

PLEXUS — PLURALITY OF CAUSES

It connotes more internal dependence, however, than does the term aggregate. (J.D.)

Plexus (in neurology): Ger. *Nervennetz*; Fr. *plexus, réseau*; Ital. *plexo (nervoso)*. (1) A group of anastomosing fibres outside the central nervous system, especially in the course of the peripheral nerves. It is best to refer to these as Nerve-plexuses or Neuro-plexuses.

The term does not imply protoplasmic union, but merely the interweaving of nerve-fibres. Protoplasmic union of dendrites and neurite processes of cells may be termed Neuroreticulum. Cf. NEUROPLEM.

(2) Disperse ganglia, especially those of the SYMPATHETIC SYSTEM (q. v.; cardiac, mesenteric, and hypogastric plexuses). Such an aggregate may be termed a Ganglion-plexus.

(3) Vascular intrusions of the tela (cf. BRAIN) or thin parts of the neural tube into the cavities of the brain. Often in combination, as Metaplexus. The descriptive adjective 'choroideus' is now frequently omitted. (H.H.)

Plotinus. (205-270 A.D.) Born at Lycopolis, Egypt, he went to Alexandria, 232, and for ten years studied under Ammonius Saccas. In 242 he accompanied the Emperor Gordianus to Persia to learn the Persian and Indian philosophies: the emperor was murdered, and he went to Rome, where he taught philosophy with great success. Retired into solitude, 269. Cf. NEO-PLATONISM.

Pluralism [Lat. *plures*, several, many]: Ger. *Pluralismus*; Fr. *pluralisme*; Ital. *pluralismo*. The theory that reality consists in a plurality or multiplicity of distinct beings.

It may be materialistic, as with the ATOMISTS; hylozoistic, as with Empedocles; or spiritualistic, as with Leibnitz. Or, again, it may be conceived as indifferent, as the unknowable reals of Herbart which produce the phenomena both of consciousness and of matter. While opposed to monism as a theory of the essential and ultimate unity of all being, it may agree with it in opposition to a dualistic theory of the opposition of subject and object. The chief difficulties with the system are (a) in the idea of God (as with Leibnitz it seems to be both the highest of the monads, and the system of monads as such), and (b) in the ideas and facts of relationship, order, law, or harmony: if this harmony exists, we seem to have not a sheer plurality, but already an organized system; if it does not we have only chaos, no universe; and (c) in the idea of interaction. This, however, may be regarded only as a special case of (b).

It need hardly be mentioned that we have here to do with one of the most serious problems of philosophy; one which was among the earliest to attract attention, and about which the conflict is most stubborn. The needs which pluralism endeavours chiefly to serve are (1) the possibility of real change, or an objectively valid dynamic view, since monism seems to make change a mere incident in the totality of being, or even a partly illusory phenomenon (Heraclitus and Hegel, however, seem to be dynamic monists in asserting the one reality to be essentially process); (2) the possibility of real variety, particularly in the differences of persons, as monism appears to lend itself to a pantheistic view, regarding all distinctions as simply limitations of the one being; (3) the possibility of freedom, as a self-initiating and moving power inherent in every real *qua* real.

The term pluralism is very recent in English (it is used as early as Wolff in German). Kant uses the term as opposed to egoism and solipsism—the tendency to regard self as only one among many (*Anthropology*). Bowne uses the term incidentally in *Philos. of Theism*, 57; James has probably done more than any one else to give it currency, in his *Will to Believe* (see Preface in particular); and Howison employs it to denote the substantially distinct existence of free ethical personalities (*Limits of Evolution*, and in Royce's *Conception of God*, xiv). (J.D.)

Plurality [Lat. *pluralis*, numerous]: Ger. *Vielheit, Mehrheit*; Fr. *multiplicité, pluralité*; Ital. *pluralità*. More than oneness. See MANIFOLD, MULTIPLICITY, and (especially) UNITY and PLURALITY. Cf. also NUMBER.

According to Eucken (*Philosophische Terminologie*, 63), Scotus Erigena was the first to use *pluralitas* as a technical philosophical term. (J.D.)

Plurality of Causes: Ger. *Mehrheit der Ursachen*; Fr. *pluralité des causes*; Ital. *pluralità delle cause*. John Stuart Mill, in his *System of Logic*, III. v. 3, argues that 'the cause, philosophically speaking, is the sum total of the conditions positive and negative taken together; the whole of the contingencies of every description, which being realized, the consequent invariably follows.' This has been called the doctrine of 'Plurality of Causes.'

This doctrine was not at all new when Mill's *Logic* was put forth. It had been the general view since the Aristotelian phraseology had been given up, and had even been

common under the Aristotelian régime, although the word cause was then loaded down with many different meanings. But when Aristotelians used such phrases as the cause of a *thing*, or of an historical *event*—not of any *fact*, or abstract element of the event, expressible by a proposition, but of the whole *event* in its concreteness, such that no proposition, or book of propositions, or library of books of propositions, could begin to describe it adequately,—when Aristotelians used such phrases, of course they must mean something quite different by a cause, or efficient cause; and in fact we find that they fully recognized that any concrete thing or concrete event has multitudes of ‘efficient causes.’ In some cases they were able to mention one of these as the *principalis efficiens*. In other cases they spoke of one cause as being *principalior* than another. The Aristotelian doctrine did an incalculable amount of practical mischief, due to its utter confusion; and this confusion was owing to the attempt to give a meaning to the efficient cause of a concrete thing or concrete event.

Mill recognizes the enormous importance of clearing up the notion of cause. ‘The notion of cause,’ he says, ‘should be, with the utmost practicable degree of precision, fixed and determined.’ Nevertheless, so far is he from making his reader understand that the logical antecedent and consequent are not concrete things or events, but abstract elements thereof precisely and fully expressible by propositions, that after repeated re-readings of what he says, both in his *Logic* and elsewhere, one can but be left extremely doubtful whether Mill regarded the effect, or consequent, as a concrete event (he often says it is ‘an event’) or an abstract element of an event. He, and still more his followers, often seem to speak as if there were no single cause of an effect, in most cases. (C.S.P.)

It seems evident, however, that Mill—‘speaking philosophically,’ as he says—is not concerned with mere logical or abstract antecedence and consequence, but with the statement of the ‘sum total of the conditions’ of a concrete event. Modern idealism puts the same truth, ‘philosophically speaking,’ in the doctrine that reality is a system the statement of which in its entirety is necessary for the statement of any part (fact, event, &c.) of it. See CAUSE AND EFFECT, and CAUSE AND CONDITION. (J.M.B., K.G.)

Plutarch. (cir. 46—cir. 120 A.D.) A famous Greek essayist and biographer. His writings

show a mingling of doctrines from various sources, Greek, Egyptian, Persian, and Italian. Cf. ALEXANDRIAN SCHOOL.

Pneuma [Gr. *πνεῦμα*, air, breath, spirit]. The vital soul or animating spirit.

It can be defined, however, only with reference to its historical use. Few terms, indeed, embody within themselves a more interesting combination of various sources and motives than does this one. The three chief elements in it are derived from Greek philosophy, from Greek medical science, and from Hebrew religion. The air was conceived as active (the wind) in Greek thought, and as a source of life in plants, animals, and men. Anaximenes, because of its restless, apparently self-caused, activity and its obvious connection (in breathing) with life, identified air with the soul of the universe and of the individual. While subsequent philosophy limited its scope and value, pneuma was universally accepted as a fact, and as something in man which mediated between his life and the larger world, and also between his strictly physiological functions and his higher spiritual nature. Through its relation to warmth (the living body is always warm and always inhaling air) it is the force which organizes the matter of the body, permeating, because of its fineness and activity, all parts. The Greek physicians accepted this doctrine and elaborated it. Praxagoras discovered the distinction between veins and arteries, and regarded the latter as carrying air (since they are empty in a dead person), the former blood; the circulation of this air stands in close relation to health and sickness. His successors regarded this circulation as most important in travelling between the heart as vital centre and brain as centre of thought, and hence as in some sense a connecting link of the physical and psychical.

Meanwhile, the later Peripatetics had taken up the tale and made the pneuma the physiological basis of all psychical activities. The Stoics made the conception (again as with Anaximenes) a cosmic one—it is the objective union of the spiritual and material, God and the world. Earth and water are only condensed air (pneuma), and the psychical is but the highly refined residuum. Meantime Hebrew thought had also conceived the soul as primarily a form of ‘air,’ and made no difference between it, the wind, and respiration. But since it is regarded (in the Old Testament) as breathed into man by God, it loses its materialistic connotations; it is