

have to the pragmatist no adequate 'reason for being.'

The definition by W.J. above, however, seems, by including 'experiences to be expected,' to broaden the application of the principle.

*Literature*: besides the works of PEIRCE and JAMES, as cited, see CALDWELL, Pragmatism, in Mind, Oct., 1900; MILLER, Philos. Rev., viii. (1899) 166; cf. CLIFFORD, Lect. and Essays (1886), 85 ff.; also the literature of SELECTIVE THINKING. (J.M.B.)

**Praiseworthy**: Ger. *preiswürdig*, *lobenswerth*; Fr. *méritoire*; Ital. *lodevole*. See APPROBATION, MERIT, and WORTH.

**Prayer** (rite of) [Lat. *precarious*, from *precarari*, to beseech]: Ger. *Gebet*; Fr. *prière*; Ital. *preghiera*. The most characteristic form of worship, and consisting in spoken or unspoken petitions to the object of worship, and accompanied ordinarily with praise, confession, and thanksgiving. (A.T.O.)

**Pre- and Post-millenarianism**: see MILLENARIANISM. *Pre-millenarianism*: the belief that the second coming of Christ is to precede the millennial era, and that he is to reign in person on earth during that period.

*Post-millenarianism*: the belief that the second advent will occur at the close of the millennial period and be followed by the general resurrection and the last judgment.

*Literature*: see references under MILLENARIANISM. (A.T.O.)

**Precise** [Lat. *praecisus*, abridged through Fr.]: Ger. *präcis*; Fr. *précis*; Ital. *preciso*. (1) Having that element of accuracy which consists in strict curtailment of superfluity. A precise narrative is one from which subjective interpolations have been rigidly excluded. A precise definition is one from which inessential characters are excluded. The definition of a circumference as 'an untermi- nated line in a plane, everywhere at the same distance from a point within,' will be rendered precise by cutting off the word 'within.' In English the word is used more vaguely than in French.

(2) In physics it means having [a very small error in consequence of the conscientious application of the most refined methods of measurement.

(3) In older writers the adjective is sometimes applied to a noun to signify that that noun is to be understood in its precise sense, without reference to accidental characters often associated with it. (C.S.P.)

**Precision** [Lat. *praecisio*, through Fr.]:

Ger. *Präcision*; Fr. *précision* (in all the senses of the English word; but in the technical logical sense it is obsolete in Fr.); Ital. *precisione*. (1) A high degree of approximation, only attainable by the thorough application of the most refined methods of science.

(2) Its earlier meaning, still more or less used by logicians, is derived from a meaning given to *praecisio* by Scotus and other scholastics: the act of supposing (whether with consciousness of fiction or not) something about one element of a percept, upon which the thought dwells, without paying any regard to other elements. Precision implies more than mere discrimination, which relates merely to the essence of a term. Thus I can, by an act of discrimination, separate colour from extension; but I cannot do so by *precision*, since I cannot suppose that in any possible universe colour (not colour-sensation, but colour as a quality of an object) exists without extension. So with *triangularity* and *trilaterality*. On the other hand, precision implies much less than dissociation, which, indeed, is not a term of logic, but of psychology. It is doubtful whether a person who is not devoid of the sense of sight can separate space from colour by dissociation, or, at any rate, not without great difficulty; but he can, and, indeed, does so, by *precision*, if he thinks a vacuum is uncoloured. So it is, likewise, with space and tridimensionality.

Some writers called every description of abstraction by the name *precision*, dividing precision into the real and the mental, and the latter into the negative and the positive; but the better usage named these *abstraction*, divided into *real* and *intentional*, and the latter into *negative* (in which the character from which abstraction is made is imagined to be *deniable* of the subject prescinded) and into *precisive abstraction* or *precision*, where the subject prescinded is supposed (in some hypothetical state of things) without any supposition, whether affirmative or negative, in respect to the character abstracted. Hence, the *brocard*: *abstrahentium non est mendacium* (generally enunciated in connection with the *De Anima*, III. vii. 7). Scotus (in II. *Physic.*, *Expositio* 20 *tactus* 18) says: 'Et si aliquis dicat, quod Mathematicis tunc faciunt mendacium: quia considerant ista, quasi essent abstracta a motu, et materia; quae tamen sunt coniuncta materiae. Respondet, quod non faciunt mendacium: quia Mathematicus non con-

siderat, utrum id, de quo demonstrat suas passiones, sit coniunctum materiae, vel abstractum a materia.' This is not the place to treat of the many interesting logical, as well as psychological, discussions which have taken place concerning precision, which is one of the subjects which the scholastics treated in a comparatively modern way, although it leads directly to the question of nominalism and realism. It may, however, be mentioned that Scotus in many places draws a certain distinction variously designated by him and his followers (its nature and application is perhaps made as clear as anywhere in the *Opus Oxon.*, III. xxii. qu. unica, 'Utrum Christus fuerit homo in triduo,' i. e. between the crucifixion and the resurrection), which the Thomists mostly dispute. There is some account of the matter in Chauvinus, *Lexicon* (2nd ed.), under 'Praecisio.'

Hamilton has some remarks on the use of the words *abstract* and *praescind*, which could hardly come from any other man of equal learning and power, because no other such man is liable to be utterly confused by a slight complication. The remarks are mentioned here, because they have misled some students (*Lects. on Met.*, xxxv; *Lects. on Logic*, vii). (C.S.P.)

**Precocity** [Lat. *praecox*, early, ripe]: Ger. *Frühreife, Altklugheit*; Fr. *précocité*; Ital. *precocità*. The relatively early development of a physiological or psychological function.

Wherever the time of appearance or the rate of development of a given power has been measurably determined, any marked anticipation of this period or development may properly be termed precocity. Infants may thus be precocious in their acquisition of the power to walk or to speak, and the like. There may also be a special precocity of the musical sense, of artistic capacity, of motor skill, &c. The term is most frequently used with regard to general intellectual attainments in early years. Instances of unusual precocity in the lives of men of genius are readily cited, and have led to the discussion of the general relations between precocity and genius (see Galton, *Hereditary Genius*). It is also stated that precocious children occur relatively often in families some of whose members present neurotic traits, and are themselves liable to mental disorder. Cf. GENIUS. (J.J.)

**Preconception** [Lat. *prae* + *conceptio*]: Ger. *Vorbegriff*; Fr. *préconception*; Ital. *pregiudizio*. (1) Used vaguely and popularly for anticipation with reference to a particular

idea or event which, carrying the suggestion of prejudgment or mental bias, is said to be preconceived.

(2) The term might well serve a technical use as designating the mental process of a dispositional or notional character preliminary to the determination of a concept. See CONCEPTION. (J.M.B.)

**Pre designate** [a word formed by Sir W. Hamilton by composition from Lat. *prae*, in front of, and *designatus*, marked out]: (not in use in the other languages). (1) A term applied by Hamilton to verbal propositions whose quantity, as universal or particular, is expressed (*Lects. on Logic*, xiii).

(2) By C. S. Peirce applied to relations, characters, and objects which, in compliance with the principles of the theory of probability, are in probable reasonings specified in advance of, or, at least, quite independently of, any examination of the facts. See PROBABLE INFERENCE (2).

For example, the laws of England will, in the long run, cause the majority of English sovereigns to be males. In that sense it was unlikely that the successor of William IV would be a queen. But it would be absurd to say this after knowing that there was no heir to the crown so near as the Princess Victoria; and, in like manner, to say that it was not very unlikely that Queen Victoria's successor would be a queen was true enough as long as the character of her progeny was not known, or, if known, was not taken account of, but false considering the number of her sons and grandsons. In such cases of deductive probable inference the necessity of the pre designation is too obvious to be overlooked. But in indirect statistical inferences, which are mere transformations of similar deductive consequences, and the validity of which, therefore, depends upon precisely the same conditions, the necessity of the pre designation is more often overlooked than remarked. Thus Macaulay, in his essay on the inductive philosophy, collects a number of instances of Irish whigs—which we may suppose constitute a random sample, as they ought, since they are to be used as the basis of an induction. By the exercise of ingenuity and patience, the writer succeeds in finding a character which they all possess, that of carrying middle names; whereupon he seems to think that an unobjectionable induction would be that all Irish whigs have middle names. But he has violated the rule, based on the theory of probabilities, that the