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same kind of matter, or of the same chemical element, must have the same mass. A series of masses proportional to the masses of different kinds of atoms are called the atomic weights. For example, if we take the mass of an atom of carbon as unity, then that of an atom of oxygen will be about 8, of carbon dioxide 44. These numbers are 8/12, relatively, since nothing is known of the absolute mass of any one atom. Cf. Chemical Synthesis.

For the atom in philosophy, see MOIRAN.

Molecula. Most substances with which we are familiar are compounded of various elements; hence these smallest particles must be capable of subdivision into these elements, and therefore cannot be atoms. These smallest portions, particles which cannot be divided without changing the chemical properties of the compound, are called molecules. The distinction between an atom and a molecule is the latter is subject to division, while the former is not.

Elements are the different kinds of matter which cannot be decomposed, and which therefore make up the substance of the material universe. From a purely logical point of view, the distinction between an element and a compound would seem to be relative to our knowledge at the moment. Possibly many of what we call elements are compounds which, if we had not proceeded to decompose them, the idea that all matter may be of one kind, and all atoms be really molecules made up of different arrangements of the same kind of prismatic atoms, has been widely entertained, and may be well founded. But it is a significant fact that the atoms in connection that no progress is being made in the way of decomposing the substances, but rather the idea of a molecule in our modern chemistry as an element has been decomposed or transformed into another. This distinction, however, is not between elements tomodify compounds is therefore a real one in kind, whether, in the absolute sense, an atom or of a compound.

Matter and Form: See: Matter (substances) and its relation to the form; f. Ind. materiae s. forma.

The word matter (Lat. materia, which was used to translate the Gr. ἔννεστιν, s. υφής), is a term used in Greek science which, used to translate the Gr. ρύπα and χώμα, though the latter is more exactly represented by the English words, is often employed where υφής, figure, or χώμα, shape, would be near equivalent. The Greek expressions χώμα and ρύπα, and υφής, are nearly synonymous.

The distinction of matter and form was first made, apparently, by Aristotle. He almost involves his metaphysical doctrine; and he is almost as remarkable for his capacity as a naturalist as for his capacity in physics and metaphysics. Various aspects of his thought before his mind the fact that all eggs are very much alike, and all seeds are very much alike, while the animals that grow out of the one, the plants that grow out of the other, are as different as possible. Accordingly, his notion of germinal being, not amounting to existence; while his entelechy is the perfect thing that ought to grow out of that form. Matter, which he associates with stuff, timber, wood, is the unmodified element of a thing, which is made up of a germinal being, but which is not necessarily a form.

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Incorporeal form: a form not subject to corruption.
Individual form: in one of the theories of individualization, this was the form of the individual, which in matter acquired the power of individualizing whatever floated or seemed accidental to it, so that it could give an occult modus operandi. Among the followers of Bacon we, at first, hear a great deal about forms. Boyle wrote whole books about them. But the distinction of matter and form was not calculated to further such inquiries as theirs. It is adapted to expressing phenomena of life. It might be twisted to such a purpose as Gilbert put it to (see Astral form), but it was not suited to the mechanical philosophy of Boyle, and only led to wordy and sophistical discussions.

Participate form: a form considered as united with matter.
Preparatory form: a term used by Boyle where dispersen form would be more technical. He says, 'The preparatory form is but (if I may so speak) a harbinger that discourses to the matter to receive a more perfect form, which if it is not to be succeeded by any other more noble, is entitled the specific form of that body; as, in the embryo, the vegetative and the sensitive soul is but preparatory to the rational, which alone is said to be the specific form of man.' (See Considerations about Subordinate Forms).

Physical form: such forms as may form the objects of empirical sciences. Of course, the empirical form was very differently understood during scholastic times and in the 17th century. But the above definition contains very both uses.

Primary form. There is no such well-received term of form materialism, but a remark of William Gilbert leads us to suppose that medics used another meaning to it. It is the form which per se constitutes a species. Called also specific form. Radical form: see Astral form.

Sensible form: Though it chances that Aristotle nowhere distinguishes sensible into eleatic and sensible, yet his followers did. Sensible forms are those which the outward senses distinguish; intelligible are those which the inward senses distinguish.

Significant form: a Thomistic term, a form distinguished by a name. Simple form: a form without matter. 'Fare simplex, esuit purus actu, esolu deum,' says St. Thomas.

Specific form: see Principal form.

Substantial form: a form capable of existing separate from matter; as Aquinas holds that the angels and departed spirits are.

Substantial form: a form which constitutes a nature, i.e. a species or genus. Thus, the substantial form of a fish is the form of the existing species, and not the accidental form of a fish; the substantial form of an animal is not the accidental form of an animal.

Matter is what we have supposed to characterize the four elements.

Example form: an idea. Final form: see Complete form.

General form: the form of a genus, a term which either depends upon matter while it is being made, nor after it is made; a term employed in the theological doctrine of creation.
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than to call it an abstraction. If the distinction of matter and form could have any value at all, it was the substantial forms that were properly speaking, forms. If the Scotists could really specify any natural class, any mode of being, it was at that time in any case the condition to raise any just doubt upon them when they were perfectly justified in giving a name to the intelligible characteristics of that class, and that was all the substantial form made any pretension to the matter. Their other and principal faults, which may with justice be called a sin, since it involved a certain moral incongruity, was that they set up their idle logical distinctions as preceding all physical inquiry. The physicists and Scotists, being intent upon a widely dispersed purpose, could not understand one another. There was a tolerably good excuse for the physicist, since the Scotist was of an abstract and technical kind not easily understood. But there was no such excuse for the Scotist, since that he was so engaged with his metaphysics that ordinary human needs had lost all practical aspect. All through the 18th century and a large part of the 19th, scholastics against the monstrance of the scholastic dogmas were entities continued to be part of the stock-in-trade of the Christian, and it is just with the prevalent nominalism. But nowadays it is very clear that when physical science gives rise to new and more to scholastic realism (limited closely to its formal aspect) than it does to nominalism, a view of the history more that here put forward is beginning to prevail.

In the following term, mostly Kantian, there is a great deal more of philosophic clarification.

Form of corporeity: a very common term of scholasticism, originating with Aquinas and used by Aquinas (Summa Theol., pars. 1. cap. 15., q. 9, a. 1.) and particularly by Scoto (in his great discussion Opera Omnia, IV. dist. 38, q. 9, b. beginning "De secundo articulo dici") who was a follower. More like the rational soul, being purely spiritual, cannot confer corporeity upon the bodily, but a special form, the form of corporeity, is requisite. Saucer and oven, generally included, as well as Henry of Ghent, denied this in the general that a soul has but one form. Thus a great metaphysical dispute as to the study of the doctrine of transcendentals. But Suarez, De Sapientia et Prudentia in De Anima, dist. 16, which is in the Lyons ed. of Boston, tom. ii. Form of cognition, in Kant's doctrine, is that element of knowledge which the mind must experience in order to be apprehended by the mind. Kant seems to have been thinking of legal forms which must be complete in order to give standing before a court. So an English sergeant, in order to be convicted, must be a "form of matter," or in an intensity of thinking for Romish decrees which he probably respects with greatcoolness. Kant's definitions are chiefly the following:—

"In the phenomenon, which corresponds to the impression of sense, I call the matter of it; while that which constitutes the fact that manifestation of the phenomenon is intuited as ordered in certain manner, I call the form of the phenomenon" (Krit. d. Kreis von Verstand, 1st ed., 20).

"All transcendental unity of the synthesis is an acquisition, through which, consequently, all objects of possible experience must a priori be represented" (Krit. i. Supp., 186).

"There are two factors in cognition: first, the matter of the phenomenon, which has not, and must not, any corporeal existence; second, the form, which is the several which serves as a rule" (ibid., 206).

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For just as phenomena have no existence in themselves, but are merely relative to the mind, as having sense, so laws do not exist in themselves, but are merely relative to the mind in which the phenomena appear. Hence it is that mind exercising understanding (and not mind as passive) is said to be its subject and predicate, while the copula is its form. But speaking formaliter, the matter of a proposition is, as we familiarly say, the 'matter of fact,' to which the proposition relates, or as defined by the substantius, 'habitudo extensior adinoctio.' The second treatise of the Summulae of Petrus Hispanus begins with the words: 'Propositiones simpliciter est materia; scilicet, arbitrari, contingens, et remota. Naturalia est illa quae praecedit substantiam vel propositionem; ut, homo est animal; vel, homo est animalis. Corpusque est illa quae praedictum potest ad alia substantias praestare; subiecti corporamentum; ut, homo est animal um, homo est animalis; non est ille in qua praedictum noster censetur esse subiectum; ut, homo est animus.'

For the immediate matter in the three propositions: the remote, the third term.

Form of force: the concept by which the copula is constituted. The copula is not, and must not, any corporeal existence, but it is a form, which is the several which serves as a rule.

Maxim

Maxim (in ethics) [Lat. maxima sententia, ostentatio, testis (bright): Gr. MAXME, Fr. maxime; It. massimo. (1) Any important principle for the regulation of conduct; (2) A technical term in Kant's ethics: a practical principle regarded by the agent as valid; (3) A technical term in Kant's ethics: a principle regarded by the agent as valid; in this latter sense a maxim is distinguished from a practical law. The latter is regarded as a principle, valid both for the will of the every rational being. Morality consists, according to Kant, in the objective law becoming also the subjective maxim of the will; and his moral imperative is accordingly expressed in the terms, 'Act so that the maxim of thy will can always be a principle of universal legislation.' Cf. Kant's Kritik, Prof. Verum, Pf. I. II. chap. § 51.

Maxim (in logic). A widely received general assertion or rule.

The earliest writers, so far as has been shown, used maxima as a substantive, as had Albertus Magnus and Petrus Hispanus. The formantes (Lat. maxima) exercises constitute the seventh of thirteen clauses of propositions, which may be accepted, though they are uncertain, so that they differ widely from dogmatism, or axioms. He says, Maxima propriae opinionum esse; and non recipiuntur nisi in quantum sunt manifestae.

It putit vulgus communis et et simplicius et non perit quod sinit primum ex uti veritatem communem commutare intellectum subscripti est, quia praedicabo; Modus est tunc, quod, etc. Hamilton quotes, but gives as unverifiable reference to, a sentence in which Albertus nunc maxima another name for a syllogism. Petrus Hispanus (Summulae, v., maxima est propugione. quos est sermo prior nullus nactus; and he divides commonplaces into two kinds, called Maxim and Difference of Maxim.

The general conception was so generally followed that it is surprising that Præis's contribution of it to Albertus (who simply copies the Summulae here, almost verbatim) should have found any acceptance. 'Humberville and other early English take the word from the Summulae. It was also adopted into English law. The meaning now tends to be extended to anything which is recognized as the form of the proposition, as said to be a true trinity proposition distinct and isolation conclusion ex praecipue necessario consecutum.' But Kant, in the logic of the transcendental idealism, makes the premises the matter, and the conclusion the form. (c.a.r.)

Maximus (legal): Sec. De Veritate, Grund- sache, vol. 1, (1): maxim of reason as a substantive principle derived not from the character of the subject, but from the interest of reason, or the interest of the common good. Logik, by Friedrich (Einleitung III) he defines it as the reason of reason as a principle derived from different ends. (C. R. P.)

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The use of maxima is common to all

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