also under POSSIBILITY) in the Kantian and derived systems of logic.

(2) In Greek it would mean pertaining to a problem; but the actual meaning, which is loose, is approximating to the import of an interrogation.

Sigwart and others maintain that problematic propositions are not propositions, because they are not assertory. If they are empty, their denials should be absurd, which does not seem to be the case. It is better to say that whatever presses as a question so much as to merit examination may properly be termed problematic. (C.S.P.)

Problematic Idealism: see SOLIPSISM.

Procedure (in law) [Lat. *procedere*, to proceed, through Fr.]: Ger. *Rechtsgang, Verfahren, Rechtsverhandlung*; Fr. *procédure*; Ital. *procedura*. The means provided by law for enforcing rights through the action of judicial or administrative tribunals. It includes all matters of process, pleading, practice, and evidence.

(2) The formal mode in which the functions of any branch of government are discharged.

Reformed procedure: an American system of simplified or 'Code' pleading, initiated in New York in 1848, and adopted in England by the Judicature Act of 1872.

In early societies rights often spring from forms. 'It would not be untrue to assert that in one stage of human affairs, rights and duties are rather the adjective of procedure than procedure a mere appendage to rights and duties' (Maine, *Early Hist. of Inst.*, lect. ix. 252. (S.E.B.)

Process [Lat. *procedere*, to proceed]: Ger. *Prozess*; Fr. *procès, processus*; Ital. *processo*. Continuous CHANGE (q.v.). (J.M.B.)

Process (mental): Ger. *psychischer Prozess*; Fr. *processus psychique* (or *mental*); Ital. *processo psichico* (or *mentale*). Continuous change in consciousness, or in mental disposition, or in both.

The continuity of mental process is of two kinds: temporal continuity and dispositional continuity, or continuity of interest. By temporal continuity is meant the fact that each state passes into that which succeeds it without a break in time. By continuity of interest is meant the fact that successive states of consciousness may be stages in the development of a single conative tendency. Continuity of interest may exist without continuity in time, and continuity in time may exist without continuity of interest. I can to-day resume a problem at the point where I left it yesterday. In spite of the interval of time, yesterday's train of thought and to-day's have continuity of interest. Again, while meditating on my problem my attention may be diverted by the arrival of a visitor. There is temporal continuity between my mental processes in attacking the problem and in entertaining my guest; but there is discontinuity of interest. Continuity of interest constitutes in part the bond between one individual consciousness and another, which makes possible which is called the 'collective' mind. I may work at my problem up to a certain point, and then communicate my method and results to another. He may continue the same train of thought, and in his turn communicate his results to me. In this way we may solve the problem in co-operation. Our minds act as if they were one mind, so far as concerns the attainment of the end which we both pursue. This kind of co-operation in thinking and willing constitutes the psychical organism of human society, and binds together the successive generations of mankind. The process, however, though divided among different minds, is individual, not social. Cf. SOCIAL ORGANIZATION, SOCIAL PROCESS, and TRADITION.

Other forms of distinguishable mental process, such as cognition and feeling, have continuity also, which can probably in all cases be reduced to temporal merely (as emotional change produced by external events), or to dispositional merely (as in the continuity of a disturbed cognitive process), or to these two existing together. The further question of the reduction of all phenomenal continuity in change to a principle itself not subject to change, as well as the attempt to consider mental process as an independent system of self-produced changes, leads into metaphysics. (G.F.S.–J.M.B.)

Process (social): see SOCIAL PROCESS.

Proclus. (412–85 A.D.) Educated at Xanthus in Lycia, at Alexandria, and at Athens. Became a celebrated teacher, and died at Athens. The last of the Neo-Platonists to exercise any considerable influence. Cf. NEO-PLATONISM, and ALEXANDRIAN SCHOOL.

Procreation: see REPRODUCTION (in biology).

Prodicus. Born on the island of Ceos in the 4th century B.C. He was a teacher of virtue or the art of living, a Sophist, and taught for money at Athens.

Prodigality of Nature. Darwin's expression (*Origin of Species*) for EXCESS or

This characteristic is regarded as significant zoologically in the evolution of the higher animals, and ethnologically in the differentiation of races. It is measured either by the FACIAL ANGLE (q.v.), or by the subnasal facial, guathic, or alveolar index (Flower), which is the ratio of the length from the basion to the alveolar point, to the length from the basion to the subnasal point or nasion (lines BA and BN in the figure under CRANIOLOGY). When this index is below 98, the skull is orthognathous; when between 98 and 103, mesognathous; when above 103, prognathous. The figures illustrate the difference in appearance of prognathous and orthognathous skulls. (J.J.)

Prognosis and **Prognostication**: see PROPHECY, and MAGIC.

Progress [Lat. *progressus*, advance]: Ger. *Fortschritt*; Fr. *progrès*; Ital. *progresso*. Used loosely for any sort of continuous change towards a terminus, end, or ideal. It is opposed to regress, or change in a reverse direction (also loosely used). See the following topics. (J.M.B.)

Progress (economic). Increased command over the forces of nature for purposes of production, combined, as it generally is, with increased intelligence in utilizing the product for purposes of consumption.

Before the time of Malthus, increase in population would have been regarded as the clearest criterion of progress. After Malthus, population is relegated to the background as compared with production; for instance, in Mill's well-known treatment of the subject. The definition given is based on Bagehot's *Physics and Politics*.

The criterion accepted by most writers of the younger generation to determine whether an economic change did or did not represent progress, would be its effect on the survival of the community which adopted it, in the struggle for existence. (A.T.H.)

Progress (moral and social): see MORAL PROGRESS, and SOCIAL EVOLUTION AND PROGRESS.

Progressive: Ger. *progressiv, fortschreitend*; Fr. *progressif*; Ital. *progressivo*. (1) In medicine: progressive with regard to a disease indicates a gradual sequence of development, often with a predictable order of symptoms.

It serves, along with the words acute and chronic, to indicate types of onset and development of various diseases. Progressive paralysis (also termed general PARALYSIS, q.v., in the insane) is a well-recognized clinical form of insanity in which sequences of stages of increasing debility and dementia occur. Progressive muscular atrophy is a gradual wasting of muscular tissue, beginning in certain muscle groups and extending in a more or less definite order to others. (J.J.)

(2) In logic: proceeding through a linear series in the natural order. Opposed to regressive, or proceeding in a reverse order.

Progressive method: the method which proceeds from generals to particulars.

Progressive sorites: a SORITES (q.v.) in which the premises are so arranged as to proceed from what is regarded as whole to what is regarded as part. See Hamilton, *Lect. on Logic*, xix. (O.S.P.)

Project [Lat. *proiicere*, to throw forward]: Ger. *Projekt* (Sigwart); Fr. *projet*; Ital. *progetto*. (1) A possible course of action conceived simply, but not decided upon.

This follows the usage of Sigwart and Höfler (*Psychologie*, 518, 562), who make Projekt 'ein bloss vorgestelltes Willensziel.'

(2) That which is 'projected' in the second sense given under PROJECTION. (J.M.B.)

Projection: Ger. *Projektion*; Fr. *projection*; Ital. *projezione*. (1) The spatial objectivation of objects in sense perception. See LOCALIZATION (in space).

This usage is vague and descriptive, varying from the mere recognition of a spatial datum to the hypothesis of the spatial projection of states at first purely 'inner' and unspatial. It is also complicated with the hypothesis (Leconte, for vision) that nervous PROJECTION (q.v.), to the periphery, sometimes extends out in lines at right angles to the sensitive surface.

(2) A stage in the genetic construction of objects antecedent to the conscious antithesis between subject and object. This meaning, suggested by Baldwin (*Ment. Devel. in the Child and the Race*, and *Social and Eth. Interpret.*), applies especially to the material of the consciousness of self. The project is considered in contrast with SUBJECT (q.v.) and EJECT (q.v.)—the latter terms designating later phases in the genetic process.

Literature to (1): JAMES, Princ. of Psychol., ii. 31 (with numerous references); many citations in EISLER, Wörterb. d. philos. Begriffe, sub verbo (where projection is made equivalent to spatial localization). (J.M.B.–G.F.S.)

Projection (nervous, or 'eccentric'). (1) The property of the nervous system whereby

stimulations are referred to the periphery of the body or to the end-organs. Cf. LOCALIZATION.

There is considerable scepticism as to whether this is an original property of the nervous system. It is undoubtedly developed by experience, but may probably be considered as in some way having a rudiment in the nerve structure. (J.M.B.–G.F.S.)

(2) Projection system: see RADIATION.

Prolepsis [Gr. *πρόληψις*, anticipation; Lat. *anticipatio*]. A term of the Stoic philosophy denoting a concept derived immediately from perception. It was variously interpreted by ancient and mediaeval writers. Cf. Eisler, *Wörterb. d. philos. Begriffe*, 'Prolepsis.' (J.M.B.)

Proliferation (neural) [Lat. *proles*, offspring, + *ferre*, to bear]: Ger. *Zellvermehrung, Proliferation*; Fr. *prolifération*; Ital. *proliferazione*. The multiplication of nerve-cells by division of the pre-existing cells.

In an early embryonic stage such multiplication is very rapid, and is accompanied by mitosis. In these stages it plays a very important part in the formation of the peripheral nerves and their ganglia. Cf. CONCATENATION and the works there cited. Migratory neuroblasts form proliferating centres in various regions cut off from the ventricular epithelium. Recent writers (Herrick, Turner, Ayers) claim to find centres of permanent proliferation in older stages. The process is then apparently amitotic.

Literature: C. L. HERRICK, Notes on the Brain of the Alligator, J. Cincinnati Soc. Nat. Hist., xii (1890); Contributions to the Comparative Morphology of the Central Nervous System, J. of Compar. Neurol., i. (1891) 21; C. H. TURNER, Morphology of the Avian Brain, J. of Compar. Neurol., i (1891); H. AYERS, The Origin and Growth of Brain-cells in the Adult Body, J. of Compar. Neurol., vi (1896); W. HIS, Die Neuroblasten, &c., Abhandl. d. math.-phys. Cl. d. k. sächs. Gesell. d. Wiss., Leipzig, xv. 313–72 (1889), and Verhandl. d. 10. int. med. Congr., Berlin, ii (1890); C. S. MINOT, Human Embryol. (1892), and Merkel and Bonnet's Ergebnisse, vi (for 1896) (1897); S. PATON, in Contrib. to the Sci. of Med., dedicated to Wm. Henry Welch (1900); A. SCHAPER, Die frühesten Differenzirungsvorgänge im Centralnervensystem, Arch. f. Entwicklungsmech., v (1897). (H.H.)

Proof [Lat. *probare*, to prove, through Fr.; it translates Lat. *probatio*]: Ger. *Probe*; Fr. *preuve*; Ital. *prova*. An argument which suffices to remove all real doubt from a mind that apprehends it.

It is either mathematical demonstration; a probable deduction of so high probability that no real doubt remains; or an inductive, i.e. experimental, proof. No presumption can amount to proof. Upon the nature of proof see Lange, *Logische Studien*, who maintains that deductive proof must be mathematical; that is, must depend upon observation of diagrammatic images or schemata. Mathematical proof is probably accomplished by appeal to experiment upon images or other signs, just as inductive proof appeals to outward experiment. (O.S.P.)

The entire psychological machinery of REASONING (q.v.) is the instrument of proof. The verb prove means to produce adequate proof, which may be either 'direct' or 'indirect,' according as the proof process consists or not of the direct application of a rule or statement to a particular case coming under it.

Literature: LANGE, as cited; VENN, Empirical Logic; JEVONS, Princ. of Sci.; systematic works on logic. See BIBLIOG. C, 1, *b*, and 2, *j*. (J.M.B.)

Propensity and **Propension** [Lat. *pro* + *pendere*, to hang]: Ger. *Neigung, Hang*; Fr. *propension*; Ital. *propensione*. A term used loosely for any sort of more permanent active TENDENCY (q.v.).

Martineau (*Types of Ethical Theory*, ii. chap. v) uses propensions to designate the 'primary springs of action,' i.e. 'organic appetites and animal spontaneity.' James discusses the 'religious propensities' in *Varieties of Religious Experience* (*Gifford Lectures*, 1901).

In view of the meanings given (q.v.) to DISPOSITION, PREDISPOSITION, TENDENCY, IMPULSE, APPETITE, this general usage seems best. (J.M.B., G.F.S.)

Proper (1) and (2) **Propriety** [Lat. *proprius*, one's own]: Ger. (1) *passend, anständig*, (2) *Angemessenheit, Anstand*; Fr. (1) *convenable*, (2) *convenances* (pl.); Ital. (1) *conveniente*, (2) *convenienza*. (1) Fit. See FITNESS (various meanings).

(2) Ethical and social FITNESS (q.v.); but especially restricted to the social, meaning strict conformity to social convention, custom, and expectation. (J.M.B.)

Property [Lat. *proprium*, one's own, belonging to; trans. of Gr. *ἕξις*, a technical term of the Stoics, also of Gr. *ἴδιον*]: Ger. *Eigenschaft*; Fr. *propriété*; Ital. *proprietà, qualità*. (1) One of the logical PREDICABLES