

regards the existence of a material world was reached by Arthur Collier (*Clavis Universalis*), but, like Berkeley, he did not question the independent existence of God and other spirits.

Descartes, Locke, and Berkeley had all assumed the self to be an independent substance, or self-existing entity, and had relied upon the principle of causality to demonstrate the existence of God as a distinct entity. Hume assailed both these positions. He accepts unreservedly the doctrine that all the contents of experience must be some aspect or mode of 'consciousness.' Our world is the 'world of the imagination,' and we can never transcend this. But the concept of cause cannot be relied upon to carry us beyond our own perceptions. The existence of any external cause for our impressions is a matter concerning which we can make absolutely no affirmations. The impressions may be produced by God, by external objects, or by the mind. Belief in the existence of an external world is due to a propensity to feign a separate and continued existence for our perceptions. While, therefore, Hume did not dogmatically assert the sole existence of the self, he had reached the position which Kant characterized as 'a scandal to philosophy and to human reason in general,' that we should have to accept the existence of things without us (from which we derive the whole material of knowledge for our own internal sense) on faith only, unable to meet with any satisfactory proof an opponent who is pleased to doubt it.

Kant sought to meet this position of solipsism by better analysis of the meaning of self-consciousness. He maintains that while all objects of knowledge are necessarily objects of consciousness, the distinction between subject and object, or between the empirical 'self' and the outer world, is a distinction within consciousness, and not a distinction between consciousness and something outside of consciousness. In fact, the external is logically prior to the internal, since it is only as contrasted with the external that the internal self, as existing in time, is definitely conscious of itself as such. Kant, however, was not entirely consistent in his expressions upon this point, and as certain of his later fragments show, he connected the proof for the existence of objects within consciousness with the proof of the existence of things by themselves, since an appearance without something that appears would be a logical absurdity.

Fichte, though making the 'I' the central principle of his system, was not a solipsist, for the 'I' of his science of knowledge was not the individual. His problem was rather the analysis of the general conditions of consciousness. Mill, in his definition of the external world as permanent possibilities of sensation, repeated the Berkeleyian analysis. Recent discussions between Neo-Kantians and Realists (see REALISM) have turned very largely upon ambiguities above referred to.

*Literature:* KULPE, *Introd. to Philos.*, 194 f.; BRADLEY, *Appearance and Reality*, chap. xxi; LADD, *Philos. of Knowledge*, chap. vii; ERHARDT, *Metaphysik*, chap. x; SCHUBERT-SOLDERN, *Grundlagen einer Erkenntnistheorie*, chap. iii; LECLAIR, *Beitr. z. einer monistischen Erkenntnistheorie*, 113 ff.; HAMILTON, *Notes B and C in ed. of Reid*; MILL, *Exam. of Hamilton*, chaps. x f.; VON HARTMANN, *Neu-Kantianismus u. Schopenhauerismus*; VOLKELT, *Erfahrung u. Denken*; BERGMANN, in *Zeitsch. f. Philos.*, cx; KÖNIG and HARTMANN, *ibid.*, xcix, ciii f., cviii f.; SETH, RITCHIE, *TUFTS*, in *Philos. Rev.*, 1893-6; ZELLER, *Vorträge u. Abhandl.*, iii. 225 ff. (J.H.F.)

**Solon.** (cir. 638-cir. 558 B.C.) A native of Salamis, and a merchant by education and profession, he travelled much in Greece, Western Asia, and Egypt, acquiring the knowledge which made him the statesman and lawgiver of his native city. He was the first archon of Athens, and gave to the city the democratic organization which led to its greatness. He died during the war against Pisistratus. He was one of the greatest of 'law-givers' and was one of the 'seven wise men' of ancient Greece. See CODE (in law).

**Solution** [Lat. *solutio*, from *solvere*, to melt]; Ger. *Lösung*; Fr. *solution*; Ital. *soluzione*. (1) The solution of a geometrical problem consists in: (a) describing a construction; (b) proving that that construction would satisfy the requisita of the problem; (c) proving that the construction is possible when the problem has any solution.

(2) The solution of an equation or system of equations has various meanings in different branches of analysis. Only in elementary algebra does it mean giving an algebraical equation of which the unknown forms one member while no unknown enters upon the other side.

(3) The answer to a general speculative problem of pure deductive logic: how can a given form of relationship hold good? (C.S.P.)

**Soma** [Gr. *σῶμα*, body]: same in other

languages. The mortal portion of the body in opposition to the sexual elements, which continue the life in the next generation. Cf. GERM-CELLS.

In this sense the term has been used only since the publication of Weismann's theories (see his *Germ-Plasm*). (C.S.M.)

Following Weismann, somaplasm is used for the substance and tissues of the body constituting the soma in contrast with the germ-plasm of the germ-cells. Only the latter, on Weismann's view, are the bearers of heredity, modifications of the somaplasm having no effect on the next generation. Cf. WEISMANNISM. (J.M.B.)

**Somaplasm**: see SOMA.

**Somatology** [Gr. *σῶμα*, body, + *λόγος*, discourse]: Ger. *Somatologie*; Fr. *somatologie*; Ital. *somatologia*. (1) A synonym for physical anthropology, or the study of the physical part of man.

The use of this term would avoid the confusion between the several meanings attached to anthropology, as well as meeting the need for descriptive adjectives in connection with it. Somatology as a division of anthropology includes an account of the structure of the human body, the skeleton, and internal organs; the proportions of the parts of the body (ANTHROPOMETRY, q. v.) and the special study of the brain; the developmental and comparative facts in regard to the body and body-growth; and throughout, the utilization of all these facts for the differentiation of man from his nearest animal kin, as well as the differentiation of human races, tribes, peoples, nations, or special classes (men of genius, criminals, &c.). It would thus constitute, in the most comprehensive sense, the description and systematic exposition of our entire knowledge regarding the body, with special reference to the application of such knowledge to the problems of anthropology. See for further details and for literature ANTHROPOLOGY, and ANTHROPOMETRY.

(2) In theology: see PSYCHOLOGY (empirical and rational). (J.J.)

**Somatopleure** (in embryology) [Gr. *σῶμα*, body, + *πλευρά*, wall]: Ger. *Somatopleura*; Fr. *somatopleure*; Ital. *somatopleura*. The primitive wall of the body formed by the union of the ectoderm and outer or somatic leaf of the mesoderm.

The term was introduced by Michael Foster in 1875. It is often used incorrectly in Germany to designate the somatic mesoderm.

*Literature:* FOSTER and BALFOUR, *Embryology*; F. M. BALFOUR, *Compar. Embryol.* (1881); MINOT, *Human Embryol.* (C.S.M.)

**Some** (in logic): Ger. *einige*; Fr. *des, quelques*; Ital. *alcuno, qualche*. (1) The mark of a 'particular' proposition, i. e. of that modification of the subject of a proposition which limits the predication to an indefinite part of the subject class. See PROPOSITION, IV.

It is thus equivalent to 'at least some' and does not assert or deny concerning all; i. e. it is not equivalent to 'only some' (see definition 2). (J.M.B.)

(2) A mark which fits a proposition to be the precise denial of a universal proposition. Cf. ALL (2). (C.S.P., C.L.F.)

The latter definition is held by those who hold that the particular asserts the existence of the subject while the universal does not. This is, however, a matter for difference of opinion. Definition (1) is the commonly accepted one. (J.M.B.)

No practical difficulty need arise from this difference of opinion: it is only necessary to add statements of such existences as the parties to the discussion believe to be involved. (C.L.F.)

**Somnambulism** [Lat. *somnus*, sleep, + *ambulare*, walk]: Ger. *Schlafwandeln, Somnambulismus*; Fr. *somnambulisme*; Ital. *somnambulismo*. Literally, walking in one's sleep; more generally, a mental condition of partial sleep, or intermediate between sleep and waking, in which purposive acts are performed.

Talking, singing, writing, answering questions in sleep without awaking, may thus properly be regarded as instances of somnambulism. The presence of a sleep condition is shown by the limitation of sensibility, frequently by the closure of the eyes, by the unimpressiveness to ordinary stimuli, and by the complete forgetfulness of what was done during the somnambulatory state. Some of the senses are automatically alert, particularly the muscle sense: thus somnambulists rise from their beds, properly direct their steps, avoid obstacles, and walk along dangerous places, such as the parapet of a roof, with safety and freedom from fear. In other cases hearing is responsive to suggestions made by bystanders. In many cases the train of thought carried out is a continuation of that with which the mind was occupied during the day. The oft-quoted instance of the mathematician who was surprised to find written out at his