as sodium pentothal.

Narcotic drug: Drug such as morphine, which leads to physiological dependence and increased tolerance.

Natural law: A philosophy that refers to a system of rules and principles for the guidance of human behavior; the system arises from the rational intelligence of humans. These rules are apart from enacted laws and stem from and conform to the entire human mental, moral, and physical constitution.

Necker cube: An optical illusion using “rate of apparent change (RAC)” to differentiate normal from brain-injured individuals. Fewer and slower reversals are reported by brain-injured individuals, with damage associated with right hemisphere or frontal lobe lesions.

Necrosis: Local death of tissue.

Negative feedback system: A regulatory system in which output is used to reduce the effect of input signals.

Negativism: Form of aggressive withdrawal that involves refusing to cooperate or obey commands, or doing the exact opposite of what has been requested.

Negligence: The failure to exercise the degree of care that a reasonable person, guided by ordinary considerations under similar circumstances, would exercise.

Neocortex: The relatively recently evolved portions of the cerebral cortex.

Nerve growth factor: A substance that controls the growth of neurons of the spinal ganglia and the ganglia of the sympathetic nervous system.

Nerve impulses: The propagated electrical messages of a neuron that travel down from the axon to adjacent neurons. Also called action potentials.

Neural tube: A prenatal structure with subdivisions that correspond to the future forebrain, midbrain, and hindbrain. The cavity of this tube contains the cerebral ventricles and the passages that connect them.

Neurasthenic neurosis: Neurotic disorder characterized by complaints of chronic weakness, easy fatigability, and lack of enthusiasm.

Neuroblasts: Early forms of cells during the stage of cell migration.

Neurofibrillary tangles: Abnormal whorls of neurofilaments within nerve cells that are especially apparent in people suffering from dementia.

Neurofilaments: Small rodlike structures in axons that are involved in transport materials.

Neuroglia: “Nerve glue” or glia, these cells make up about half the volume of the central nervous system and provide structural and metabolic support to neurons. *See* Glial cells.

Neurohypophysis: *See* Posterior pituitary.

Neurological examination: Examination to determine presence and extent of organ damage to the nervous system.

Neuromodulators: Substances that influence the activity of synaptic transmitters.

Neuron: The basic unit of the nervous system, composed of a cell body (also known as soma or perikaryon), receptive extensions, and a transmitting extension (axon). A cell of the brain or spinal cord composed of a cell body, axon, and dendrites.

Neuron doctrine: A hypothesis that states that the brain is composed of separate cells that are distinct structurally, metabolically, and functionally.

Neuropathies: Peripheral nerve destruction.

Neurosecretory cells: Neurons that manufacture and secrete hormones.

Neurospecificity: A theory of nervous system development that states that each axon grows to a particular site.

Neurotic nucleus: Basic personality characteristics underlying neurotic disorders.

Neurotic paradox: Failure of neurotic patterns to extinguish despite their self-defeating nature.

Neurotic style: A general personality disposition toward inhibiting certain anxiety-causing behaviors; distinguishable from anxiety, somatoform, and dissociative disorders in that neurotic styles do not manifest themselves in specific, disabling neurotic symptoms.

Neurotransmitter: Biochemical substances that transmit information between neurons: *See* Synaptic transmitter.

Nicotinic: A cholinergic receptor that mediates chiefly the excitatory activities of acetylcholine.

Night hospital: Mental hospital in which an individual may receive treatment during the night while carrying on his usual occupation in the daytime.

Nigrostriatal bundle (NSB): A dopaminergic tract that runs from the substantia nigra of the midbrain to the lateral hypothalamus, the globus pallidus, and the caudate putamen.

Nihilistic delusion: Fixed belief that everything is unreal.

Nociceptors: Receptors that respond to stimuli that produce tissue damage or pose the threat of damage.

Node of Ranvier: A gap between successive segments of the myelin sheath where the axonal membrane is exposed.

Nomadism: Withdrawal reaction in which the individual continually attempts to escape frustration by moving from place to place or job to job.

Nomothetic methodology: An approach in which the discovery of relationships between variables by studying large numbers of cases or events is emphasized.

Non compos mentis: Insane; not sound of mind. A very general term including all varieties of mental derangement.

Norepinephrine (NE): A neurotransmitter produced mainly in brain stem nuclei, also called noradrenalin.

Normal pressure hydrocephalus (NPH): A reversible condition involving obstruction of cerebral spinal fluid (CSF). Increased pressure leads to ventricle enlargement with the primary lesion in the midbrain reticular formation.

Nosology: The classification of diseases, including mental diseases.

NSB: See Nigrostriatal bundle.

Nucleotide: A portion of a DNA molecule composed of a single base and the adjoining sugar-phosphate unit of the strand.

Nucleus: An anatomical collection of neurons, e.g., caudate nucleus.

Nystagmus: Abnormal to and fro movements of the eye during attempts to fixate. Rhythmic oscillation of the eyeballs, horizontal, rotary, or vertical.

O

Occipital cortex: The cortex of the occipital (posterior) lobe of the brain.

Ocular-dominance histogram: A graph that shows the strength of a neuron's response stimuli presented to either the left or right eye. Used to determine the effects of depriving one eye of visual experience.

Ondine curse: A type of sleep apnea where automatic breathing during sleep is disrupted. Lesions of the reticulospinal tract have been implicated in this condition.

Oneirism: Prolonged dream state despite wakefulness.

Optic aphasia: Inability to name visually presented objects with intact recognition. Spared recognition is shown by demonstration of use or matching (pointing) to the object when named.

Optic ataxia: Inability to localize objects in space by visual guidance. Difficulty in shifting (stimulus boundedness) is an associated feature.

Optic chiasm: The site where optic neurons from the eye separate and cross over to the contralateral hemisphere. Located near the pituitary gland.

Optic radiation: Axons of the lateral geniculate nucleus that terminate in the primary visual areas of the occipital cortex.

Optic tract: The axons of the retinal ganglion cells after they have passed the optic chiasm.

Optokinetic system: A closed-loop system controlling eye movement and keeping the gaze on target.

Organ of Corti: A structure in the inner ear that lies on the basilar membrane; contains the hair cells and the terminations of the auditory nerve.

Orifice: Any aperture or opening.

Osmoreceptors: Cells in the hypothalamus that were thought to respond to changes in osmotic pressure.

Osmotic thirst: The response to increased osmotic pressure in brain cells. Contrast with hypovolemic thirst.

Ostium: A small opening, especially one that forms an entrance into a hollow organ or canal.

Overutilization anoxia: Occurring during epileptic seizures, a lack of sufficient oxygen secondary to the abnormal electrical discharges. Seen as due to the high metabolic rates during seizures.

Oxidation: The combining of food and oxygen in the tissues; chemically, the increase in valence of an element.

Oximeter: An instrument for measuring the oxygen saturation of hemoglobin in the circulating blood.

Oxytocin: A hormone released by the posterior pituitary that triggers milk let-down in the nursing female.

P

Pacchionian bodies: Small projections of the arachnoid tissue, chiefly into the venous sinuses of the dura mater.

Pain asymbolia: Loss of appreciation for pain, associated with left parietal lesions.

Pain cocktail: A concoction of all the medication a pain patient is taking in a single liquid, which can be systematically controlled and reduced in strength.

Paleocortex: Evolutionary old cortex, e.g., the hippocampus.

Palilalia: Progressively more rapid and softer speech productions, ending in an indistinguishable mutter. Associated with bilateral frontal lesions or with subcortical structures.

Palpitation: Forcible pulsation of the heart perceptible to the individual.

Papilledema: Edema of the optic disk, associated with increased intracranial pressure.

Paradigmatic change: A new way of viewing the world.

Paradoxical sleep: *See* Rapid-eye-movement sleep (REM).

Parallel processing: Using several different circuits at the same time to process the same stimuli.

Paralysis: A loss of power of voluntary movement in a muscle through injury or disease of its nerve supply.

Paranoia: Psychosis characterized by a systematized delusional system.

Paranoid personality: Individual showing behavior characterized by projection (as a defense mechanism), suspiciousness, envy, extreme jealousy, and stubbornness.

Paranoid schizophrenia: Subtype of schizophrenic disorder characterized by absurd, illogical, and changeable ideas and hallucinations of grandeur and persecution.

Paranoid state: Transient psychotic disorder in which the main element is a delusion, usually persecutory or grandiose in nature.

Paraphasias: Errors in word usage associated with aphasia. Substitutions for a correct word may occur (e.g., “I ate night”) or substitution for syllables (e.g., “I ate rupper”). Neologisms may occur (e.g., “I ate ronks”).

Parasympathetic division: One of the two systems that compose the autonomic nervous system. The parasympathetic division arises from both the cranial and sacral parts of the spinal cord.

Paraventricular nucleus: A nucleus of the hypothalamus.

Parenchyma: The essential elements of an organ; the functional elements of an organ, as distinguished from its framework or stroma.

Parens patriae: Literally, “parent of the country.” Refers to the role of the state as sovereign or guardian of such persons as minors and insane and incompetent persons.

Parkinson’s disease: A degenerative neurological disorder involving dopaminergic neurons of the substantia nigra. A subcortical, progressive dementia that is primarily caused by neuronal degeneration of the basal ganglia, particularly the substantia nigra. There may also be cortical impairment. The three primary symptoms are tremor, rigidity, and bradykinesia. Egocentricity, irritability, and suspiciousness are common.

Partial seizures: Epileptic seizures arising from pathological foci that do not have widespread distribution. These include focal repetitive motor spasms and do not involve loss of consciousness.

Parturition: Giving birth to young.

Path analysis: Statistical technique that takes into account how variables are related to one another through time and how they predict one another.

Pathological gambling: Addictive disorder in which gambling behavior disrupts the individual’s life.

Pederasty: Sexual intercourse between males via the anus.

Perceptual defense: A process in which threatening stimuli are filtered out and not perceived by the organism.

Perceptual filtering: Processes involved in selective attention to aspects of the great mass of incoming stimuli that continually impinge on the organism.

Perimeter: An instrument delimiting the field of vision.

Peripheral nerves: Neurons that lie outside the central nervous system.

Peripheral nervous system: The portion of the nervous system that includes all the nerves outside the brain and spinal cord.

Permanent planning: Placing children who are drifting through foster homes back into their original families.

Perseveration: Persistent continuation of a line of thought or activity once it is under way. Clinically inappropriate repetition.

Perseveration–consolidation hypothesis: A hypothesis stating that information passes through two stages in memory formation. During the first stage the memory is held by perseveration of neural activity and is easily disrupted. During the second stage the memory becomes fixed, or consolidated, and is no longer easily disrupted.

Personality disorder: A group of maladaptive behavioral syndromes originating in the developmental years and not characterized by neurotic or psychotic symptoms.

Perversion: Deviation from normal.

Petit mal seizures: A type of generalized epileptic seizure characterized by a spike-and-wave electrical pattern. During these seizures the person is unaware of the environment and later cannot recall what happened.

pH: The symbol commonly used in expressing hydrogen ion concentration; signifies the logarithm of the reciprocal of the hydrogen ion concentration expressed as a power of 10.

Phantom limb: The experience of sensory messages attributed to an amputated limb.

Phasic receptors: Receptors that show a rapid fall in nerve impulse discharge as stimulation is maintained.

Phlebothrombosis: Thrombosis of a vein without inflammation of its walls.

Phonological agraphia: Impaired ability to spell nonwords with intact ability for familiar words. Associated with lesions of the supermarginal gyrus or associated areas.

Phosphemes: Flashes of light caused by dysfunction of the auditory-visual association area. Visual hallucinations may also be produced, related or not to past experiences.

Photopic system: A system in the retina that operates at high levels of light, shows sensitivity to color, and involves the cones; contrast with scotopic system.

Phrenology: The belief that bumps on the skull reflect enlargements of brain regions responsible for certain behavioral faculties.

Pick's disease: Similar to Alzheimer's disease, here neuron damage is typically confined to the frontal and temporal lobes. Personality changes usually precede memory loss. Affects twice as many women as men.

Pilocarpine: An alkaloid that stimulates the parasympathetic division of the autonomic nervous system.

Pitch: A dimension of auditory experience in which sounds vary from low to high.

Pituitary gland: A small complex endocrine gland located in a socket at the base of the skull. The anterior pituitary and posterior pituitary are separate in function.

Place theory: A theory of frequency discrimination according to which pitch perception depends on the place of maximal displacement of the basilar membrane produced by a sound. Contrast with volley theory.

Plaintiff: A person who initiates an action or legal suit. In a civil suit, the party who complains or sues.

Planum temporale: A region of superior temporal cortex adjacent to the primary auditory area.

Plea: In a legal action, the defendant's answer to the plaintiff's declaration.

Plea bargaining: In a criminal case, the process in which the accused and the prosecutor negotiate a mutually satisfactory disposition of the case subject to the approval of the court. Usually involves the defendant pleading guilty to a reduced punishment or offense or to a lesser number of counts in a multicount indictment.

Pleading: The formal allegations made by the opposing parties of their respective claims and defenses.

Pleasure principle: In psychoanalysis, the demand that an instinctual need be immediately gratified regardless of reality.

Plexus: A network, or tangle, of interweaving nerves, veins, or lymphatic vessels.

Pneumoencephalogram: A technique for examining brain structure in intact humans by taking radiographic images after a gas is injected into the ventricles.

Pons: A portion of the metencephalon.

Positive law: A system of rules and laws enacted or adopted by the government of an organized political community for the purpose of controlling the conduct of its people.

Positron emission tomography (PET) scan: A technique for examining brain structure and function in intact humans by combining tomography with injections of radioactive substances used by the brain. An analysis of metabolism of these substances reflects regional differences in brain activity. Computer-assisted radiographic procedure designed to analyze and track glucose utilization in the brain.

Postcentral gyrus: Involved in sensory mediation, this cortical convolution is located just posterior to the fissure of Rolando.

Posterior pituitary: The rear division of the pituitary gland. Also called neurohypophysis.

Posthypnotic amnesia: The subject's lack of memory for the period during which he or she was hypnotized.

Posthypnotic suggestion: Suggestion given during hypnosis to be carried out by the subject after he or she is brought out of hypnosis.

Postpartum disturbances: Emotional disturbance of the mother associated with childbirth.

Postsynaptic potentials: *See* Graded potentials.

Post-traumatic amnesia (PTA): A form of anterograde amnesia seen as a postconcussional effect of head trauma. Correlates well with coma length and severity. Some retrograde amnesia may accompany PTA.

Post-traumatic stress disorder: Category of disorder in which the stressor is severe and residual symptoms occur following the traumatic experience.

Postural tremor: A tremor that occurs when a person attempts to maintain a posture such as holding an arm or leg extended, resulting from pathology of the basal ganglia or cerebellum.

Precedent: A previous judgment or decision of a court considered as an authority for deciding later identical or similar cases. Under the doctrine of stare decisis, case: which establish that a rule of law are authoritative and must be adhered to.

Precentral gyrus: Involved in the mediation of motor activity, this cortical convolution is located just anterior to the fissure of Rolando.

Precipitating cause: The particular stress that triggers a disorder.

Predisposing cause: The factor that lowers the individual's stress tolerance and paves the way for the appearance of a disorder.

Predisposition: Likelihood that an individual will develop certain symptoms under given stress conditions.

Pressor: Excited vasoconstrictor activity, producing increased blood pressure; denoting afferent nerves that, when stimulated, excite the vasoconstrictor center.

Presumption: An inference resulting from a rule of law or the proven existence of a fact that requires such rule(s) or action(s) be established in the action. Presumption can be irrefutable, such as the presumption of incapacity in a person under 7 years of age to act, or rebuttable, in which case it can be disproved by evidence.

Presumption of innocence: A principle of criminal law in which the government carries the burden of proof beyond a reasonable doubt for every element of a crime, with the defendant having no burden of proof to prove his or her innocence.

Prima facie case: A case in which there is sufficient evidence for the matter to proceed beyond a motion for a directed verdict in a jury case or a motion to dismiss in nonjury trial; requires that the defendant proceed with his or her case.

Prima facie evidence: Evidence that, in the judgment of the law, is good and sufficient to establish a given fact or a chain of facts making up the party's claim or defense. If such evidence is unexplained or uncontradicted, it is sufficient to sustain favorable judgment for the issue it supports; may be contradicted by other evidence.

Primary reaction tendencies: Constitutional tendencies apparent in infancy, such as sensitivity and activity level.

Privilege: A particular benefit or exemption enjoyed by a person, company, or class beyond the common ones held by other citizens.

Privileged communication: Statements that are made in a setting of legal or other professional confidentiality. Applies to certain persons within a protected relationship, such as husband–wife and attorney–client, who are legally protected from forced disclosure on the witness stand at the option of the witness.

Pro bono publico: For the welfare or good of the public, such as when an attorney or other professional handles a case without compensation to advance a social cause or represents a party who cannot afford to pay.

Problem drinker: Behavioral term referring to one who has serious problems associated with drinking alcohol. Term is currently preferable to alcoholic.

Process (poor premorbid, chronic) schizophrenia: Schizophrenia pattern that develops gradually and tends to be long-lasting.

Prodrome: Behavioral/mood change preceding onset of a seizure. Prodromal signs may be apparent for several days before the seizure.

Progressive supranuclear palsy: An uncommon Parkinson-like condition that usually begins in the 50s with emotional liability, imbalance, and problems with downward gaze. A dementia develops with relative sparing of language and constructional abilities.

Projection neuron: Large neurons that transmit messages to widely separated parts of the brain.

Prosecution: A criminal proceeding to determine the guilt or innocence of a person charged with a crime. Refers to the state or federal government as the party proceeding in a criminal action.

Prosencephalon: *See* Forebrain.

Prosody: Rhythm, pitch, tempo, and similar characteristics of speech. Important in communication of affective content. Typically seen as a right hemisphere activity.

Prosopagnosia: Inability to recognize faces of those with whom one was previously familiar. Loss of ability to recognize unfamiliar faces is a variant of this disorder. Usually associated with right lesions.

Protocritic: A diffuse type of sensory experience (e.g., temperature) that is common to all homeostatic internal mechanisms. Cognitive processing does not lead to identifying a discrete place or duration for the sensation. Opposed to epicritic.

Proximal: An anatomical directional term meaning near the trunk or center; opposite of distal.

Proximate cause: An occurrence that, in a natural and unbroken chain of events, results in an injury and without which the injury would not have occurred. The event that is closest in the causal relationship to the effect.

Pseudo-community: Delusional social environment developed by a paranoid person.

Pseudobulbar state: Strong affective expressions to include laughing and crying, often simultaneously, but also incongruous to the stated feeling of the person. Associated with lesions of connecting pathways between the frontal lobes and lower brain structures.

Pseudodementia: A pattern of deficit behavior resembling organically produced dementia. Depression is the primary factor causing the intellectual suppression.

Pseudodepression: The major pathology involves the dorsal-lateral frontal convexity, severe bilateral frontal pathology, or severing of frontal-thalamic pathways. This is a pathology of reduced/absent motor responses (e.g., mutism, inactivity, helpless unconcern). The subject may be aware of his or her deficit.

Pseudohemianopsia: Lack of attention to visual stimulation from the contralateral side despite intact visual fields.

Pseudopsychopathy: The major pathology involves the orbital frontal areas and reflects motor excess (e.g., puerile acts, restlessness, bursting into motion, impulsive antisocial acts). The subject knows but cannot control the motor behavior.

Psychic cortex: Anterior portion of the temporal lobe that when stimulated produces recollection of previous experience (e.g., music, visual scenes). Temporal lobe tumors may produce hallucinations involving previous experiences.

Psychomotor epilepsy: State of disturbed consciousness in which the individual may perform various actions, sometimes of a homicidal nature, for which he or she is later amnesic.

Psychosexual dysfunction: Inability or impaired ability to experience or give sexual gratification.

Psychotogens: Substances that generate psychotic behavior.

Psychotropic drugs: Drugs whose main effects are mental or behavioral in nature.

Pterygoid: Shaped like a wing.

Ptosis: Drooping eyelid caused by a lesion to the oculomotor cranial nerve.

Pure agraphia: Writing deficits caused by brain damage in the absence of other significant language disturbance.

Pure word deafness: Inability to understand spoken words with an intact ability to read, write, and speak. Usually does not occur in isolation of other defects and is associated with cardiovascular accidents.

Purkinje cell: A type of large nerve cell in the cerebellar cortex.

Putative: Reputed or supposed.

Pyramidal cell: A type of large nerve cell in the cerebral cortex.

Pyramidal system: A motor system including neurons within the cerebral cortex and the axons that form the pyramidal tract.

Q

Quasi-experimental design: A research study in which the experimenter has partial experimental control over the setting and variables.

R

Ramp movements: Slow, sustained motions thought to be generated in the basal ganglia. Also called smooth movements. Contrast with ballistic.

Ramus: A branch; one of the primary divisions of a nerve or a blood vessel; a part of an irregularly shaped bone that forms an angle with the main body.

Random assignment: An experimental method that ensures that every subject has an equal chance of being selected for the experimental or control group.

Range fractionation: A hypothesis of stimulus intensity perception stating that a wide range of intensity values can be encoded by a group of cells, each of which is a specialist for a particular range of an intensity scale.

Rape: An act of violence in which sexual relations are forced upon another person.

Raphe nucleus: A group of neurons in the midline of the brain stem that contains serotonin, involved in sleep mechanisms.

Rapid-eye-movement (REM) sleep: A state of sleep characterized by small-amplitude, fast electroencephalographic (EEG) waves, no postural tension, and rapid eye movements. Also called paradoxical sleep.

Ratio decidendi: The principal ground or reason for a court's written decision. The point in a case that is essential to determining the court's judgment.

Reaction formation: Ego-defense mechanism in which the individual's conscious attitudes and overt behavior are opposite to repressed unconscious wishes.

Readiness potential: An electrical potential that occurs over widespread posterior regions of the scalp prior to the onset of a voluntary movement.

Reality assumptions: Assumptions that relate to the gratification of needs in the light of environmental possibilities, limitations, and dangers.

Reality principle: Awareness of the demands of the environment and adjustment of behavior to meet these demands.

Reasonable doubt: The degree of doubt required to justify an acquittal of a criminal defendant, based on reason and arising from evidence or lack of evidence.

Reasonable doubt standard: A standard beyond which guilt must be shown.

Receptive field: The stimulus region and features that cause the maximal responses of a cell in a sensory system.

Receptor: Nerve ending that receives a stimulus. The initial element in sensory systems, responsible for stimulus transduction, e.g., hair cells in the cochlea or rods and cones in the retina.

Receptor proteins: Substances at synaptic receptor sites whose reaction to certain transmitters causes a change in the postsynaptic membrane potential.

Receptor sites: Regions of specialized membrane containing receptor proteins located on the postsynaptic surface of a synapse; these sites receive and react with the chemical transmitter.

Recess: A short interval during a trial or hearing when the court suspends business without adjournment.

Reduplicative paramnesia: Associated with right parietal and/or frontal damage of a coarse nature. Involves relocating a place (e.g., hospital) to another place (e.g., one's home town).

Reflex: A simple, highly stereotyped, and unlearned response to a particular stimuli (i.e., an eyeblink in response to a puff of air).

Refractory: A period during and after a nerve impulse in which the axon membrane's responsiveness is reduced. A brief period of complete insensitivity to stimuli (absolute refractory phase) is followed by a longer period of reduced sensitivity (relative refractory phase) during which only strong stimulation produces a nerve impulse.

Regression: Ego-defense mechanism in which the individual retreats to the use of mature responses in attempting to cope with stress and maintain ego integrity.

Remand: To send a case back to the court from which it came to have further action taken on it there.

Remedy: The means by which a right is enforced or the violation of a right is prevented or compensated for.

Repression: Ego-defense mechanism by means of which dangerous desires and intolerable memories are kept out of consciousness.

Residual schizophrenia: Category used for persons regarded as recovered from schizophrenia but still manifesting some symptoms.

Resistance: Tendency to maintain symptoms and resist treatment or uncovering repressed material.

Resistance to extinction: Tendency of a conditioned response to persist despite lack of reinforcement.

Resorption: The loss of substance through physiologic or pathologic means.

Respondent: The party answering a charge or the party contending against an appeal.

Resting potential: Potential differences across the membrane of nerve cells during inactive period. Also called membrane potential.

Retainer: A contract between an attorney and a client stating the nature of the service to be rendered and the cost of such services. By employing an attorney to act on their behalf, clients prevent the attorney from acting for their adversary.

Rete mirabile: A network of fine blood vessels located at the base of the brain in which blood coming from the periphery reduces the temperature of arterial blood before it enters the brain.

Reticular: Netlike.

Reticular activating system: Brain stem area that mediates level of arousal.

Reticular formation: A region of the brain stem (extending from the medulla through the thalamus) that is involved in arousal.

Retinaculum: A special fascial thickening that holds back an organ or part; helps retain an organ or tissue in its place.

Retrieval: A process in memory during which a stored memory is utilized by an organism.

Retroactive amnesia: A type of memory loss in which events just before a head injury are not recalled.

Retrograde amnesia: Inability to recall events previous to the onset of a trauma; recovery of remote events usually occurs first.

Retrograde degeneration: Destruction of the nerve cell body following injury.

Reuptake: A mechanism by which a synaptic transmitter released at a synapse is taken back into the presynaptic terminal, thus stopping synaptic activity.

Reverse tolerance: Situation in which a decreased amount of some psychoactive drug brings about the effects formerly achieved by a larger dose.

Rh antigen or factor: An agglutinin, or antigen, first found in the erythrocytes of rhesus monkey, hence the Rh. Rh positive and Rh negative terms denote presence or absence, respectively, of this antigen.

Rhodopsin: The photopigment in rods that responds to light.

Ribosomes: Organelles that appear as dots lining the endoplasmic reticulum; they are the protein factories of cells.

Right: A power or privilege, enforced legally, giving a person control over the actions of others.

Rigid control: Coping patterns involving reliance upon inner restraints, such as inhibition, suppression, repression, and reaction formation.

Role obsolescence: Condition occurring when the ascribed social role of a given individual is no longer important to the social group.

Roots: The two distinct branches of a spinal nerve, each of which serves a separate function. The dorsal root carries sensory information from the peripheral nervous system to the spinal cord. The ventral root carries motor messages from the spinal cord to the peripheral nervous system.

Rostral: An anatomical term meaning toward the head end; opposite of caudal.

S

Saccades: Rapid movements of the eyes that occur regularly during normal viewing.

Saccadic suppression: The suppression of vision during saccades, which provides the viewer with perception free of these abrupt movements.

Sacral: Refers to the lower part of the back or spinal cord.

Sadism: Sexual variant in which sexual gratification is obtained by the infliction of pain upon others.

Sagittal plane: The plane that bisects the body or brain into right and left halves.

Saltatory conduction: The form of conduction seen in myelinated axons in which the nerve impulse jumps from one node of Ranvier to the next.

Schizo-affective psychosis: Disorder characterized by schizophrenic symptoms in conjunction with pronounced depression or elation.

Schizoid personality: Personality pattern characterized by shyness, oversensitivity, seclusiveness, and eccentricity.

Schizophrenia: Psychosis characterized by the breakdown of integrated personality functioning, withdrawal from reality, emotional blunting and distortion, and disturbances in thought and behavior.

Schizophreniform disorder: Category of schizophrenic psychosis, usually in an undifferentiated form, with a duration of less than 6 months.

Schizophrenogenic: Qualities in parents that appear to be associated with the development of schizophrenia in offspring; often applied to rejecting, cold, domineering, overprotective mothers or passive, uninvolved fathers.

Schwann cell: The kind of accessory cell that forms myelin in the peripheral nervous system.

Scotoma: A region of blindness caused by injury to the visual pathway.

Scotopic system: A system in the retina that responds to low levels of light.

Second messenger: A relatively slow acting substance in the postsynaptic cell that amplifies the effects of nerve impulses and can initiate processes that lead to changes in electrical potentials at the membrane.

Selective vigilance: A tuning of attentional and perceptual processes toward stimuli relevant or central to goal-directed behavior, with decreased sensitivity to stimuli irrelevant or peripheral to this purpose.

Sella turcica: A saddlelike depression on the upper surface of the sphenoid bone, in which the hypophysis lies.

Semantic agraphia: Deficit or loss of ability to spell or write with meaning, produced by brain damage to various sites.

Semantic memory: Memory for what is learned as knowledge. This recall therefore is considered “timeless and spaceless” (e.g., a number system, a foreign language).

Senile dementia: A neurological disorder of the aged involving progressive behavioral deterioration including personality change and profound intellectual decline.

Senile plaques: Neuroanatomical changes correlated with senile dementia due to the build-up of beta amyloid.

Sensorineural deafness: A hearing impairment originating from cochlear or auditory nerve lesions.

Sepsis: A morbid condition resulting from the presence of pathogenic bacteria. From septic.

Septo-hypothalamo-mesencephalic (SHM) continuum: One of three limbic mechanisms, the SHM continuum has distinct circuitry connecting the hypothalamus, the limbic midbrain area, and other sites. Only the prefrontal lobe has direct connections with the SHM continuum, out of the entire isocortex.

Serial lesion effect: The lessened severity of cerebral symptoms (e.g., due to diaschisis) when lesions are introduced in stages as opposed to all at once.

Serotonergic: Refers to neurons that use serotonin as their synaptic transmitter.

Serotonin (5HT): A neurotransmitter produced in the raphe nuclei and active in structures throughout the cerebral hemispheres; plays a role in the systems that control memory, emotion, and perception. A compound (5-hydroxytryptamine) found in the bloodstream that has vasoconstrictive properties.

Short-term memory: Memory that usually lasts only for seconds or as long as rehearsal continues.

Significant others: In interpersonal theory, parents or others on whom an infant is dependent for meeting all physical and psychological needs.

Simple cortical cells: Cells in the visual cortex that respond best to an edge or a bar of a particular width and with a particular direction and location in the visual field.

Simulation: An intentional imitation of the basic processes and outcomes of a real-life situation, carried out to better understand the basic mechanisms of the situation. In civil law, misrepresenting or concealing the truth, as when parties pretend to perform an act different from that in which they really are engaged.

Simultagnosia: The perception of one stimulus when two objects are presented. Often associated with inertia of gaze.

Sinus: A channel for the passage of blood; hollow in a bone or other tissue; antrum; one of the cavities connecting with the nose; a suppurating cavity.

Sinusoid: A blood space in certain organs, as the brain.

Situational stress reaction (acute): Superficial maladjustment to newly experienced life situations that are especially difficult or trying.

Sleep apnea: A sleep disorder that involves slowing or cessation of respiration during sleep, which awakens the patient. Excessive daytime somnolence results from frequent nocturnal awakening.

Slow-wave sleep: Stages of sleep including stages 1 through 4, defined by presence of slow electroencephalographic (EEG) activity.

Socialized-aggressive disorder: Pattern of childhood maladaptive behaviors involving social maladaptation, such as stealing, truancy, gang membership.

Sodium pentothal: Barbiturate drug sometimes used in psychotherapy to produce a state of relaxation and suggestibility.

Sodomy: Sexual intercourse via the anus.

Somatosensory agnosia: Loss of tactile recognition due to cerebral dysfunction in the presence of intact somatosensory receptive functions.

Somatosensory modalities: Refers to different types of body sensation (e.g., touch, pain, pressure). Distinguished from auditory and visual senses.

Somesthetic: Pertaining to somatesthesia, or the consciousness of having a body.

Somnolent mutism: Immobility and unresponsiveness with eyes closed, associated with mesencephalic–diencephalic lesions. Intense stimulation yields minimal responses.

Spasm: An involuntary, convulsive, muscular contraction.

Spatial acalculia: Spatial misarrangement of the numbers during arithmetic calculation with intact knowledge of correct principle. Associated with right hemisphere lesions.

Spatial agraphia: Deficits in spatial motor aspects of writing due to brain damage located in the nondominant parietal lobe. Frequently associated with the neglect syndrome.

Spatial summation: The summation of the axon hillock of postsynaptic potentials from across the cell body. If this summation reaches threshold, a nerve impulse will be triggered.

Special vulnerability: Low tolerance for specific types of stress.

Specific heat: The heat energy required to raise the temperature of 1 g of a substance by 1°C.

Spectrally opponent cell: A visual receptor cell with opposite firing responses to different regions of the spectrum.

Spinal nerves: The 31 pairs of nerves that emerge from the spinal cord.

Split-brain: Individuals who have had the corpus callosum severed, halting communication between the right and left hemispheres.

Squamous: Scalelike.

Stage 1 sleep: The initial stage of slow-wave sleep involving small-amplitude electroencephalographic (EEG) waves of irregular frequency, slow heart rate, and a reduction of muscle tension.

Stage 2 sleep: A stage of slow-wave sleep defined by bursts of regular 14 to 18 Hz electroencephalographic (EEG) waves that progressively increase and then decrease in amplitude (called spindles).

Stage 3 sleep: A stage of slow-wave sleep defined by the spindles seen in stage 2 sleep mixed with larger amplitude slow waves.

Stage 4 sleep: A stage of slow-wave sleep defined by the presence of high amplitude slow waves of 1 to 4 Hz.

Star chamber: An ancient court of England that originally had jurisdiction in cases in which the ordinary course of justice was obstructed by one party to the extent that no inferior court would find its process obeyed. Abolished in modern jurisprudence.

Stare decisis: The legal policy of courts stating that once a principle of law is laid down, it will be adhered to and applied to all future cases in which the facts are substantially the same. Serves to ensure security and certainty of legal principles.

Static phase of weight gain: A later period following destruction of the ventromedial hypothalamus during which the animal's weight stabilizes at an obese level and food intake is not much above normal.

Statistical test of significance: A standard of probability stating that an experimental finding is significant if, by chance alone, it could have occurred fewer than 1 or 5 times in 100 occurrences. In the field of psychology, 5 times in 100 is usually the standard of acceptability for statistical significance.

Statute: An act of legislation by which a law is created, as opposed to unwritten or common law.

Statutory law: The body of law created by the legislature.

Statutory rape: Sexual intercourse with a minor.

Stellate cell: A kind of small nerve cell with many branches.

Stenosis: Narrowing or contraction of a body passage or opening.

Stereoacuity: The ability to discriminate small differences in visual depth by point-by-point matching in the retinas.

Stereopsis: The ability to perceive depth, utilizing the slight difference in visual information from the two eyes.

Stimulus enhancement: The second stimulus in a pair adds rather than masks the neural effects of the first stimulus. Studies include those that present letters of one half of a word (first stimulus) and then letters of the remaining portion of the word (second stimulus).

Stimulus masking: A second stimulus leads into or masks a first stimulus if the trace of the initial stimulus is longlasting or otherwise sufficient. The target stimulus (e.g., letters of the alphabet) is interfered with by the masking stimulus (e.g., patterned line segments).

Stimulus persistence: Effects of external stimulation are lasting in the central nervous system, dependent on many factors. Stimulus persistence acting as an interference to new stimuli has been advanced to account for deficient perception in the older person.

Stipulation: An agreement made between opposing parties that certain facts or principles of law are true and applicable and will not be contested.

Stress-decompensation model: View of abnormal behavior that emphasizes progressive disorganization of behavior under excessive stress.

Striate cortex: A portion of the visual cortex with input from the lateral geniculate nucleus.

Strict liability: Liability without a showing of fault, as when a person, who engages in a hazardous activity, is totally liable for injuries caused by the activity even without negligence being shown.

Stricture: A circumscribed narrowing of a tubular structure.

Stroma: The tissue that forms the ground substance, framework, or matrix of an organ, as distinguished from that constituting its functional element, or parenchyma.

Sub nom: Under the name. In the name of. Often used when the original name of a case must be changed due to a change in parties.

Subpoena: A command for a witness to appear at a certain time and place to testify in court on a certain matter.

Subpoena duces tecum: A command that a witness produce a specified document or record.

Substance-abuse disorders: Pathological use of a substance for at least a month, resulting in self-injurious behavior and biological dependence on the substance.

Substance-induced organic disorder: Category of disorders based on organic impairment resulting from toxicity or physiologic changes in the brain.

Substance-use disorder: Patterns of maladaptive behavior centered around regular use of substance involved.

Sulci: The furrows of convoluted brain surface. Contrast with gyri.

Superior colliculus: A structure in the midbrain that receives information from the optic tract.

Superior olivary complex: A brain stem structure that receives input from the left cochlear nuclei, providing the first binaural analysis of auditory information.

Supplementary motor area (SMA) location: Area 6 and partially area 7, anterior to paracentral lobule. Function: volitional (self-initiated) movements; perineal and leg movements are found in the medial extension of the motor homunculus. Considered also a secondary speech area.

Supra: Above, upon.

Supraoptic nucleus: A nucleus of the hypothalamus.

Synapse: An area composed of the presynaptic (axonal) terminal, the postsynaptic (usually dendritic) membrane, and the space (or cleft) between them. This is the site at which neural messages travel from one neuron to another. Also called the synaptic region.

Synaptic assembly: A level of brain organization that includes the total collection of all synapses on a single cell.

Synaptic bouton: The presynaptic swelling of the axon terminal from which neural messages travel across the synaptic cleft to other neurons.

Synaptic cleft: The space between the presynaptic and postsynaptic membranes.

Synaptic region: See Synapse.

Synaptic transmitter: The chemical in the presynaptic bouton that serves as the basis for neural communication. It travels across the synaptic cleft and reacts with the postsynaptic membrane when triggered by a nerve impulse. Also called neurotransmitter.

Synaptic vesicles: The small, spherically shaped structures that contain molecules of synaptic transmitter.

T

Tactile: Pertaining to the sense of touch.

Tactual hallucinations: Hallucinations involving the sense of touch, such as feeling cockroaches crawling over one's body.

Tardive dyskinesia: Abnormal involuntary movements involving the extremities or facial area (e.g., tongue, jaw, facial surface). Results as a late side effect of neuroleptic drug treatment and, in many cases, is irreversible. Involuntary movements — especially those involving the face, mouth, lips, and tongue — that are related to prolonged use of antipsychotic drugs, such as chlorpromazine.

Telecephalon: Consists of the cerebral cortex, corpus striatum, and medullary center. The frontal subdivision of the forebrain that includes the cerebral hemispheres when fully developed.

Temporal summation: The summation of postsynaptic potentials that reach the axon hillock at different times. The closer together they are, the more complete the summation.

Testosterone: A hormone produced by male gonads that controls a variety of bodily changes that become visible at puberty.

Tetany: Intermittent tonic muscular contractions of the extremities.

Thalamic syndrome: Disturbance of the senses with initial hemianesthesia, followed by a raised threshold to touch, pain, heat, and cold on the side opposite the lesion. The sensations may be extremely aversive when reached. Due primarily to a thalamic infarct.

Thalamus: The brain regions that surround the third ventricle.

Third-party beneficiary: A person who has enforceable rights created by a contract to which he is not party and for which he gives no consideration.

Thrombophlebitis: The condition in which inflammation of the vein wall has preceded the formation of a thrombus, or intravascular clot.

Thrombosis: The formation of a clot within a vessel during life.

Thrombotic stroke: Results from blockage or occlusion by blood or tissue particles or overgrowth. Forms most often where blood vessels branch.

Thrombus: A clot of blood formed within the heart or the blood vessels, usually caused by slowing of the circulation of the blood or by alteration of the blood itself or the vessel walls.

Thyroid-stimulating hormone (TSH): A tropic hormone released by the anterior pituitary gland that increases the release of thyroxin and the uptake of iodine by the thyroid gland.

Thyrotropin-releasing hormone (TRH): A hypothalamic hormone that regulates the release of thyroid-stimulating hormone.

Thyroxin: A hormone released by the thyroid gland.

Tinnitus: A ringing or singing sound in the ears.

Tolerance: Physiological condition in which increased dosage of an addictive drug is needed to obtain effects previously produced by smaller doses.

Tomogram: *See* Computer axial tomogram.

Tonic receptors: Receptors in which the frequency of nerve impulse discharge declines slowly or not at all as stimulation is maintained.

Tort: A private or civil wrong or injury, excluding a breach of contract, for which the court will provide a remedy in the form of an action for damages.

Toxicity: The poisonous nature of a substance.

Trabecula: A septum that extends from an envelope into the enclosed substance, forming an essential part of the stroma of the organ.

Transcortical motor (TCM) aphasia: Separation of general conceptual functions (posterior) from Broca motor output area (anterior). Lesions in the supplementary motor area (SMA) or in Broca's area. The patient can repeat words but has difficulty with comprehension and/or speech.

Transient global amnesia: A relatively brief (several hours to several days) amnesic condition with few neurological sequelae. Associated features include (1) a major symptom of anterograde amnesia, (2) some retrograde amnesia, (3) confusion and time/place disorientation, and (4) speech and orientation to person are unimpaired. There is usually a sudden onset and cessation with no prodromal symptoms or known cause.

Transient ischemic attacks (TIAs): Neurological deficits of sudden onset; less intense and temporary strokes that may precede thrombotic strokes. Last less than 24 hours by definition. About half of those who experience TIAs will have a major stroke.

Transient situational disorder: Temporary mental disorder developing under conditions of overwhelming stress, as in military combat or civilian catastrophes.

Transmethylation hypothesis: A hypothesized explanation of schizophrenia suggesting that the addition of a methyl group to some naturally occurring brain compounds can convert some substances to hallucinogenic agents, or psychotogens.

Transverse: *See* Coronal.

Tremor at rest: A tremor that occurs when the affected region, such as a limb, is fully supported.

Tremors: Rhythmic repetitive movements caused by brain pathology.

Trial: A judicial examination or determination, either civil or criminal, of issues between parties to an action.

Trigeminal neuralgia: Intense and sudden pain in area of a trigeminal nerve lesion. The episodic pain may be set off by light stimulation such as touching the skin.

Tropic hormones: Anterior pituitary hormones that affect the secretion of other endocrine glands.

U

Unconscious motivation: Motivation for an individual's behavior of which he or she is unaware.

Undifferentiated schizophrenia: Subtype in which the patient either has mixed symptoms or moves rapidly from one type to another.

Undue influence: Any wrongful or improper persuasion whereby the person's will is overpowered, thereby causing the person to act in a way he or she would normally not have acted.

Uniform laws: A body of written laws, in various subject areas, approved by the commissioners on uniform state laws, which are often adopted by individual states.

Unilateral apraxia: Apraxia affecting one side of the body. Sympathetic and callosal types have been postulated. The sympathetic aspect occurs when other functions are likewise impaired (e.g., right hemiparesis, left-hand apraxia) and Broca aphasia produced by left motor association destruction of callosal fibers.

Unipolar disorder: A severe affective disorder in which only depressive episodes occur, as opposed to bipolar disorders in which both manic and depressive processes are assumed to occur.

Unmyelinated: Refers to fine-diameter axons that lack a myelin sheath.

Unsocialized disturbance of conduct: Childhood disorder in which the child is disobedient, hostile, and highly aggressive.

Urticaria: Nettle rash; hives; elevated, itching, white patches.

Utilization behavior: Considered a type of magnetic apraxia, where the afflicted individual pursues a stimulus to grasp within a set of actively exploring the environment. Considered a strong frontal sign. Gegenhalten occurs when contact is made. Walking is then impaired when attempted, with leg stiffening and no movement.

V

Vaginismus: An involuntary muscle spasm at the entrance to the vagina that prevents penetration and sexual intercourse.

Vagus nerve: One of the cranial nerves.

Variant sexual behavior: Behavior in which satisfaction is dependent on something other than a mutually desired sexual engagement with a sexually mature member of the opposite sex.

Ventral: An anatomical term meaning toward the belly or front of the body or the bottom of the brain; opposite of dorsal.

Ventricles: Cavities in the brain that contain cerebrospinal fluid. The four cavities in the brain that contain cerebrospinal fluid. The choroid plexus produces the cerebrospinal fluid. Spaces within the brain, filled with cerebrospinal fluid, which provide support and cushioning for the brain.

Ventricular layer: A layer of homogeneous cells in the neural tube of the developing organism that is the source of all neural and glial cells in the mature organism. Also called the ependymal layer.

Ventromedial hypothalamus (VMH): A hypothalamic region involved in inhibiting eating, among other functions.

Venue: The particular geographic area in which a court with jurisdiction may hear and determine a case.

Verbal adynamia: Diminished speech spontaneity. There is slow speech initiation and/or reluctance to continue verbal output. Usually accompanies general apathy.

Verdict: The formal decision or finding made by a judge or jury on the matters or questions submitted for their deliberation and determination.

Vertigo: Dizziness, giddiness.

Vesicle: A small bladder, or sac, containing liquid.

Vesicles (synaptic): Small structures located at the end point (terminus) of the axon that are filled with neurotransmitter substances.

Vestibular: Pertaining to a vestibule; such as the inner ear, larynx, mouth, nose, vagina.

Vestibuloocular reflex: A rapid response that adjusts the eye to a change in head position

Viscosity: A condition of more or less adhesion of the molecules of a fluid to each other so that it flows with difficulty. A behavioral pattern characterized by stickiness in interactional contexts. Associated with frontal system damage.

Visual anosognosia: Denial of blindness caused by brain lesions. The subject attempts to behave as if the deficit were not present. *See* Anton's syndrome.

Voir dire: To speak the truth. The preliminary examination made by the court or by attorneys of one presented as a prospective juror to determine his or her competence.

W

Wada technique: Designed to assess which hemisphere is language dominant. Here, sodium amytal is injected into one carotid artery to deactivate an entire hemisphere. Changes in counting behaviors while the injection is in process indicate which hemisphere is dominant for speech and language.

Waive: To abandon or give up a claim or right.

Waiver: An intentional and voluntary surrendering or giving up of a known right.

Warrant: A document directing a public official to perform a particular act.

Weight of the evidence: The relative value of the credible evidence presented by one side balanced against the evidence presented by the other side. Indicates to the jury that the party having the burden of proof will be entitled to the verdict if the greater amount of evidence supports the issue.

Wernicke's aphasia: A fluent disorder with severe auditory comprehension and processing deficits. Empty speech, press for speech, and a moderate to substantial naming deficit are apparent. Considered a posterior aphasia.

Wernicke's area: A region of the left hemisphere involved in language comprehension.

White matter: Consists of densely packed conduction fibers that transmit neural messages between the cortex and lower centers (projection fibers), between the hemispheres (commissural fibers), or within a hemisphere (association fibers). A shiny layer underneath the cortex consisting largely of axons with white myelin sheaths.

Witness: One who testifies, under oath, to what he or she has seen, heard, or otherwise observed.

Word deafness: Also called pure word deafness. Here, nonspeech sounds are recognized but not spoken words. Usually produced by subcortical lesion disconnecting auditory input from auditory processing.

Work product: Work done by an attorney while representing a client, such as writings, statements, or testimony in regard to the attorney's legal impressions, tactics, strategies, and opinions, which are ordinarily not subject to discovery. Discovery may be obtained only when the party seeking it has a substantial need for the material to prepare his or her case and is unable to obtain the substantial equivalent of the material by other means without undue hardship.

Writ: An order issued by a court mandating the performance of a specified act, or giving authority to have it done.

X

X cells: Retinal ganglion cells that continue to respond to maintained visual stimuli.

Xanthochromia: Blood cells in the cerebrospinal fluid with discoloration due to an abnormal somatic condition.

Y

Y cells: Retinal ganglion cells that respond strongly initially but rapidly decrease the frequency of response to a visual stimulus.