abandonment

MODERN EUROPEAN PHILOSOPHY An experience gained through realizing that there are no objective principles or authorities to guide one's life. According to **existentialism**, this experience helps us to recognize that one cannot attain **authenticity** by appeal to God or to philosophical systems. We should each understand our own unique existential condition, reject bad faith, and assume full responsibility for life. The conception of abandonment is hence related to the existentialist account of the autonomy of the agent.

"When we speak of 'abandonment' – a favourite word of Heidegger – we only mean to say that God does not exist, and that it is necessary to draw the consequence of his absence right to the end." Sartre, Existentialism and Humanism

abduction

PHILOSOPHY OF SCIENCE **C. S. Peirce**'s term for the logic of discovery, a creative process that is one of the three fundamental types of reasoning in science, along with **induction** and **deduction**. When we encounter a new phenomenon that cannot be explained through the application of a general law, we should pick out certain characteristic features of this new phenomenon and attempt to find relations among these features. After forming several theories or hypotheses that might explain the phenomenon, we should select one of them to test against

experience. Such a process of reasoning to form empirical theories or hypotheses for testing is called abduction. Peirce also called it retroduction, hypothesis or presumption, but other philosophers have normally called it induction. Peirce distinguished abduction from induction by defining induction as the experimental testing of a theory. He held that abduction is what Aristotle discussed as *apagago* (Greek, leading away, substituting a more likely premise for a less acceptable one).

"Presumption, or more precisely, abduction ... furnishes the reasoner with the problematic theory which induction verifies." **Peirce**, *The Collected Papers*, vol. II

Abelard, Peter (1079–1142)

Medieval French philosopher, born near Nantes, Brittany. Abelard, whose main concern was logic, made valuable contributions to discussion of issues such as inference, negation, predicate-expressions, and transitivity. He sought to discuss theological problems by analyzing the propositions used to state these problems. He steered a middle course between realism and nominalism and maintained that the reference of a universal term is not necessarily something that exists. In ethics, he focused on the intention of the agent rather than on the action itself and considered sin to be an intention to act against God's will and virtue to be living in love with God. His major works include Dialectica, Theologian Scholarium, Ethics (Scito te ipsum, or Know Thyself) and Dialogue between a Christian, a Philosopher and a Jew. He also wrote commentaries on Porphyry's Isagoge and Aristotle's Categories and De Interpretatione. The story of love between Abelard and Heloise has fascinated many later generations.

abortion

ETHICS The intentional killing of a fetus or fertilized human egg by causing its expulsion from the mother's womb before its birth. Whether abortion should be morally permitted has been intensively debated in the past few decades and has become a major political and legal issue in many industrialized countries. One focus of the debate is on the moral status of a fetus. Is a fetus a person with a substantive right to life? The anti-abortion argument holds that a fetus is already a person and therefore should be within the scope of the moral rule that "you should not kill." This view leads to a discussion concerning the concept of personhood, that is, at what stage between conception and birth does a fetus becomes a person? Another focus concerns the rights of the pregnant woman. Does she have a right to bodily autonomy, including the right to decide what happens to her own body? Even if a fetus is a person, how shall we balance its rights and the woman's rights? Still another problem concerns the extent to which we should take into account the undesirable consequences of the prohibition of abortion, such as poverty and overpopulation. Different sides of the debate hold different positions resulting in part from the moral principles they accept. There is currently no common basis to solve all the disagreement. Nevertheless, abortion, which was legally permitted only in Sweden and Denmark until 1967, has become accepted in the majority of Western countries.

"Induced abortion is the termination of unwanted pregnancy by destruction of the fetus." **Rita Simon,** *Abortion*

Absolute, the

METAPHYSICS [from Latin *absolutus*, in turn originating from *ab*, away, from and *solvere*, free, loosen; free from limitations, qualifications or conditions] To call something absolute is to say that it is unconditional or universal, in contrast to what is relative, comparative or varying according to circumstances. In metaphysics, the Absolute, as a technical term, is a single entity that is ultimate, unchanging, overriding and all-comprehensive. **Nicholas of Cusa** uses this expression to refer to **God**. Subsequently, the Absolute is always associated with concepts such as the one, the perfect, the eternal, the uncaused, and the infinite and has been regarded as the reality underlying appearance and providing rational ground for appearance.

The revival of the notion of the Absolute in modern philosophy derives from the debate in the 1770s between Mendelssohn and Jacob about Spinoza's definition of substance. Schelling, employing Spinoza's notion of substance, defines the Absolute as a neutral identity that underlies both subject (mind) and object (nature). Everything that is mental or physical is an attribute of the Absolute or of "indefinite substance." He further claims that the Absolute is a living force, an organism, and something that is self-generating rather than mechanistic. Hegel claimed that the Absolute is the unity of substance and its modes, of the infinite and the finite. Such an Absolute is both a substance and a subject, developing from the underlying reality to the phenomenal world and reaching absolute knowledge as its highest phase. Thus, the Absolute is a selfdetermining activity, a spirit, and a concrete dynamic totality. Its development mirrors the development of knowledge. Hegel's metaphysics sought to work out the process and implications of this development.

In the twentieth century, this term is particularly associated with **Bradley**, who conceives the Absolute to be a single, self-differentiating whole. Antimetaphysical thought argues for the elimination of the Absolute as an entity that cannot be observed and that performs no useful function in philosophy.

"Absolutes are the limits of explanation, and as such they have been the main theme of traditional philosophy." **Findlay**, *Ascent to the Absolute*

absolute conception

METAPHYSICS A term introduced by Bernard Williams in his study of **Descartes** for a conception of reality as it is independent of our experience and to which all representations of reality can be related. To gain such a conception requires overcoming the limitations of our enquiry and any systematic bias, distortion, or partiality in our outlook. Such a conception may enable us to view our representations as one set among others and to avoid assessing the views of others from our own standpoint. Williams claims that our notion of knowledge implies that such a conception is possible.

"This notion of an absolute conception can serve to make effective a distinction between 'the world as it is independent of our experience' and 'the world as it seems to us'." **B. Williams**, *Ethics and the Limits of Philosophy*

absolute idea

METAPHYSICS The absolute idea, for Hegel, is equivalent to absolute truth in his Phenomenology of Mind and to the absolute in his Logic. It is also called absolute spirit. For Hegel, an idea is not something mental or separate from particulars, but is the categorical form of spirit. The absolute idea is the idea in and for itself, an infinite reality and an all-embracing whole. It exists in a process of selfdevelopment and self-actualization. As a metaphysical counterpart of the Christian God, it is the basis for the teleological development of both the natural and social worlds. Its determinate content constitutes reality. The absolute idea is what truly is, and the final realization of truth. For Hegel, the absolute idea is a dynamic self, involving inner purposiveness and normative ideals. By characterizing reality as the absolute idea, Hegel showed that his notion of reality is fundamentally conceptual. It is a unity of the ideal of life with the life of cognition. The core of Hegel's idealism is the claim that the being of all finite things is derived from the absolute idea. In terms of this notion, Hegel integrated ontology, metaphysics, logic, and ethics into one system.

"The defect of life lies in its being only the idea implicit or natural, whereas cognition is in an equally one-sided way the merely conscious idea, or the idea for itself. The unity and truth of these two is the Absolute Idea, which is both in itself and for itself." **Hegel**, *Logic*

absolute identity

LOGIC As traditionally understood, identity is a rigorous notion that cannot have variant forms, and the identity relation is taken absolutely. According to **Frege**, this absolute notion of identity can be

expressed in two theorems: (1) **reflexivity**: x = x (everything is identical with itself) and (2) the **indiscernibility of identicals** (or **Leibniz**'s law): if a and b are identical, whatever is true of a is true of b, and vice versa. Hence, "a is identical with b" means simply "a is the same as b."

Peter **Geach** calls this account the classical theory of identity and believes that it is mistaken. Instead, he claims that identity is always relative, so that a is not simply the same as b, but rather that a can be the same as b relative to one concept but not the same as b relative to another concept. In response, some argue that relative identity is qualitative identity, while numerical identity remains absolute.

"Absolute identity seems at first sight to be presupposed in the branch of logic called identity theory." **Geach,** *Logic Matters*

absolute rights, see rights, absolute

absolute spirit, another term for absolute idea

absolutism

METAPHYSICS, ETHICS, POLITICAL PHILOSOPHY A term with different references in different areas. In metaphysics, it is opposed to subjectivism and relativism and claims that there is an ultimate, eternal, and objective principle that is the source and standard of truth and value. Ethical absolutism holds that there is a basic universal principle of morality that every rational being should follow, despite their different empirical circumstances. Moral absolutism is opposed to moral relativism, which denies that any single moral principle has universal validity. In political theory, it is the view that the government's power and rights are absolute and that they always have priority when they come into conflict with the rights, interests, needs, preferences, or desires of citizens or groups in society.

"In ethics, the rejection of absolutism leads initially to the recognition of multiple moral authorities, each claiming its own local validity." **Toulmin**, *Human Understanding*

abstract/concrete

EPISTEMOLOGY, METAPHYSICS [from Latin *abstrahere*, to remove something from something else and *concrescere*, to grow together] At the outset of a process of recognition our concepts are likely to be

vague or superficial. We must first abstract them in order to understand their diverse determinations. Being abstract is the product of abstraction, that is, of drawing away something common from diverse perceptible or sensory items and disregarding their relatively inessential features. Concepts and universals are thus formed. To say that something is abstract means that it is conceptual, universal, essential, or a matter of principle, while to say that something is concrete means that it is contextual, particular, personal, sensible. To be concrete is equivalent to being rich and vivid. Since what is abstract is drawn from what is concrete, to be abstract is equated with lacking the detail and individuality of the concrete and is thought to be meager, dependent, and lifeless. The existence and nature of abstract entities such as numbers and universals has long been a matter of dispute.

In another usage, which is especially prominent in **Hegel's** philosophy, being abstract means being cut off from thoughts or from other sensory items, while being concrete is to be relational. Hence, a particular is abstract if it is isolated from other particulars, while a concept or universal is concrete if it is related to other concepts or universals and is one item in an organic system. Hegel called such a concept a "concrete concept" or "concrete universal."

"What we abstract from are the many other aspects which together constitute concrete objects such as people, economies, nations, institutions, activities and so on." **Sayer**, *Method in Social Science*

abstract entities

METAPHYSICS Objects that are not actualized somewhere in space and time, that is, non-particulars such as numbers, properties, relations, proposition, and classes. They stand in contrast to spatio-temporal physical objects. Whether these entities actually exist – whether we should ascribe reality to them – is a question of persistent dispute in philosophy. Empiricists and nominalists try to conceive of abstract entities as having merely a linguistic basis. However, if mathematics embodies general truths about the world and has abstract entities as its subject matter, abstract entities would be objects of reference and hence real existents. This is the claim of Platonism and is also a position admitted by **Quine's** criterion of ontological commitment. The discussion of abstract entities is related to the problem of being, to the problem of universals, and also to the theory of meaning.

"Empiricists are in general rather suspicious with respect to any kind of abstract entities like properties, classes, relations, numbers, propositions, etc." **Carnap**, *Meaning and Necessity*

abstract ideas

EPISTEMOLOGY, PHILOSOPHY OF LANGUAGE HOW can an idea stand for all individuals of a given kind even though the individuals vary in their properties? How can we form general statements about kinds of things and reason with regard to them? Locke introduced the notion of abstract ideas, also called general ideas, and claimed that they are universal concepts generated as a result of a process of abstraction from our ideas of individual exemplars of a kind, by leaving out their specific features and keeping what is common to all. As an empiricist, Locke believed that only particulars exist in the world. An abstract idea does not refer to something individual or particular, but is a special kind of mental image. This image is the meaning of the abstract general term. The function of abstract ideas is to classify individuals into different kinds for us. As classically understood in Locke, abstraction is something in the mind between reality and the way we classify it. He believed that an abstract idea encompasses a whole kind of thing. This claim was rejected by Berkeley, who insisted that all ideas are particular and only become general through our use of them. Berkeley's criticism of Locke's notion of abstract ideas, like his criticism of Locke's theory of real essence, has been very influential, but it is a matter of dispute whether his criticism is sound.

"This is called abstraction, whereby ideas taken from particular beings become general representatives of all of the same kind; and their name general names, applicable to whatever exists conformable to such abstract ideas." Locke, *An Essay Concerning Human Understanding*

abstract particular

METAPHYSICS An individual **property** that is peculiar to the individual or particular possessing it, for example the white color possessed only by Socrates and not shared by any other white things. A property is generally regarded as being **universal**, that is, capable of being exemplified in many individuals or particulars. But some philosophers believe that there are also particularized qualities or property-instances. These are abstract particulars.

The issue can be traced to Aristotle. He classified all the realities into four kinds in his Categories: (1) that which is neither predicated of a subject nor inherent in a subject, namely, primary substances; (2) that which is predicated of a subject but not inherent in a subject, namely, secondary substances such as species and genus; (3) that which is predicated of a subject and also inherent in a subject, namely, universal attributes or properties; and (4) that which is not predicated of a subject, but which is inherent in a subject. For this last kind of reality, Aristotle's example is a particular piece of grammatical knowledge. He seems to be distinguishing universal properties and particular properties. In contemporary metaphysics, some philosophers claim that individual properties are constitutive of concrete particulars, that is, of events and physical objects, while others apply Ockham's razor to deny their existence. Alternative terms for abstract particulars are perfect particulars, particularized qualities, unit of properties, tropes, cases, and property-instances.

"Stout calls particulars which he postulates 'abstract particulars'. In calling them 'abstract' it is not meant that they are other-worldly... It is simply that these particulars are 'thin' and therefore abstract by comparison with the 'thick' or concrete particulars which are constituted out of the abstract particulars." **D. Armstrong, Universals and Scientific Realism, vol. 1**

abstract terms

PHILOSOPHY OF LANGUAGE, PHILOSOPHY OF SCIENCE, PHILOSOPHY OF MATHEMATICS The terms naming **abstract entities**, such as "natural number," "real number," "class," or "property." Different abstract terms can name the same abstract entity, and abstract terms can be either singular or general. Such terms have been used in mathematics and physics. In relation to the problem of the **ontological** status of abstract entities, it is also disputed whether the use of these terms will indicate the truth of Platonic realism. For according to **Quine**'s theory, to admit names of abstract entities commits us to the existence of the abstract entities named by them. "The distinction between meaning and naming is no less important at the level of abstract terms." **Quine,** *From a Logical Point of View*

abstracta

METAPHYSICS [plural of Latin *abstractum*] Abstract entities or objects, which are not perceptible and have no spatio-temporal location. Because we cannot point to them, *abstracta* are not objects of **ostensive definitions**. It is generally thought that *abstracta* do not have causal powers, but this point is controversial in contemporary epistemology. *Abstracta* are contrasted with *concreta* (plural of Latin *concretum*), which are the things that make up the observable world. It is widely held that *abstracta* are dependent on *concreta*.

"Abstracta... are combinations of concreta and are not directly observable because they are comprehensive totalities." **Reichenbach**, *The Rise of Scientific Philosophy*

abstraction

EPISTEMOLOGY [from Latin *abs*, away from + *trahere*, draw, draw away from] A mental operation that forms a concept or idea (an abstract idea) by picking out what is common to a variety of instances and leaving out other irrelevant properties. This is a process of deriving universals and establishing classifications. From this mental act we may form concepts, and then build them up into judgments involving combinations of concepts, and further join judgments into inferences. In ancient philosophy there was a persistent problem about the ontological status of abstract things, and this is also the central point in Aristotle's criticism of Plato's Theory of Forms. Aristotle also refers to abstraction as a mental analysis that separates form from matter. Locke takes abstraction as the means of making ideas represent all objects of the same kind by separating ideas from other existence. For him it is the capacity for abstraction that distinguishes between human beings and animals. His theory of abstract ideas is criticized by Berkeley.

"This is called abstraction, whereby ideas taken from particular beings become general representatives of all of the same kind; and their names general names, applicable to whatever exists conformable to such abstract ideas." Locke, An Essay Concerning Human Understanding

absurdity

EPISTEMOLOGY, MODERN EUROPEAN PHILOSOPHY [from Latin *absurdus*, out of tone] Used as a synonym for "the irrational." In epistemology, an obvious and undeniable **contradiction** or incoherence in a belief or a proposition, such as "the square is a circle." Absurdity is stronger than an error arising from a misapplication of a name to an object. The aim of a *reductio ad absurdum* argument is to reveal the absurdity of a proposition and by these means to show the truth of its negation. Absurdity is associated primarily with language and hence with human beings. Philosophical absurdities can arise from using terms belonging to one category as though they belonged to another category. Gibert **Ryle** called such absurdities "**category mistakes**."

For **existentialism**, there are two other uses of "absurdity." The first concerns the meaninglessness of human existence that derives from its lack of ground or ultimate purpose. In the second use, absurdity transcends the limitations of the rational and requires our whole power of conviction and feeling to be embraced. As an equivalent of the transcendental, the absurd is profound and valuable. Absurdity in this latter sense is derived from existentialist criticism of the absolute claims of reason and displays the characteristic irrationalism of existentialism.

"This divorce between man and his life, the actor and his setting, is properly the feeling of absurdity." **Camus**, *The Myth of Sisyphus*

academic freedom

ETHICS The free performance of academic activities, especially research and teaching, without externally imposed constraints. Academic freedom is a necessary condition for the pursuit of unknown truths and for passing them on by teaching. Academic freedom needs protection because the search for new ideas and knowledge is crucial for the development of any society. Historically, academic activities, especially regarding controversial and unpopular subjects, have always been interfered with by authorities and other forces, who characteristically claim that developing this kind of knowledge is harmful to society. Various original and creative scholars in each generation have therefore been suppressed and even prosecuted for the new ideas they have developed. But history has repeatedly proved that such interference is mistaken. Since nobody and no organization can decide beforehand which knowledge is harmful, we have no reason to censor any scholarly performance on the grounds that it will produce harm. Academic freedom also requires justice in distributing research and teaching facilities, including job security for academics, research support, publication space, and appropriate ways of evaluating teaching.

"The greatest external threats to academic freedom come from ideologies and governments; and most of all from governments in the service of ideologies." **Kenny,** *The Ivory Tower*

Academy

ANCIENT GREEK PHILOSOPHY The school that **Plato** founded around 385 BC, so named because it was located near a park with a gymnasium sacred to the hero Academus. The Academy was like a college in an ancient university, with all members sharing the same religious connections and the ideal of a common life. It was a progenitor of European educational institutions. The curriculum of the Academy is generally believed to have been similar to the scheme presented by Plato in the *Republic* for training rulers.

"Academy" is a term also used to refer to the philosophy of Plato and his followers. Historians differ regarding the history of the Academy. Some divide it into the Old Academy (Plato, 427-347 BC, Speusipus, 407–339 BC, and Xenocrates, 396–314 BC) and the New Academy (Arcesilaus of Pitane, 316-241 BC and Carneades, c.214-129 BC). Some prefer to ascribe Arcesilaus to the Middle Academy, and Carneades to the New Academy. Others want to add a Fourth Academy (Philo of Larissa, 160-80 BC), and a Fifth Academy (Antiochus of Ascalo, 130-68 BC). The general position of the Academy was to explain and defend Plato's doctrines. Plato's successors in the Old Academy were more interested in his "Unwritten Doctrines." The leaders of the Middle and New Academies were skeptics. Philo tried to reconcile their position with that of the Old Academy, and Antiochus is known for his eclecticism.

accident

Aristotle studied with Plato in the Academy for 19 years and left only when Plato died in 347 BC. Much of our information about the Old Academy comes from his writings. The Academy should be distinguished from Middle Platonism and **Neopla**tonism, although it was one of the main proponents of Neoplatonism. Along with other pagan schools, the Academy was closed by the Eastern Roman emperor, Justinian I, in 529.

During the Renaissance, the intellectual circle led by Ficino in Florence was also called the Platonic Academy. Most of its activities involved commenting on Plato's works. From the eighteenth century, all societies organized for advanced learning, and subsequently all universities and colleges, have also been called academies.

"The Academy that Aristotle joined in 367 was distinguished from other Athenian schools by two interests: mathematics . . . and dialectic, the Socratic examination of the assumptions of mathematicians and cosmologists." G. Owen, *Logic, Science and Dialectic*

accedie

ETHICS, MEDIEVAL PHILOSOPHY [Latin, generally, but inadequately, translated as sloth; also spelled *accidie*] One of the "seven deadly sins," a spiritual attitude that rejects all the pleasures of life and turns away from what is good. In *accedie* the mind is stagnant and the flesh a burden. *Accedie* resembles apathy, but they are not the same. *Accedie* concerns the lack of feeling and has a negative sense, while apathy concerns mental states in which emotion is governed by reason and is regarded as a virtue.

"Accedia . . . is sadness over a spiritual value that troubles the body's ease." Aquinas, *Summa Theologiae*

acceptability

PHILOSOPHY OF SCIENCE Philosophers of science disagree about what it means for a **theory** to be acceptable and about what determines degrees of acceptability. In this debate, the degree of acceptability is closely associated with issues concerning the degree of **confirmation** and the degree of **probability**. Some hold that to be acceptable a theory has to be proven. Others claim that a theory is acceptable if it is rendered probable by the available **evidence**. Others argue that the acceptability has nothing to do with reliability, but is simply related to the fact that a theory performs more successfully than its competitors when undergoing testing.

"If we mean by the degree of acceptability of a theory the degree to which it is satisfactory from the point of view of empirical knowledge – that is, from the point of view of the aims of empirical science – then acceptability will have to become topologically equivalent to corroboration." **Popper,** *Realism and the Aims of Science*

accident

METAPHYSICS [from Latin accidens, something that happens, related to the Greek sumbebekos, from the verb sumbainein, to come together, to happen, and better translated coincident or concomitant] For Aristotle, a technical term that contrasts with essence and has three major meanings: (1) the permanent features of a thing that are inherent and inseparably bound up with it, but that do not constitute part of its essence. Aristotle sometimes called these features properties (Greek, idia); (2) the features that belong to the subject only for a time, with their addition or loss not affecting whether the subject remains the same thing. These correspond to the modern notion of accidental properties, which contrast with essential properties, the loss of which will change the identity of a thing; (3) the secondary categories (categories other than substance) that are accidents to substance. In another sense, they are essential, for example white is an accident to Socrates, but it is essentially a color. Accidents of this sort are more properly called attributes or properties, although they still do not contribute to the identity of individual substances. They can only inhere in a substance and do not have independent existence.

Medieval philosophers distinguished accident *per se*, which as an attribute is itself an entity, from accident *per accidens*, which is a way of talking about something inessential to an object. Modern philosophy has tended to reject the distinction between substance and accident and has understood accident, in a manner similar to Aristotle's third sense, as an attribute, quality, or property. Accordingly, **Descartes** claimed that there is no science except the accidental, **Locke** distinguished primary qualities from secondary qualities, and **Berkeley** claimed that substance itself is nothing but a set of accidents.

"Accident means that which attaches to something and can be truly asserted, but neither of necessity nor usually." **Aristotle**, *Metaphysics*

accidental property

METAPHYSICS A property that is not a defining or essential feature of a particular. The identity of a particular is not affected by the change or loss of its accidental properties. For instance, the color of a wall or roof is an accidental property of a house. The relationship between an accidental property and the particular of which it is a property is external rather than internal. Accidental properties are contrasted to "essential properties," the change or loss of which alters the identity of the particular. Traditionally, rationality has been taken to be an essential property of being a human being. When people mention a particular, it is its essential properties rather than its accidental properties that are crucial in determining the identity of that particular and the kind of thing that it is. Although the discussion of accidental and essential properties goes back to Aristotle, the revival of essentialism in the work of Kripke and Putnam has renewed interest in the distinction

"P is an accidental property of members of class A, if 'A' is not defined in terms of 'p'." **Pap**, *Elements of Analytic Philosophy*

achievement verbs

PHILOSOPHY OF LANGUAGE, PHILOSOPHY OF ACTION FOR Ryle, some verbs merely signify actions, such as reading or hunting. Ryle calls these task verbs. Other verbs not merely signify actions, but also indicate that the actions are suitable or correct. Not only has some performance been gone through, but also something has been brought off by the agent in going through it. These acts and operations, which have had certain positive results, are called achievement verbs by Ryle. A mark of an achievement verb such as "see" is that as soon as it is correct to say that a person sees something it is also correct to say that he has seen it. Such verbs are also called success verbs or success words. Correspondingly, there are failure verbs, such as lose or misspell. All perception verbs are achievement verbs since they involve an acquiring of knowledge about the physical world.

"There was another motive for desiderating a mistake-proof brand of observation, namely that it was half-realised that some observation words, such as 'perceive', 'see', 'detect', 'hear', and 'observe' (in its 'final' sense) are what I have called 'achievement verbs'." **Ryle**, *The Concept of Mind*

Achilles and the tortoise

LOGIC, METAPHYSICS, ANCIENT GREEK PHILOSOPHY The most widely discussed of Zeno's paradoxes, which were designed to show that the concept of motion is incoherent. Achilles, the Olympic champion in running, can never catch up with the slow-moving tortoise if the latter is given a head start. Achilles has to take some time to reach the place where the tortoise started, but when he reaches that place, the tortoise will have moved to a further point. The same is true when Achilles reaches that further point, because the tortoise will again have moved on. This process will be repeated endlessly, and the gap, which may get smaller and smaller, will remain. So as long as the tortoise keeps moving forward, Achilles cannot possibly overtake it, yet the paradox arises because we know that faster runners do overtake slower ones. The difficult problem is to explain the concepts of space, time, and motion in a way that shows what goes wrong in Zeno's reasoning. This paradox, which is closely connected with the dichotomy paradox, depends on the assumption that space and time are continuous and infinitely divisible. Our source for all of Zeno's paradoxes is Aristotle's account in Physics.

"Zeno's paradoxes of motion, such as his 'Achilles and the Tortoise', revealed grave and subtle difficulties in the notion of infinite divisibility." **Copi**, *The Theory of Logical Types*

acosmism

METAPHYSICS, PHILOSOPHY OF RELIGION [from Greek, *a*, not + *cosmos*, world, order] **Spinoza**'s identification of God and world has often been interpreted as an assertion of **atheism**, but **Hegel** interpreted Spinoza as claiming that God rather than the world really exists. He entitles this position "acosmism." This position does not mean that God and the world are two distinct entities, but Hegel believed that it left unsolved questions about the **appearance** of the world and of the philosophizing **metaphysical subject**.

"[T]he system of Spinoza was not Atheism but acosmism, defining the world to be an appearance lacking in true reality." **Hegel,** *Logic*

acquaintance

EPISTEMOLOGY The way in which a knowing subject is aware of an **object** by experiencing it directly and immediately. Acquaintance contrasts with **description**, where an object is known through an intermediary process of **inference**. There is controversy over what are the objects of acquaintance. Among the items proposed for this role are **sense-data**, **memories**, and **universals** such as redness, roundness. The notion of acquaintance has been used to constrain what we can be said to experience. **Russell** calls the knowledge derived through acquaintance knowledge by acquaintance, which is the direct knowledge of things and is distinguished from knowledge by description, which reaches truth through inference.

"Acquaintance: an animal is said to be acquainted with an object when the object, or an image of it, is part of the animal at the moment." **Russell**, *Collected Papers of Bertrand Russell*

acroama

PHILOSOPHICAL METHOD [from Greek *akroama*, a thing heard] For **Kant**, a basic principle, especially of philosophy. In contrast, an axiom is a basic principle of mathematics or science. This is a distinction between **axioms** and discursive principles or between mathematical and philosophical principles. An axiom requires the intuition of objects and thus considers the universal in the particular, while an acroama is discursive and considers the particular in the universal. All principles of pure understanding are acroama, for they are established by the analysis of language and a discursive process of proof. Kant drew this distinction to criticize the tendency in traditional metaphysics to apply mathematical principles to philosophy.

"I should therefore prefer to call the first kind acroamatic (discursive) proofs, since they may be conducted by the agency of words alone (the object in thought), rather than demonstrations which, as the term itself indicates, proceed in and through the intuition of the object." **Kant, Critique** of Pure Reason

act, see action

act and omission

PHILOSOPHY OF ACTION, ETHICS, PHILOSOPHY OF LAW To act is to do something, while an omission is a failure to act in circumstances where one has the ability and opportunity to act. In euthanasia, one acts if one actively kills a patient, but this can be distinguished from omitting to act, where not acting allows a death that intervention could have prevented. In contrast to killing, an omission lets die or does not strive to keep alive. To send poisoned food to the starving is an act that kills them, while failing to aid them is an omission that lets them die. In these and other similar moral situations, objectionable acts are open to moral condemnation. What then is the moral status of apparently parallel omissions? Are they equally wrong or are they permissible? Are such omissions something that morally ought not to be allowed? This question gives rise to a complex debate regarding the moral significance of the distinction between act and omission. Consequentialism denies the importance of the distinction, while deontology holds on to it.

"It [the acts and omissions doctrine] holds that there is an important moral distinction between performing an act that has certain consequences – say, the death of a disabled child – and omitting to do something that has the same consequences." **P. Singer,** *Practical Ethics*

act-centered, see agent-centered morality

act-consequentialism

ETHICS **Consequentialism** is generally divided into act-consequentialism and **rule-consequentialism**. Act-consequentialism holds that an action is right if it produces a better consequence than alternative actions available to the agent. Rule-consequentialism, on the other hand, claims that the rightness of an action depends not on its direct consequences but on whether it conforms to a set of rules that lead to better consequences than other alternative rules. Act-**utilitarianism** is the most typical and familiar form of act-consequentialism. But there are also other forms of act-consequentialism that hold that pleasure or happiness are not the only factors by which we assess the goodness of the consequences. Like act-utilitarianism, act-consequentialism is criticized for considering all things from an impersonal standpoint.

"Different act-consequentialist theories incorporate different conceptions of the overall good . . . but all such theories share the same conception of the right which requires each agent in all cases to produce the best available outcome overall." **Scheffler**, *The Rejection of Consequentialism*

act-object theory

THEORY OF KNOWLEDGE An analysis of sensation introduced by Moore and Russell in their sensedata theory, which suggests that sensation consists of sense-data (objects) and the act of sensing. Sense-data are entities that are distinct from the act of seeing. A sensation is a genuine relation between a subject and a really existent object. Objects exist independently of acts. Moore uses this distinction in criticizing Berkeley's idealist thesis that esse est percipi by saying that it fails to distinguish between the object sense-datum and the act of consciousness that is directed upon it. "Yellow" is an object of experience, and the sensation of "yellow" is a feeling or experience. Russell claims that perceiving and other cognitive processes are acts of attention, directed at some object. But under the influence of adverbial analysis, Russell later abandons this actobject analysis. For Broad, sensa-data cannot exist independent of the act of sensing, and he call them "sensa."

"The sensum theory . . . holds that this [sensation] is a complex, and that within it there can be distinguished two factors: X itself, which is the sensum and is an object, and a subjective factor, which is called the 'act of sensing'." **Broad**, *Scientific Thought*

act token

PHILOSOPHY OF ACTION, ETHICS Alvin **Goldman** has distinguished between act tokens and **act types**. An act type is a kind of **action**, such as driving a car or writing a paper. An act token is a particular act or action that is performed by a particular person in a particular circumstance: for instance, driving my Ford Escort yesterday afternoon or writing my paper about Aristotle's concept of substance. An act type is an action property, while an act token is an exemplification of such a type. An act token is the performance of an act. If an act type is wrong, all act tokens that belong to it are wrong. There has been a debate about the identity conditions for actions. Generally, two act tokens are thought to be identical if and only if they involve the same agent, the same property, and the same place and time.

"A particular act, then, consists in the exemplifying of an act-property, by an agent at a particular time. I shall call such particular acts 'act tokens'." **Goldman**, *A Theory of Human Action*

act type, see act token

action

PHILOSOPHY OF MIND, PHILOSOPHY OF ACTION, ETHICS [from Latin *agere*, to do] Some philosophers draw a distinction between acts and actions and suggest that while an act is the deed that is done, an action is the doing of it. But most believe that this distinction is hard to maintain and take an act as a synonym for an action.

Although there are actions in nature, such as the action of a river on its bank, an action is generally defined as what is intentionally done by a human rational agent. Natural action is described as a mere process, happening, or occurrence. Action has been the focus of much discussion in recent philosophy of mind, especially concerning human intention and deliberation. Many theories have been developed to explain what it means to act intentionally and to show how to distinguish actions from other events involving persons. On one standard account, an action is an event by which an agent brings about changes through bodily movement. A rival mental action theory argues that not all actions involve bodily movement and identifies actions with primary mental events in the causal chain between the agent and behavioral events. According to the causal theory of action developed by Davidson, Searle, and Goodman among others, actions are the effects of primary mental events. Other philosophers reject such primary mental events and deny that actions are events at all.

One bodily movement can bring about, directly and indirectly, many changes and the consequences of this for identifying and explaining actions are unclear. X moves his hand; by moving his hand, he turns the steering wheel; and by turning the steering wheel, he drives his car; and so on. Is there one action in this case or are there many? When should we distinguish an action from its consequences? Some philosophers suggest that we can deal with these problems by identifying **basic actions** that cause other actions but that are not themselves caused by actions. But there is much dispute regarding how to identify basic action.

Actions can be discussed in isolation, but they often occur in a pattern of activity either in a single life or involving others. **Social action** was profoundly explored by **Weber**.

If we seek a causal account of action, are actions caused by reason, desire, or both? Would another framework be more appropriate for explaining or understanding action either within a causal account or as a rival to it? It is unclear whether an explanation by **reasons** that is not a form of **causal explanation** is coherent. Answering such questions requires the analysis of many key notions, such as **motives**, intentions, **voluntary and involuntary** action, **practical reason**, wants, and **desires**. The question of explaining action is closely associated with the problem of free will and determinism and the problem of responsibility.

Another much debated problem in philosophy of law and moral philosophy is the relation between action and omission, inaction or negligence.

"The word 'action' does not very often occur in ordinary speech, and when it does it is usually reserved for fairly portentous occasions. I follow a useful philosophical practice in calling anything an agent does intentionally an action, including intentional omission." **Davidson**, *Essays on Actions and Events*

action (Aristotle)

ANCIENT GREEK PHILOSOPHY, ETHICS [Greek, *praxis*, from the verb *prattein*, to do] Broadly, everything that an **agent** does intentionally, in contrast to speech and to being acted upon. Humans, including children, and some non-human animals are capable of this sort of action. More strictly, action is confined to carrying out rational choice, something that non-humans cannot do. It is doing what is or could be the outcome of **deliberation** on the part of the agent or for what the agent is held responsible. This sense, which is central to moral philosophy, is related to the problem of **free will** and **responsibility**. Only in this sense is action open to moral praise and blame. Aristotle also used *praxis* narrowly for rational action that is its own end, and that is not done merely for the sake of some further end. This sense contrasts with production (Greek, *poiesis*), which is for the sake of some end product. According to this contrast, ethical actions, unlike technical performances, are done and valued for their own sake. Philosophers also discuss the conceptual relations between these sorts of action and action in nature that does not involve intention, reason, or purpose, such as the action of a river on its bank.

"[An unconditional goal is] what we achieve in action, since doing well in action is the goal." Aristotle, *Nicomachean Ethics*

action at a distance

METAPHYSICS, PHILOSOPHY OF PHYSICS Action at a distance is contrasted to action by contact or local action. Whether one thing can act on another at a distance without postulating some kind of intervening medium as involved in the interaction has been a topic of debate in physics and philosophy since ancient Greece. The dominant tendency is to reject any such possibility. Atomism claims that atoms cannot interact without contact. Aristotle believes that every object in local motion must have a conjoined mover. This is also the main attitude in physics and philosophy of the seventeenth and eighteenth centuries. Descartes, Newton, Locke, and Leibniz all reduce actions at a distance to actions through a medium of some sort, yielding actions that are continuous, although there is no agreement about what the medium is. In contemporary field theory the question is still disputed. The problem of action at a distance is related to the question of whether causality is something more than correlation.

"The formula by which we determine what will happen in a given region will contain references to distant regions, and it may be said that this is all we can mean by 'action at a distance'." **Russell**, *The Analysis of Matter*

active intellect

METAPHYSICS, PHILOSOPHY OF MIND, ANCIENT GREEK PHILOSOPHY, MEDIEVAL PHILOSOPHY **Aristotle** claimed in *De Anima* III, 5 that, as with anything else, one can draw a distinction between **form** and **matter** and between **actuality** and **potentiality** within the soul. The formal and actual aspect of the soul is

active intellect, and the material and potential aspect of the soul is passive intellect. Passive intellect amounts to ordinary apprehension that is receptive of the sensible and intelligible forms of objects. This kind of knowing is only potential. Passive intellect will perish at the death of an individual. Active intellect is the agent that brings the passive intellect's potential knowledge of objects to actuality. Active intellect is separable, unmixed, and impassable. The distinction between active and passive intellect and the nature and function of active intellect are ambiguous in Aristotle's writings and gave rise to many debates among commentators in the later Hellenistic and medieval periods and in contemporary Aristotelian scholarship as well. Controversial questions include: Is the distinction between active and passive intellect realized only within the human soul, or does active intellect exist outside human beings? Is active reason identical with God as described in the Metaphysics? If active intellect is entirely independent of body, how can we reconcile it with Aristotle's standard view that soul is the form of body?

"Intellect in this sense of it is separable, impassable, unmixed, since it is in its essential nature activity (for always the active is superior to the passive factor, the originating force to the matter which it forms)." **Aristotle**, *De Anima*

active reason, another name for active intellect

actual idealism, see actualism

actualism

METAPHYSICS, PHILOSOPHY OF ACTION, ETHICS Actualism has several senses. First, it is the actual **idealism** of the Italian philosopher Giovanni **Gentile**. This theory claims that the pure act of **spirit** (that is, the transcendent subject as opposed to the empirical subject) is the only real thing in the dialectical process. Such acts are acts of self-affirmation and constitute a synthesis of the self and the world.

Secondly, actualism (also called factualism) is the view, proposed by **Plantinga**, **Stalnaker**, and **Armstrong**, that only the actual world exists. The world is wholly composed of actual entities, including concrete individuals and instantialized abstractions. All sorts of potentialities, tendencies, forces, and unexampled essences are not admitted. This view contests those theories of **possible worlds** that accept the existence of possible worlds and their contents as well as the existence of the actual world.

Thirdly, actualism as a theory of choice claims that an agent should choose the best option that he or she *will actually* do, rather than the best option that he or she *can* do. This latter view is called **possibilism**.

"I assume the truth of what may be called actualism. According to this view, we should not postulate any particular except actual particulars, nor any properties and relations (universals) save actual, or categorical, properties and relations." **D.** Armstrong, *What is a Law of Nature*?

actuality/actualization

Ancient Greek philosophy [Greek, energeia, actuality, from ergon, function or action, etymologically associated with motion or activity; entelecheia, actualization (Greek), from enteles echein, having an end within, etymologically associated with the completion of an action or a process] Aristotle used these two terms interchangeably and ignored their different etymologies. In many places, he contrasted energeia with motion (kinesis) saying that motion is an incomplete activity that aims at some end beyond itself, while energeia is a complete activity which is its own end. Both energeia and entelecheia are used in contrast to potentiality for the fulfillment or realization of different kinds of potentiality. In Aristotle's discussion of substantial change, actuality or actualization is identical with form, and sometimes even with the composite of matter and form, that which has been shaped out of the matter.

"The word 'actuality' which we connect with actualisation has in the main been extended from motion to other things; for actuality in the strict sense is thought to be identical with motion." Aristotle, *Metaphysics*

actuality (Hegel)

METAPHYSICS [German, Wirklichkeit, from wirken, to be active, or effectual] In the preface to *Philosophy* of *Right*, **Hegel** claimed that "what is rational is actual, and what is actual is rational." This has been criticized as a conservative doctrine that allows no

ad hoc hypothesis

attack on existing political systems and institutions, however tyrannical or perverse they might be. But this response is based on a mistaken understanding of Hegel's notion of actuality. Hegel employed the standard contrast between actuality and possibility or potentiality, but also contrasted actuality to mere existence or appearance, so that not everything existing is actual. In his Logic, actuality is the unity of existence and essence, of inward reality and outward reality. Something actual is fully developed according to the inner rationality of the species to which it belongs. For Hegel, everything has its own teleological necessity and can be said to be actual only when this necessity has been fully worked out. Hence, an infant, although it exists, is not actual with respect to the essence of human species.

"Actuality is the unity, become immediate, of essence with existence, or of inward with out-ward." Hegel, *Logic*

actualization, see actuality/actualization

actus reus, see mens rea

additive fallacy, an alternative expression of the additivity assumption

additivity assumption

Етніся Also called the additive fallacy. Utilitarianism argues that we can add individual utilities together to make up a total utility and that any action that results in a larger amount of total utility is morally more acceptable than other actions that result in less total utility. Here a working hypothesis is assumed that individual utilities can be quantitatively measured, compared, and combined into an overall outcome. This is the additivity assumption. It is not only central to utilitarianism, but is also active in many other moral theories, insofar as they appeal to notions such as "balancing," "weighing," and "simple-complex." Critics, however, maintain that individual utilities are always qualitatively different and incommensurable and therefore that it is impossible to compare and contrast them. Furthermore, even if an aggregation is possible, this would not be sufficient to establish the moral status of an action, for a larger amount of utility does not entail an equal or just distribution.

"The view that the moral status of an act is the sum of individual positive and negative contributions – the particular reasons for and against performing the act – is, as I suggested, a familiar and attractive one. Nonetheless, I believe that the additive assumption should be rejected." Kagan, "Additive Fallacy," *Ethics* 99

adequacy conditions on definitions of truth, see material adequacy

adequate ideas

EPISTEMOLOGY For **Spinoza**, adequate ideas are the **ideas** from the second grade of **cognition**, **reason**, and from the third grade of cognition, intuitive knowledge, in contrast to the ideas formed from the first grade of cognition, sense **experience**. Adequate ideas are wholly caused from within individual minds, either by seeing them to be **self-evident** or by deriving them from other ideas that are self-evident. Adequate ideas are coextensive with true ideas, and bear all the internal marks of **truth**. In **Leibniz**, adequate ideas are those that are clearly and distinctly conceived.

"By adequate idea I understand an idea which, in so far as it is considered in itself, without reference to the object, has all the properties or internal marks of a true idea." **Spinoza**, *Ethics*

ad hoc hypothesis

EPISTEMOLOGY, PHILOSOPHY OF SCIENCE [Latin, *ad hoc*, for this, to this] Something that is *ad hoc* is only for the purpose at hand. A theory might be saved from a challenge that is inspired by contrary evidence if we introduce an additional hypothesis. Such a hypothesis, if it has no independent rationale but is used merely to preserve the theory, is called an *ad hoc* hypothesis. An *ad hoc* hypothesis is generally rejected by a satisfactory scientific explanation, for it is not testable independently of the effect to be explained, and hence does not have any theoretical power. In another sense, *ad hoc* also means an explanation introduced to account for some fact after that fact had been established.

"A satisfactory explanation is one which is not *ad hoc.*" **Popper**, *Objective Knowledge*

Adorno, Theodor (1903–69)

German philosopher, sociologist, and musicologist, born in Frankfurt, a leading member of the Frankfurt School of critical theory. Adorno joined the Institute for Social Research before emigrating to the United States in 1934 following Hitler's rise to power. He rejoined the Institute in 1938 in New York, but returned to Frankfurt in 1953 and became director of the Institute in 1959. His most important work, Negative Dialectics (1966), is a critique of thinking based on identity and the presentation of a negative dialectic of non-identity that has exerted great influence on postmodern and post-structuralist thought. He was co-author of The Authoritarian Personality (1950), a study of the psychological origins of fascism and Nazism. With Horkheimer, he published Dialectic of the Enlightenment (1947), which traces totalitarianism and scientism in modern society to the Enlightenment conception of reason. He criticized Husserl in Against Epistemology (1956) and Heidegger in The Jargon of Authenticity (1965). His Aesthetic Theory was left unfinished at his death.

adventitious ideas

EPISTEMOLOGY [from Latin ad, to + venire, to come] Descartes's term for those ideas that we get through senses and that are caused by things existing outside one's mind. Adventitious ideas contrast both to innate ideas and to fictitious ideas. Innate ideas are not obtained by experience, but are carried by the mind from birth. Fictional ideas are created by mind in imagination. Descartes argued that it is impossible for all ideas to be adventitious. In contrast, British empiricists claimed that all ideas can be reduced to adventitious ideas and specifically denied the existence of innate ideas. On their account, all universals result from the operation of mind on the basis of adventitious ideas. The treatment of adventitious and innate ideas became one of the major divergences between rationalism and empiricism.

"I marvel indeed at the train of reasoning by which you try to prove that all our ideas are adventitious and none of them constructed by us, saying – because the mind has the power not only of perceiving these very adventitious ideas, but, besides this, of bringing together, dividing, reducing, enlarging, arranging, and everything similar to this." **Descartes**, *Meditations, Reply to Objection V*

adverbial materialism

PHILOSOPHY OF MIND A theory of mind that combines the adverbial analysis of sense-experience with **materialism** or **physicalism**, developed by the American philosopher J. W. Cornman. In the spirit of adverbial analysis, the theory claims that when people perceive something red in the appropriate conditions, they do not sense red sense-data, but rather they sense red-ly. It further takes this sensing event to be identical with a brain event. Every sensing event is reduced to a physical event. The theory is opposed to **phenomenalism** and is compatible with direct materialism. Critics suggest that this analysis leaves out the most central element of perception, the perceptual **experience** itself.

"This [theory of adverbial materialism] is the theory that each sensory experience consists in an objectless sensing event that is not only identical with but also nothing but some physical event, presumably a neuronal brain event." **Cornman**, *Perception, Common Sense, and Science*

adverbial theory

EPISTEMOLOGY An analysis of sensing that intends to convert the objects of sensation into senseexperience characterized in an adverbial way. An adverb is introduced to describe the way a sensing activity is taking place; thus, "I sense a red color patch" should be regarded as a statement of how I sense, that is "I sense red-ly." The purpose of this analysis is to deny that sense-data are independent entities; rather, it takes them as sense-contents that cannot exist independent of the act of sensing of them. Sense-data are considered as modes of awareness instead of internal objects of awareness. The starting-point of this theory is the idea that sensations cannot exist when not sensed. It eliminates mental objects by reducing all statements about sensations to statements about the way or mode in which a subject is sensing. The analysis influenced both Moore and Russell with regard to their actobject theory of sensation and was later advocated by C. J. Ducasse, Ayer, and Chisholm. The analysis becomes difficult once a complex sensation is involved, such as, "I sense a red color patch to the left of a blue color patch." It is also challenged for its inability to distinguish sense-experience from purely mental imaging.

"If the adverbial theory is right, it tells us how I am sensing and does not require for its truth that there be an object being sensed." Jackson, *Perception*

aesthetic attitude

AESTHETICS A special attitude with which to approach art, nature, and other objects. First, it differs from a practical attitude and has no concern with practical (sensual, intellectual, or moral) utilities. An aesthetic attitude takes nature or a work of art "for its own sake." In this sense it is "disinterested," as Kant emphasized in his Critique of Judgement. Secondly, it does not involve personal desires, motives, or feelings in dealing with an object. This freedom from desire or emotion is called "aesthetic distance" or "aesthetic detachment." Thirdly, in contrast to a cognitive or scientific attitude, it is indifferent to the real existence, the content or the meaning of a thing. It does not appreciate an object through bringing it under concepts. Instead it is a pure appreciation or contemplation of the perceptual qualities of an object as an object of sensation. It is claimed that in this way we can live in the work of art as an embodiment of our feeling. Schopenhauer and Heidegger ascribe a metaphysical importance to the aesthetic attitude by saying that it can reveal the essence of reality more profoundly than conceptualization. The possible existence and role of a pure aesthetic attitude are topics of dispute.

"All appreciation of art – painting, architecture, music, dance, whatever the piece may be – requires a certain detachment, which has been variously called the 'attitude of contemplation', the 'aesthetic attitude', or the 'objectivity' of the beholder." Langer, *Feeling and Form*

aesthetic autonomy

AESTHETICS The idea that art has its own sphere demarcated from other human activities and determines its own principles or rules. Art cannot be replaced by other activities without loss. Aesthetic experience should be explained by aesthetic terms or attributes, and art should be valued by itself alone. The idea is intended to protect art from being assimilated to scientific, religious, or moral functions and to insist that art has a different domain from science and morality. The position demands that human beings should be liberated from various instrumental attitudes towards art and that the development of art should not be unjustifiably subjected to the service of extra-aesthetic concerns. In this century, aesthetic autonomy has gained popularity in the face of the danger of submerging the aesthetic attitude into the cognitive attitude.

"The only answer, in short, is in terms of aesthetic value beyond which we cannot go. We assume the autonomy of aesthetics and all we can do is to see where this assumption will lead to." **Saw**, *Aesthetics*

aesthetic detachment, see aesthetic attitude

aesthetic distance, see aesthetic attitude

aesthetic education

ETHICS, AESTHETICS Education directed at developing a person's aesthetic capacities and experiences of art. Its purpose is to educate a person's feeling and to enhance the harmony between **emotion** and **reason** in order to elevate our character. Its function regarding one's soul is analogous to the function of physical education for one's body. As early as **Plato**'s **Republic**, there is a detailed discussion to show that education should have an aesthetic concern. An account of this education is most systematically developed in **Schiller**'s *Letters on the Aesthetic Education of Man*. There are contrasting views of what such an education should be, according to different theories of art.

"Aesthetic education is possible only if it involves criticism; and edifies only when its mirror images are not merely produced or consumed, but when they are critically grasped and appropriated." Shusterman, *Pragmatist Aesthetics*

aesthetic imagination

AESTHETICS The **imagination** that plays a role in the production and appreciation of artworks. Aesthetic imagination explores the possibilities suggested by the connection of aesthetic experience. It accompanies indispensably our interactions with art. While scientific imagination is bound by agreement with reality and is in the service of theoretical work, aesthetic imagination is free and operates in the service of aesthetic feeling. Its purpose is the satisfaction of the feeling that inspires it. It broadens our understanding, gives rise to emotional identification with the object, and enables us to experience a wider range of feelings than we can experience in actual life. For **Kant**, aesthetic experience involves a free play of the imagination and the understanding.

"Aesthetic imagination can perceive the ennobling beauty and truth of past art produced in more harmonious times." **Shusterman**, *Pragmatist Aesthetics*

aesthetic judgment

AESTHETICS The ascription of an aesthetic property or value to an object, as distinguished from cognitive or logical judgment that gives us knowledge. The determining ground for such an ascription has been hotly disputed. For objectivism, an aesthetic judgment attributes an objective property to a thing judged and does not essentially involve the feelings of the person who is judging. It is hence a universal judgment. For subjectivism, the feelings, such as liking or disliking, of the person who judges are the decisive ground, and hence aesthetic judgment is not universal. The most influential frameworks of analysis of aesthetic judgments were developed by Hume and Kant. According to Hume, although aesthetic properties are not inherent in things, aesthetic judgments are not merely an expression of personal pleasure or displeasure. Like judgments of color, they are determined by contingent causal relations between object and subject, although their ultimate ground is the sensibility of human beings. Kant claims that aesthetic judgments do not depend on a set of formulated rules or principles. Unlike objective knowledge claims, they rest on subjective response and personal acquaintance. He suggests that in a broad sense aesthetic judgments include empirical aesthetic judgment and "judgments of taste." An empirical aesthetic judgment judges the agreeable or the pleasant and concerns that which simply gratifies desire. A judgment of taste is an aesthetic judgment in its narrow sense. It is the judgment of beauty and is "disinterested," in the sense that it is independent of all personal desires and motivations. Hence, a person making such a judgment expects other people to have similar responses under the same circumstance. Hence, judgments of taste have a type of subjective validity or universality.

"Aesthetic judgements, just like theoretical (i.e. logical) ones, can be divided into empirical and pure. Aesthetic judgements are empirical if they assert that an object or a way of presenting it is agreeable or disagreeable; they are pure if they assert that it is beautiful. Empirical aesthetic judgements are judgements of science (material aesthetic judgements); only pure aesthetic judgements (since they are formal) are properly judgements of taste." Kant, Critique of Judgement

aesthetic pleasure

AESTHETICS Distinguished from both sensual pleasure and intellectual pleasure, aesthetic pleasure or aesthetic enjoyment is the emotional element in our response to works of art and natural beauty. It can vary from **pleasure** in its mildest form to rapturous enthusiasm. To characterize the peculiar nature of aesthetic pleasure has been a challenging job for aesthetics. Since Kant, many theorists have accepted that aesthetic pleasure is a result of a disinterested and non-conceptual engagement with an object. But it is a point of dispute whether this pleasure arises from apprehending the formal character of the object, its content, or both. It is also unclear how much subjective elements contribute to this process. Other major issues concern the relation between aesthetic pleasure and the aesthetic attitude and the distinction, if there is one, between aesthetic pleasure in response to nature and to art.

"Aesthetic pleasure is manifested in a desire to continue or repeat the experience." **Sheppard**, *Aesthetics*

aesthetic property

AESTHETICS A quality that contributes to determining the **aesthetic value** of an artwork. Such properties can be subject either to positive evaluation, such as being beautiful, charming, elegant, sublime, balanced, graceful, or majestic, or to negative evaluation, such as being ugly, boring, clumsy, garish, or lifeless. There can, of course, be beautiful depictions of ugly objects or lifeless depictions of beautiful ones. Some aesthetic qualities, such as being sad or joyful, can be non-evaluative. It is widely agreed that we require a special sensitivity, "taste," to perceive them. Aesthetic properties are the ultimate sources of "aesthetic value," and contribute to determining the nature of artworks. Positively aesthetic properties make artifacts into works of art and figure in a subject's account of why an artwork pleases him. Some philosophers argue that as **emergent properties** aesthetic properties **supervene** on non-aesthetic properties, but others insist that aesthetic properties must be seen as entirely independent of nonaesthetic properties.

"I imagined explaining my emotional response to the painting by pointing out some of its aesthetic properties; the colours, although pastel, are warm rather than faded, the faces of the saints 'sweet and gentle."" **Mothersill**, *Beauty Restored*

aesthetic value

AESTHETICS The properties rendering a work of art good or successful, such as balance, charm, elegance, grace, harmony, integrity, or unity. Aesthetic value is whatever contributes to the "**beauty**" of a piece of art, in contrast to that which contributes to its usefulness, truth, or moral goodness. "Beauty" is the supreme name for aesthetic value, and "ugliness" is the supreme name for aesthetic disvalue. The history of aesthetics has been characterized by disputes about whether aesthetic value is waiting to be discovered objectively in the objects, independent of the responses of observers, or exists subjectively in the experiences of human agents, or lies in the connection between the object and the feelings of its observers.

"Instead of saying that an aesthetic object is 'good', they [philosophers] would say that it has aesthetic value. And correspondingly, instead of saying that one object is better than another, but not because it has a higher cognitive or moral value, they would say that it has a higher aesthetic value, or is aesthetically more valuable." **Beardsley**, *Aesthetics*

aestheticism

AESTHETICS The position that art should be valued only according to its intrinsic **aesthetic properties**, such as **beauty**, harmony, unity, grace, or elegance. It maintains the supreme value of art over everything else. A work of art is nothing more than a work of art and should not be viewed as a means to further ends. Its internal aesthetic value is supreme. Pure beauty has nothing to do with **utility**. The pursuit of such beauty is the supreme source of human happiness and should not be constrained by moral or other considerations. In its extreme form, aestheticism claims that any art that has external functions or purposes is ugly. The slogan of aestheticism is "art for art's sake" (French, L'art pour l'art). An art critic should not be concerned with art for the sake of citizenship, patriotism, or anything else. Aestheticism is rooted in Kantian aesthetic formalism and flourished in the nineteenth century, first in French literature, represented by Flaubert, and then in English literature, represented by Walter Pater and Oscar Wilde. Aestheticism opposes society's interference with artistic creation, for artworks characterized by adventurousness are always subject to criticism based on customs and established modes of thought and feeling. But it is problematic whether an artwork can be completely isolated from its environment and social consequences. The opposite view, which can be called "instrumentalism," proposes that art should serve the needs of the people and the community.

"[Aestheticism] is the view that aesthetic objects are not subject to moral judgements, that only aesthetic categories can be, or ought to be, applied to them." **Beardsley**, *Aesthetics*

aesthetics

AESTHETICS Although many problems discussed in contemporary aesthetics as a branch of philosophy can be traced to Plato's dialogues (especially Ion, Symposium, Phaedrus, Republic, and Philebus) and Aristotle's Poetics, aesthetics did not become an independent discipline until the eighteenth century. The term was coined by the German philosopher Alexander Baumgarten in his Reflections in Poetry (1735), based on the Greek word aisthesis (sensation, perception). Baumgarten defines it as "the science of sensitive knowing," which studies both art and sensible knowledge. Kant inherited these two senses. The first part of Critique of Pure Reason, the "Transcendental Aesthetic," deals with a priori sensible form; the first part of Critique of Judgement, called "Critique of Aesthetic Judgement," is a critique of taste, concerning the judgment of beauty and the sublime and the "autonomy of taste."

Nowadays the word "aesthetics" is confined to the study of experience arising from the appreciation of artworks and covers topics such as the character of aesthetic attitude, aesthetic emotions, and aesthetic value; the logical status of aesthetic judgments; the nature of beauty and its allied notions; and the relation between moral education and works of art. It also encompasses problems dealt with by the "philosophy of art" such as the nature of art and the perception, interpretation, and evaluation of artworks. Philosophy of art is thus a part of aesthetics. The development of aesthetics in the twentieth century has been deeply influenced by developments in the philosophy of mind, theories of meaning, and hermeneutics.

"The Germans are the only people who currently make use of the word 'aesthetic' in order to signify what others call the critique of taste. This usage originated in the abortive attempt made by Baumgarten, that admirable analytical thinker, to bring the critical treatment of the beautiful under rational principles, and so to raise its rules to the rank of a science." **Kant, Critique of Pure Reason**

Aeterni Patris, see neo-scholasticism

aether

Ancient Greek philosophy, philosophy of science A rarified element believed to fill the heavens. Anaxagoras considered aether to be derived from aithein (Greek, to ignite, to blaze) and identified it with fire. Some other pre-Socratic philosophers considered aether to be derived from aei thein (Greek, runs always), and took it to be a divine element, different from other basic elements. Aristotle developed their idea by arguing that aether is a fifth element in addition to the usual four elements: fire, air, earth, and water. He divided the cosmos into two levels. While the lower world, which is within the sphere of the moon, is composed out of the four elements, the upper world, from the moon upwards to the first heaven, is composed of aether. Aether has no property in common with the four simple elements in the lower world and cannot be transformed into them, and the four elements cannot go up to the outer region. Aether as a divine body has no movement except uniform circular motion and is indestructible. This cosmology became the foundation of the Ptolemaic system of astronomy. Seventeenth-century science postulated aether as the medium of interactions in the heavens. Nineteenth-century science postulated aether as the medium of transmission in the wave theory of light. This term is also retained in contemporary quantum field theory.

"They [natural philosophers], believing that the primary body was something different from earth and fire and air and water, gave the name aether to the uppermost region, choosing its title from the fact that it 'runs always' and eternally." Aristotle, *De Caelo*

affirmative method

PHILOSOPHY OF RELIGION [from Latin via affirmativa or via positiva] A Christian theological method for obtaining knowledge of God, in contrast to negative method (via negativa). The affirmative method rejects the claim of the via negativa that God cannot be apprehended by human concepts and discourse. On the basis of the doctrine that man is made in the image of God, it claims that the highest human qualities are pointers and signs of the perfection of God. We can, therefore, deduce divine attributes through analogy to these qualities. The basic procedure is to start with the highest human categories and to proceed through intermediate terms to particular divine titles. In this way we can indicate how human terms such as goodness, wisdom, and power are applicable to God in a manner that transcends our experience. Because knowledge obtained in this way is pre-eminent, the via positiva is also called the via eminentiae. Some theologians, such as Aquinas, claim that the via negativa cannot be used in isolation, but is a necessary preliminary step to the via positiva. There are difficulties in applying a method of analogy like the affirmative method beyond the possibility of our experience.

"The affirmative method means ascribing to God the perfections found in creatures, that is, the perfections which are compatible with the spiritual nature of God, though not existing in Him in the same manner as they exist in creatures." **Copleston**, *A History of Philosophy*, vol. II

affirming mode, another term for modus ponens

affirming the consequent

LOGIC A logical **fallacy** of the form "If p then q; q; therefore p," that is, the categorical premise affirms the consequent of the conditional premise, while the conclusion affirms its antecedent. For instance, "if he is sick, he does not come to work; he does not come to work; therefore he is sick." This is invalid because in the conditional premise the truth of the consequent does not entail the truth of the antecedent. The correct form should infer from the antecedent of a true implication to its consequent; that is, it should be of the form "If p then q; p; therefore q." This was called *modus ponens* by the medieval logicians and is also called the affirming mood.

"'P \supset Q, Q, therefore P' bears a superficial resemblance to the valid argument form modus ponens and was labelled the fallacy of affirming the consequent." **Copi**, *Introduction to Logic*

a fortiori

LOGIC [Latin: for a stronger reason, even more so or with more certainty] An argument that if everything that possesses A will possess B, then if a given thing possesses A to a greater degree, it has a stronger reason (*a fortiori*) to possess B. For example, if all old men who are healthy can run, then *a fortiori* a young man who has greater health than old men can run.

"All the so-called relational (or *a fortiori*) syllogisms depend on the transitivity of the relations." **Cohen and Nagel,** *An Introduction to Logic and Scientific Method*

afterlife, see disembodiment

agape

ANCIENT GREEK PHILOSOPHY, ETHICS [Greek, love; its Latin translation, *caritas*: hence charity] In contrast to other terms for love, such as *eros* and *philia*, *agape* is used for Christian love and is one of the primary **virtues** in Christian ethics. Its content is expressed in two biblical injunctions: "Love the lord your God with all your heart, and all your soul, and all your mind" (Matthew 22: 9, but adapted from Leviticus 19:18) and "Love your neighbor as yourself" (Matthew 22:37, but previously Deuteronomy 6:5). *Agape* is wholly unselfish, but there has been some dispute whether it includes rational self-love. The relationship of *agape* to justice is also problematic. In comparative religion, *agape* has been compared with Confucian *jen*, humanity.

"Agape is that form of love in which God loves us, and in which we are to love our neighbour, especially if we do not like him." Tillich, *Ultimate Concern* **age of adventure,** another name for the Renaissance

age of reason, another name for the Enlightenment

agent

PHILOSOPHY OF ACTION, ETHICS [from Latin *agens*, what is acting, referring to a rational human being who is the subject of action] An agent can decide to act or not. Having decided to act, an agent can **deliberate** how to act. Once the means of acting are chosen, an agent can apply the means to bring about certain changes. The kind of capacity intrinsic to an agent is called agency. The change caused by an agent is called agent-causation, in contrast to eventcausation in which one thing is caused externally by another. In ethics, only agents are members of a moral community and bearers of moral responsibility.

"The way a cause operates is often compared to the operation of an agent, which is held responsible for what he does." **von Wright**, *Explanation and Understanding*

agent-centered morality

ETHICS Also called agent-related ethics. It demands that moral consideration should be given to moral agents rather than merely to the consequences of the agent's acts. It is a thesis opposed to consequentialism, in particular to utilitarianism, which it labels outcome-centered ethics. It accuses consequentialism of ignoring the integrity of the characters of moral agents, for consequentialist ethics requires that what an agent is permitted to do in any situation is limited strictly to what would have the best overall outcome impersonally judged. In contrast, agent-centered morality focuses on the agent's rights, duties, or obligations. It holds that our primary responsibility as agents is to guarantee that our actions conform to moral rules and do not violate our obligations towards others. Agents should perform such actions even if they know that the consequences of what they do would be better if they were willing to compromise their principles. Major issues for this view are to classify the forms of agent-relativity, to justify agent-relative principles, and to offer an adequate rationale for agent-centered restrictions.

"Agent-centred morality gives primacy to the question of what to do, a question asked by the individual agent, and does not assume that the only way to answer it is to say what it would be best if he did." T. Nagel, *Mortal Questions*

agent-neutral reason

ETHICS The evaluation of something objectively, independently of one's own interests. This is in contrast to "agent-relative reason," which values things by taking one's situations into consideration. Agentneutral reason cares about everyone, while an agentrelative reason cares more particularly about oneself. The introduction of this dichotomy of reasons for acting is credited to Derek Parfit, but Thomas Nagel borrows it (using the terms objective reason and subjective reason) and uses it widely. It plays a great role in the contemporary debate between "consequentialism" and "agent-related ethics." Consequentialism is generally characterized as "agent-neutral," for it requires that everyone should act so as to maximize the amount of happiness for all involved. Some philosophers therefore claim that it asks moral agents to consider their actions from an impersonal point of view and is thus in conflict with common sense. On the other hand, agentrelated ethics is believed to be based on "agentrelative reason" because it allows moral agents to base their moral aims on their moral characters. Consequentialism is also called "agent-neutral morality" or "act-centered ethics," and its opposite is called "agent-related ethics" or "agent-centered morality."

"Nagel calls a reason objective if it is not tied down to any point of view. Suppose we claim that there is a reason to relieve some person's suffering. This reason is objective if it is a reason for everyone – for anyone who could relieve this person's suffering. I call such reasons agent-neutral. Nagel's subjective reasons are reasons only for the agent. I call these agent-relative." **Parfit**, *Reasons and Persons*

agent-related ethics, another expression for agentcentered morality

agent-relative reason, see agent-neutral reason

agglomeration principle

ETHICS, LOGIC A term introduced by Bernard Williams and now used as a rule of inference in

deontic logic. According to the principle, if one has a duty to do a and if one also has a duty to do b, then one has a duty to do a and b. The principle also extends to cover all situations in which a property can be conjoined out of two other properties. The validity of the principle has been a matter of controversy because it needs to be reconciled with the principle that ought implies can. In some cases, a person can do a and can do b separately, but cannot do both of them and will therefore not have a duty to do both.

There is a converse to the principle of agglomeration, called the division principle, which states that if one has a duty to do both a and b, then one has a duty to do a and has a duty to do b.

"... that 'I ought to do a' and 'I ought to do b' together imply 'I ought to do a and b' (which I shall call the *agglomeration principle*)..." **B. Williams,** *Problems of the Self*

agnosticism

PHILOSOPHY OF RELIGION [from Greek a, not + gnostikos, one who knows] A term used by T. H. Huxley for a position that neither believes that God exists nor believes that God does not exist and denies that we can have any knowledge about the nature of God. Agnosticism is contrasted both to theism, which holds that we can know the existence and nature of God, and to atheism, which denies the existence of God. Many agnostics argue that human reason has inherent and insuperable limitations, as shown by Hume and Kant. Therefore, we cannot justify any claims supporting either theism or atheism and should suspend our judgment over these issues. The attitude of agnosticism has persisted in many periods, but it became important philosophically in nineteenth-century debates concerning science and religious belief. Agnosticism is also used more generally for the suspension of judgment about the truth or falsity of claims going beyond what we directly sense or commonly experience.

"Agnosticism: this is the theory that we have no means of telling what are the characteristics of those relatively permanent things and processes which manifest themselves partially to us by the interrelated sensa which we from time to time sense." **Broad,** *The Mind and its Place in Nature*

agreeable

AESTHETICS [German, *das Angenehme*] For **Kant**, what the senses find pleasurable in sensation, that is, the feeling of **pleasure** evoked by the presence of a sensible object. Whatever is liked is agreeable. This feeling gratifies desire and offers a pathologically conditioned delight, not only for man, but also for non-rational animals. In contrast, the good evokes delight by pure rational determination. Kant believed that the nature of this delight is both agreeable and good. Judgment about the agreeable implies no universality, but universal agreement is required where the judgment is transferred to the morally good.

"Agreeable is what the senses like in sensation." Kant, Critique of Judgement

Al, abbreviation of artificial intelligence

Ajdukiewicz, Kazimierz (1890–1963)

Polish analytical philosopher, born in Tarnopoi. Ajdukiewicz continued the development of twentieth-century Polish logic initiated by Twardowski and Lukasiewicz. He combined work on semantic categories, syntax, and meaning with a conventionalism in ontology and a pluralist epistemology. His conception of categorical grammar brought together his interests in logic and ontology. His major works include *Problems and Theories of Philosophy* (1949) and *Language and Knowledge*, 2 vols. (1960–5).

Albert the Great (c.1206–80)

Medieval Dominican Aristotelian, born in Germany. Albert the Great taught in Cologne and Paris. Under the influence of Neoplatonism, he attempted to reconcile Greek and Islamic philosophy and science with Christianity, a project that led to the great medieval synthesis of his student Aquinas. Albert's major works, including commentaries on Aristotle and *Summa Theologiae*, appear in his *Opera Omnia*.

Albo, Joseph (c.1380–1444)

Jewish philosopher, born in Spain. Albo used Jewish, Islamic, and Christian sources to provide a rational justification for Judaism. In his major work *The Book of Principle* (1425), he examined religious and philosophical discussions of the existence of God, providence, and the Torah as revelation, and developed a doctrine of natural, conventional, and divine law as a basis for political and social life.

d'Alembert, Jean Le Rond (1717-83)

French Enlightenment mathematician and philosopher, born in Paris, member of the Académie des Sciences, co-editor of the *Encyclopédie* (with Diderot). In his *Discourse préliminaire* to the great Enlightenment project of the *Encyclopédie* (1751–65), d'Alembert showed the influence of Bacon, Locke, and Newton as well as Descartes in laying down the methods of establishing human knowledge within a single rational framework of principles. He argued that these principles could be known through scientific investigation rather than through metaphysical argument.

algorithm

EPISTEMOLOGY, LOGIC [from the name of the Islamic mathematician al-Khuwarizmi (*c*.830)] A step-by-step procedure for reaching a sound result. The steps are finite in number, and each has instructions for its proper implementation, so that the whole procedure can be carried out in a mechanical fashion. An algorithm can be a calculative procedure to compute the value of a **function** for any **argument** within a domain. It can also be a decision procedure to determine whether a specific object has a particular property. The **truth table** test of the truth-value of a formula is one paradigm of an algorithm. It is important to know whether an algorithm is possible for a given kind of problem.

"An algorithm is a procedure, brutish or not, that guarantees solution." **Boden**, *Artificial Intelligence and Natural Man*

alienation

PHILOSOPHY OF RELIGION, POLITICAL PHILOSOPHY, ETHICS, MODERN EUROPEAN PHILOSOPHY [German, *Entfremdung*, from *fremd*, alien or *Entäusserung*, from *entäussern*, to make outer or external, which is associated with Latin, *alius*, another. Also translated as estrangement] A state in which a thing is separated, through its own act, from something else that used to belong to it, so that this other thing becomes self-sufficient and turns against its original owner.

The idea of alienation may be traced to the Christian doctrine of **original sin** and to **Rousseau**'s theory of the **social contract**, in which individuals in a state of nature relinquish their natural freedom in favor of civil freedom upon entering a social state. It is explicated by **Hegel**, **Feuerbach**, and **Marx**. For Hegel, the development of the absolute idea is a process of alienating or eternalizing ideas in the natural world and then de-alienating or recovering them at a higher stage. Each category develops into its contrary, which is originally contained in it. It thus enters a state of alienation, followed by reconciliation into a higher unity. This unity itself proceeds to further alienation. Nature is an alienation of the absolute idea. Each individual will be alien to social substance and also to his particular self although he is identified with the universal substance. The process of alienation and de-alienation corresponds to the process of the growth of human knowledge. Feuerbach held that God is nothing but the alienated human self. Marx claimed that alienation is a universal phenomenon of capitalist societies, rooted in the alienation of workers from the products of their labor. In capitalism these products take the form of commodities, money, and capital. For Marx, alienation can only be overcome by replacing capitalism by communism. The concept of alienation gained wide currency in the twentieth century, largely due to the influence of Marx's Economical and Political Manuscripts, which was written in 1844 and published in 1932. Neo-Marxists, especially Lukács, used the notion to provide a new interpretation of Marxism. Existentialism and the Frankfurt school take alienation to be a basic malaise of modern society and some Marxist theorists have looked for theoretical grounds to explain alienation in socialist societies. Alienation is discussed not only in philosophy, but also in other social sciences and daily life, to deal with disunities, bifurcations, or dichotomies affecting human well-being.

Alienation has various forms, but the selfalienation of human beings has attracted particular attention. Self-alienation refers to the separation of individuals from their real self, their nature, and their consciousness. It is a state in which a person loses individual integrity and independence and becomes a stranger to oneself.

"This 'otherness', this acting of a role imposed upon one, imposed perhaps by the unintended consequences of the behaviour of one's self or one's fellows in the past, which comes to threaten and coerce one as if it were a real entity menacing one from outside – this is the phenomenon of alienation, to which Rousseau and Hegel, Kierkegaard and Marx, and much modern psychology and sociology have given a central role." Berlin, *The Magus of the North*

alternation

LOGIC A complex statement in the form "p or q," also called **disjunction** in contrast to conjunction. The logical word "or" in such a statement admits of both exclusive or non-exclusive interpretations in ordinary language. When it is used in an exclusive sense, "p or q" is true if only one of its components is true. It means either p or q, but not both. In a non-exclusive sense, "p or q" is true if at least one of its components is true. It means either p or q, or both. While alternation can include both senses of "or," some logicians prefer to confine alternation to the exclusive sense of "or," and others prefer to confine it to the non-exclusive sense.

"Whereas a conjunction is true if and only if its components are all true, an alternation is false if and only if its components are all false." **Quine**, *Methods of Logic*

Althusser, Louis (1918–90)

Algerian-French structural Marxist, born in Birmendreis, Algeria. Under the influence of Lévi-Strauss's structuralism and Bachelard's notion of an epistemological break, Althusser stressed the importance of Marx's mature views and rejected Marx's earlier humanistic writings as ideological rather than scientific. He sought to understand historical processes in structural terms without theoretical recourse to the human subjects filling the roles determined by structures. He nevertheless saw the base and superstructure of Marx's social theory as mutually influential, with changes in the overdetermined superstructure capable of initiating revolution. His major writings include For Marx (1965) and Reading Capital (with Étienne Balibar, Pierre Macherey, and others) (1965).

altruism

ETHICS, POLITICAL PHILOSOPHY [from Latin *alter*, other or another] A term introduced into ethics by Auguste **Comte** and imported into England by Herbert **Spencer**. Altruism is the disinterested or benevolent concern for other people, that is, a regard to promote the welfare of others for their own sake rather than to promote one's own interest or a placing of the interests of others ahead of those of oneself. It opposes **egoism**, which tries to reduce morality to self-interest. Altruism has been a perennial problem for ethics. Greek ethics believed that it is one among many equally important values, but the mainstream of modern moral theory claims that it is the most important concern of ethics. On the other hand, some anti-traditionalist philosophers like **Nietzsche** and **Kierkegaard** condemn altruism on the grounds that it will lead to low self-esteem and self-negation.

The strength of altruism lies in the facts that altruistic acts undeniably occur in any society and that moral codes universally advocate altruism or benevolence and condemn selfishness. The issues surrounding altruism include the following. Given the self-preserving tendency of human nature, how are we to account for the existence of altruism? Even if we can understand how altruism occurs, is it morally justified? Are altruistic acts merely apparent and really motivated by self-interest? Since one should reasonably pursue one's own interests, does the good of others itself provide reason for an agent to promote that good? Given the difficulty in understanding another person, how can altruism really serve the good of others? Is there an adequate distinction between altruism and paternalism?

"'Altruism' means, not 'doing good to others for a duty's sake', but 'doing good to others for its own sake' or 'doing good to others for the sake of doing good to others'." **Nowell-Smith**, *Ethics*

ambiguity

PHILOSOPHY OF LANGUAGE To say that a word or expression is ambiguous means that different **senses** or **references** are associated with the word or expression, and that it is not clear from the given context which of these senses is meant. This is called lexical or semantic ambiguity. To say a sentence or statement is ambiguous means that the sentence is confusing in its whole meaning, although each word in it is clear, because of the grammatical structure among the words. This is ambiguity of construction which is also called structural or syntactic ambiguity or amphiboly. The grammatical relations that most often produce syntactic ambiguity include misplaced modifiers, loosely applied adverbs, elliptical constructions and omitted punctuation. Other major types of ambiguity include process—product ambiguity arising from the confusion between a process (behavior or movement) and a corresponding product; act object ambiguity, in which a statement can refer to either an act or an object and it is not clear which is intended in the given context; and type—token ambiguity, in which an expression can refer to either a type or a token and it is not clear which is intended in the given context. The ideal language philosophers such as **Frege** and **Carnap** claim that natural language is full of ambiguities, and hence that it must be replaced by a **logically perfect language** that is free of ambiguity. In literature, ambiguity is a prized feature rather than something to be eliminated.

"Semanticists and philosophers usually call a word 'ambiguous' only when there is some uncertainty about which meaning is being used in a particular instance. A word is not ambiguous by itself, it is used ambiguously." Hospers, An Introduction to Philosophical Analysis

ambiguous middle, fallacy of, another term for four-term fallacy

âme collective, see group mind

amoralism

ETHICS In Greek, *a* is a negative prefix, and "amoral" literally means not moral. Amorality is distinguished from immorality (evil, wrong), where "amoral" is synonymous with "non-moral," referring to actions that are morally value-free and that are neither moral nor immoral and neither right nor wrong. In another sense, the amoral is distinguished from both the immoral and the non-moral, referring to actions that are not the concern of standard moral or social concepts of good or bad. Generally "amoralism" is used in this latter sense for an attitude that ignores or rejects the ways in which morality governs human lives and is skeptical of the necessity of ethical life. Hence it becomes a task of ethics to justify morality by showing that ethical life is rational.

"[W]hen an amoralist calls ethical considerations into doubt, and suggests that there is no reason to follow the requirements of morality, what can we say to him?" **B. Williams**, *Ethics and the Limits of Philosophy*

amour de soi

ETHICS, PHILOSOPHY OF ACTION, POLITICAL PHILOSOPHY [French, self-love or love of self] Rousseau's term for the instinctive sentiment or disposition of selfpreservation which human beings have in the state of nature. It is born to humans, but also belongs to other animal creatures. Amour-propre and the natural feeling of pity are two supreme principles governing human behavior prior to the formation of society. Acts out of amour de soi tend to be for individual well-being. They are naturally good and not malicious because amour de soi as self-love does not involve pursuing one's self-interest at the expense of others. The sentiment does not compare oneself with others, but is concerned solely with oneself as an absolute and valuable existence. It is related to an awareness of one's future and can restrain present impulse. For Rousseau, amour de soi contrasts with amour-propre, a self-love that presupposes a comparison between oneself and others and consequently generates all the vicious and competitive passions.

"Amour de soi-même is a natural feeling which leads every animal to look to its own preservation, and which, guided in man by reason and modified by compassion, creates humanity and virtue." **Rousseau**, *Discourse*

amour-propre

ETHICS, PHILOSOPHY OF ACTION, POLITICAL PHILO-SOPHY [French, literally self-love, although selfaggrandizement might be better] A term introduced by Rousseau in contrast to amour de soi [French, self-love]. Amour de soi is an instinctive disposition of self-preservation that is possessed by human beings in the state of nature and that contains no desire to surpass others. Amour-propre is generated after the formation of society or association and leads one to pursue superiority over others, even at the expense of the interests of others. For amour-propre, the well-being of the self relies on one's standing relative to other selves and on comparisons between oneself and others. It impels one to seek power and dominance, giving rise to relentless competition and conflict. It engenders deception, aggression, hypocrisy, malice, and all other evils that appear in human relationships. The immorality of amour-propre leads to the corruption of society. To avoid this,

according to Rousseau, one should withdraw from society and return to nature.

"Amour-propre is only a relative and factitious sentiment which is born in society, which leads each individual to make more of himself than of every other, which inspires in men all the evils they perpetrate on each other, and is the real source of the sense of honour." **Rousseau, in Ritter and Bondanella (eds.)**, *Rousseau's Political Writings*

amphiboly

PHILOSOPHY OF LANGUAGE, LOGIC A kind of sentential ambiguity arising from the different combinations of the words in a sentence. For instance, the sentence "The brave son's mother is kind" can be understood either as saying that the son is brave or that the son's mother is brave. Hence this sentence is amphibolous. Amphiboly is also called syntactical or structural ambiguity. Under many circumstances an amphibolous sentence is true on one interpretation and false on another. If in one argument, a person uses the correct interpretation of the sentence as a premise, but infers using the false interpretation, he is committing the **fallacy of ambiguity**.

"A statement is amphibolous when its meaning is indeterminate because of the loose or awkward way in which its words are combined." **Copi**, *Introduction to Logic*

ampliative induction

LOGIC, PHILOSOPHY OF SCIENCE [from Latin *ampliatio*, broadening] A term introduced by Kneale for reasoning that proceeds from the observed to the unobserved or from the particular to the universal. Since its conclusion goes beyond what is contained in the premises, it is ampliative. Kneale claims that this is the method characteristic of natural sciences in establishing general propositions and that it is distinguished from summative **induction**, which characterizes work in social sciences; intuitive induction; and recursive induction, which operates in mathematics.

"One of the most striking characteristics of the induction used in natural sciences is that it goes in some sense beyond its premises, which are the singular facts of experience; I propose, therefore, to call it ampliative induction." **Kneale**, *Probability and Induction* ampliative judgment, see ampliative reasoning

ampliative reasoning

LOGIC [from Latin *ampliatio*, broadening; in contrast to *restrictio*, narrowing] In medieval logic, the broadening of a term's extension. For **Peirce**, ampliation is ampliative reasoning in which the conclusion goes beyond what is contained in the premises. For example, we infer from "some x are y" to "all x are y." Ampliative induction, in contrast to other forms of induction, reasons in this way. In contrast, the conclusion of deductive reasoning is generally thought to be already contained in the premises. For **Kant**, a synthetic judgment is an ampliative judgment, because its predicate adds something new to its subject, in contrast to analytic or clarificatory judgments, in which the predicate can be derived through analysis of the subject term.

"In ampliative reasoning the ratio may be wrong, because the inference is based on but a limited number of instances; but on enlarging the same the ratio will be changed till it becomes approximately correct." **Peirce,** *Collected Papers*, vol. II

analogies of experience

EPISTEMOLOGY, METAPHYSICS Kant introduced four groups of categories, with each group having principles or rules to show its objective validity in employment. Analogies of experience are these rules for the categories of relation, that is, the categories of substance, causality, and interaction. The analogies correspond to three temporal modes, namely duration, succession, and coexistence. The first analogy is the principle of the permanence of substance; the second is the principle of the fixed order of succeeding states; and the third is the law of reciprocity or community. Kant held that these principles are necessary conditions for the possibility of temporal experience. They enable our perceptions of objects in time to relate necessarily to one another, and hence make experience possible. The analogies of experience are merely regulative, not constitutive, principles, and they do not tell us whether there is an objective substance, causal relation, or interaction.

"An analogy of experience is, therefore, only a rule according to which a unity of experience may arise from perception." **Kant,** *Critique of Pure Reason*

analogy

PHILOSOPHY OF LANGUAGE, EPISTEMOLOGY, PHILOSOPHY OF RELIGION [From Greek, ana, up, throughout + logos, reason] Originally meaning a mathematical proportion between different things, the term has been extended to refer to similarities and likenesses between different things. An expression has an analogical sense when it extends its application to additional things that are similar in certain respects to the original things covered by the term. An analogical argument states that because a thing a is like another thing b in some respect, it is possible that a is like b in other respects as well. Typical examples include the argument from design and certain responses to the other minds problem. In religion it is often held that a transcendent God can only be described analogically by human language. Analogical argument is metaphorical and correlative. It is suggestive but not conclusive.

"Analogy is the inference that a not very large collection of objects which agree in various respects may very likely agree in another respect." **Peirce,** *Collected Papers*, vol. I

analysandum, see analysis

analysans, see analysis

analysis

PHILOSOPHICAL METHOD [from Greek *ana*, up + *lyein*, loose, untie] The mental process of dissolving a whole into its components and the relations between its components. The analysis into constituents is called material analysis, while the analysis of the manner of combination of the constituents is called formal analysis. The item to be analyzed is called the *analysandum*, and the item that does the analysis is called the *analysans*.

In this century, analysis has become the central method of Anglo-American analytical philosophy shaped by the development of modern logic. Its central characteristic is that we must investigate our language to make clear our thinking about the world. We approach the world through thought, and on this view the only way to approach the structure of our thought is to study what we say. Analysis is not a set of unified doctrines, but a style or manner of philosophy. Because different philosophers have

different notions of analysis, there are different schools in analytical philosophy itself. For Frege, Moore, Russell, and early Wittgenstein, analysis aimed to overcome traditional philosophical problems through replacing the apparent structure of statements by their real and underlying logical structure. For them, as for logical positivism, analysis involves a reduction of complex discourse to simple elementary propositions. This sort of analysis is also called logical analysis. For later Wittgenstein and Oxford ordinary language philosophers, the notion of an underlying logical structure of language is unnecessary, but we still need to analyze our ways of talking to establish an understanding of our conceptual scheme. This sort of analysis is also called linguistic analysis.

"Analysis may be defined as the discovery of the constituents and the manner of combination of a given complex." **Russell,** *Collected Papers of Bertrand Russell*, vol. VII

analysis, paradox of

LOGIC, PHILOSOPHY OF LANGUAGE A paradox, originally formulated by C. H. Langford in his discussion of Moore's notion of analysis, leads to the conclusion that all analysis is either trivial or false. An analysis states relations between an analysandum (the expression to be analyzed) and an analysans (the analyzing expression). These expressions are either synonymous or not synonymous. If they are synonymous, the analysis does not convey any information and is trivial. If they are not synonymous, the analysis is false. Therefore, analysis is either trivial or false and is not a significant philosophical or logical procedure. This paradox involves an analysis of the notion of analysis. The standard response to it involves the use of Frege's distinction between sense and reference. The truth of the analysis is a matter of the different expressions having the same reference, but triviality is avoided if the expressions have difference senses.

"And the paradox of analysis is to the effect that, if the verbal expression representing the analysandum has the same meaning as the verbal expression representing the analysans, the analysis states a bare identity and is trivial; but if the two verbal expressions do not have the same meaning, the analysis is incorrect." Langford, in Schilpp (ed.), *Philosophy of G. E. Moore*

analytic (Kant)

LOGIC, EPISTEMOLOGY, METAPHYSICS Analytic is a term Aristotle used for his syllogism and for the discussion of the conditions of demonstrative knowledge presented in his Prior Analytics and Posterior Analytics. In contrast, Aristotle presented what he called dialectic in the Topics, another part of his Organon. Since the sixteenth century, it has been common practice to divide logic into two parts: analytic, which concerns the elements of judgment, and dialectic, which concerns the persuasive force of syllogism, and this practice influenced German philosophy. In Critique of Pure Reason, Kant adopted this usage and divided his transcendental logic into the transcendental analytic and the transcendental dialectic. Analytic, in his understanding, is an analysis of the form of understanding and of reason. It seeks to determine the necessary rules of all formal truth and is a canon for deciding on the formal connectives of our knowledge. Kant practiced such an analytic in all of his three Critiques. In the first Critique, the transcendental analytic, including an analytic of concepts and an analytic of principles, seeks to uncover the concepts and principles of theoretical reason. In the second and third Critique, Kant used analytic to discover the principles of pure practical reason and of the power of aesthetic judgment.

"The analytic brings to light, by sundering them, all acts of reason that we exercise in thinking." Kant, *Logic*

analytic ethics

ETHICS A term for any analysis of moral concepts, but as a distinct approach it starts with G. E. Moore's Principia Ethica (1913). It claims that the fundamental task of ethics is not to discuss substantive moral questions and to seek solutions for them, but rather to examine the meaning of moral terms such as "good," "duty," "right," "ought" and to make them as clear and precise as possible. It then evolved into the linguistic analysis of moral judgments, their types and their functions. This development was represented by Ayer's account of morality, Stevenson's emotivism, and Hare's prescriptivism. Another dimension of analytic ethics is to examine moral reasoning and the basis for distinguishing moral judgments from other value judgments. This is represented especially in the work of Stephen

analytic philosophy

Toulmin. Analytic ethics can be viewed as synonymous with **meta-ethics**. In the 1960s, as the distinction between meta-ethics and normative ethics came into question, analytic ethics as a distinctive approach also lost favor. Many moral philosophers now believe that ethics should investigate both moral terms and moral questions. Nevertheless, analytic ethics, through its sharply defined analysis of moral terms, has had a lasting influence on ethics through raising the precision and theoretical level of ethical discussion.

"Analytic ethics as a branch of philosophy should, then, be clearly distinguished from empirical ethics, from a genetic or descriptive study of moral valuations, and from propagandistic morals." **Pap**, *Elements of Analytic Philosophy*

analytic Marxism

PHILOSOPHY OF SOCIAL SCIENCE, POLITICAL PHILOSOPHY A term not for a body of doctrine, but for a tendency or style developed during the past decade that attempts to bring Marxism into the web of contemporary political theory in order to benefit from rigorous critical standards and further development. It characteristically employs the conceptual tools and methods of analytical philosophy, game theory, and decision theory in its discussion of Marxism. Analytic Marxism is inspired by Marxist questions such as alienation, exploitation, class, social theory, theory of justice, theory of history, and Marx's theory of surplus value. Unlike conventional Marxism or Western Marxism, analytic Marxism does not stress Marxist exegesis, but it does seriously consider Marx's ideas as philosophy and discusses them with clarity and rigor. It is mainly directed to the underlying principles of Marxist theory and examines questions such as: "Is socialism in the interest of workers in modern capitalism?" "Why is exploitation wrong?" In general, it rejects Marx's methodological collectivism in favor of methodological individualism, which seeks to explain social arrangements and life by appeal to the rational behavior of differently endowed individuals. The major representatives of analytic Marxism include G. A. Cohen, Jon Elster, John Roemer, and Alan Wood. The tendency is also called neoclassical Marxism, rational choice Marxism and game theory Marxism. Analytic Marxists might in principle reject many of the main features of the traditional theory of Marxism, but proponents argue

that this pattern of development through rational criticism is characteristic of science in general.

"The project of Analytic Marxism is to clarify, criticise and develop the theory of Marxism, using the methods and techniques of analytical philosophy." **Sayers, in Ware and Nielsen (eds.)**, *Analysing Marxism*

analytic philosophy

PHILOSOPHICAL METHOD Also analytical philosophy, analytic philosophy arose from Russell and Moore's criticism of Bradley's absolute idealism at the beginning of the twentieth century and developed out of the combination of Frege's logic and the British empirical tradition. The philosophers of the first generation of analysis held on to the distinction between fact and value and between analytic and synthetic propositions. They rejected traditional metaphysics and normative ethics as the products of confusions generated by the surface grammar of language, and concentrated on the reductive logical analysis of the deep structure of language. Philosophy was understood as nothing but conceptual analysis. The early Wittgenstein, who did not share Russell's empiricism, held that such analysis also revealed the structure of the world. For logical positivists, analysis was focused on the logical forms of scientific discourse and much traditional philosophical discourse was rejected as nonsense.

After the Second World War, the main object of logical analysis became ordinary language, the view being that philosophy should concern itself with language per se rather than with its alleged essence. This tendency was influenced by the later Wittgenstein, but was mainly developed in Oxford through the work of such figures as Ryle, Austin, and Strawson. Ryle's behavioristic analysis of mind set the agenda for the philosophy of mind. Austin's speech act theory made the philosophy of language and the philosophy of mind interrelated disciplines. Strawson's notion of descriptive metaphysics restored the position of metaphysics in analytic philosophy. From the middle of the 1940s to the 1960s, analytic philosophy was regarded by many as synonymous with Oxford philosophy or linguistic philosophy, though this is not precisely correct. Ayer, for example, was critical of the emphasis on ordinary language, especially in Austin's work. In the United States, Quine rejected the distinction between analytic and synthetic propositions that was essential to early analytic philosophy and saw philosophy as a continuing enterprise of science. This has changed the landscape of analytic philosophy.

As a movement, analytic philosophy carries with itself a large variety of methods and doctrines. What unifies this movement is the spirit of the respect for rationality, the suspicion of dogmatic assumptions, and the pursuit of argumentative rigor and clarity on the model of the natural sciences. On these grounds, many recent innovations in philosophy, such as functionalism, the causal theory of reference, various theories of meaning and truth, the post-positivist philosophy of science, **Rawls**'s theory of justice and virtue ethics, can be seen as developments within analytic philosophy.

Analytic philosophy is often contrasted with continental philosophy, but this distinction should not be understood to be a geographical one. Although analytic philosophy is the dominant tendency in English-speaking countries, it is also practiced in many European countries, and was also contributed to greatly by continental philosophers such as **Brentano**, Frege, and the members of the **Vienna Circle**. The single most influential analytic philosopher, Wittgenstein, was from Austria.

"The basic tenet of analytical philosophy, common to such disparate philosophers as Schlick, early and later Wittgenstein, Carnap, Ryle, Ayer, Austin, Quine and Davidson, may be expressed as being that the philosophy of thought is to be equated with the philosophy of language." **Dummett**, *The Interpretation of Frege's Philosophy*

analytic philosophy of history, see philosophy of history

analytic-synthetic

LOGIC, PHILOSOPHY OF LANGUAGE This dichotomy is first explicated by **Kant**. In an analytic **judgment** the concept of the **predicate** is contained in the concept of the **subject**, and we can tell that the **proposition** is true by analyzing the relevant subject concept. An analytic judgment is **tautologous**, and its negation involves self-contradiction. In a **synthetic** judgment, the concept of the predicate adds something new to the concept of the subject, and the truth or falsity of the proposition cannot be determined by analysis. Such a judgment provides a synthesis of two concepts and tells us something about the world. Kant connects this dichotomy with the distinction between the *a priori* and the *a posteriori*. He claims that all analytic judgments are *a priori*, and he is concerned with how **synthetic** *a priori* judgment is possible.

The adequacy of Kant's account of this distinction has been a topic of much dispute, in particular because it is unclear what it means to say that a predicate is "contained" or "included" in the subject and because the distinction thus formulated can only be applied to the sentential structure "S is P." Various other accounts have been developed this century. Many of them concentrate on the idea that a negation of an analytic proposition is selfcontradictory, and that an analytic proposition cannot be false. Others suggest that a proposition P is analytic iff P is true by virtue of the meaning of the constituents of P, or that P is analytic iff it is true in all possible worlds, or that P is analytic iff P can be proved by logic and definition alone, or that P is analytic in a Language L iff P is true in virtue of the semantic rules of L.

Quine famously criticizes this distinction as a dogma of empiricism. He argues that the explication of the notion of analyticity is unsatisfactory since it appeals to the equally unclear notions of "necessity," "semantic rules," "synonym," etc. The explanation of these later notions either involves circularity or Platonic realism. He does not believe that this distinction, which plays such a great role in the development of modern philosophy, is sound. But P. F. **Strawson** and others argue that it is valid since the use we make of semantic meanings is indispensable.

"In all judgements in which the relation of a subject to the predicate is thought . . . , this relation is possible in two different ways. Either the predicate B belongs to the subject A as something which is (covertly) contained in this concept A; or B lies outside the concept A, although it does indeed stand in connection with it. In the one case I entitle the judgement analytic, in the other synthetic." Kant, *Critique of Pure Reason*

analytical behaviorism

PHILOSOPHY OF MIND A type of behaviorism, proposed by **Hempel** and others, in which all sentences containing sensation terms or psychological terms can be translated or reformulated into sentences containing only physicalistic terms. Hence, psychological terms do not refer to mental objects, events, or states. This theory extensively employs meaning analysis and contextual definition, and its goal is to deny the existence of mental substance. The major problem it faces is its difficulty in analyzing some psychological sentences in behavioral terms.

"Analytical behaviourism is the theory that all sentences using psychological or mentalistic terms are transformable by analysis of what they mean into sentences using no psychological terms, but containing only terms used to describe bodily behaviour and bodily dispositions to behave." **Cornman**, *Materialism and Sensations*

analytical definition

LOGIC, PHILOSOPHY OF LANGUAGE A definition of a word that can be derived purely by explaining the property ascribed to the word in linguistic usage. For example, an analytical definition of "uncle" is "a man who has the same parents as a parent of another person," because this *definiens* gives the property that English ascribes to the word "uncle." Such a definition is necessarily true. To reject an analytical definition involves a violation of a rule of meaning for the language.

"Analytic definitions of concepts can give rise to analytic statements." Arthur Pap, "Theory of Definition," An Introduction to the Philosophy of Science, vol. I

analytical jurisprudence

PHILOSOPHY OF LAW John Austin first brought out the distinction between analytical jurisprudence and normative jurisprudence. Analytical jurisprudence is the branch of legal theory or philosophy that is concerned with the linguistic and logical elucidation of legal concepts. It deals with the articulation and analysis of concepts, rules, and structures of law as it is. Normative jurisprudence, on the other hand, is concerned with the evaluative criticism of legal practices and with the prescription of what law ought to be. Analytical jurisprudence does not aim at ascertaining the meaning of a term in a particular text. It intends to reveal the conceptual framework that is common to all properly constituted legal systems and thus to achieve an improved understanding of legal ideas and legal rules. After John

Austin, the approach was further developed in this century by the American jurist W. N. Hohfeld and by the Oxford legal philosopher H. L. A. **Hart** in association with the development of linguistic philosophy.

"Analytic jurisprudence is concerned with the logical analysis of the basic concepts that arise in law, e.g. duty, responsibility, excuse, negligence, and the concept of law itself." Murphy and Coleman, *The Philosophy of Law*

analytical phenomenalism, see phenomenalism

analytical priority

PHILOSOPHICAL METHOD The priority in the order of philosophical analysis. If X must be appealed to in explaining Y, while the explanation of X itself does not need to involve Y, then X has analytical priority over Y. One of the main characteristics of analytical philosophy is the view that language is analytically prior to thought, and that we should focus on the analysis of language. The philosophy of thought, on the other hand, holds that thought is analytically prior to language. That is, the meaning of a language should be explained in terms of the thought that the language is used to express. Analytical priority is distinguished from ontological priority in which X is prior to Y because Y depends on X for its existence, while X does not exist because of Y. It is also distinguished from epistemological priority in which X is prior to Y because the knowledge of Y presupposes the knowledge of X, but not vice versa.

"To say that the notion of X is analytically prior to the notion of Y is to say that Y can be analysed or elucidated in terms of X, while the analysis or elucidation of X itself does not have to advert to Y." **Davies, in Bunnin and Tsui-James (eds.),** *The Blackwell Companion to Philosophy*

analytical Thomism, see Thomism

anamnesi, Greek term for recollection

anarchism

POLITICAL PHILOSOPHY [from Greek *a*, not + *arche*, ruling, governing, literally the lack of government] In a popular sense, pejoratively understood as a position opposing all existing authority and institutions

and associated with lawlessness, chaos, violence, and terrorism.

Proudhon (1809-65) was the first to identify himself as an anarchist. In his sense, anarchism is a theory that advocates that voluntary and contractual social and economic organizations should replace the existing authoritarian and coercive state and statelike institutions. Accordingly, anarchism is a political theory that rejects authoritarianism and demands the establishment of a better society on the basis of free competition, cooperation, and equality. For anarchism, state power is not legitimate and does not have satisfactory justification. Authority involves oppression and domination and entails the promotion of privilege and wealth for a certain minority of the population. It is not helpful in achieving social goals, but produces undesirable consequences. Hence, a society may need certain forms of organization, but should remove all authoritarian and coercive regulations. Political obligation to the state should vanish. Such a view can be traced to Greek Stoicism and Chinese Taoism. It was fully expressed in modern times in William Godwin's An Inquiry Concerning Political Justice (1793). With regard to the means to realize the desired anarchic state, different anarchists have different plans. For example, Proudhon and Max Stirner (1806-56) believed that anarchism should be achieved through the peaceful change of the existing coercive institutions, while M. Bakunin (1814-76) called for a violent revolution to destroy the current machinery of the state.

Anarchism has met tremendous difficulties, for it cannot find an acceptable means of maintaining social order and rectifying degenerate or evil societies. But in theoretical terms it is a significant source for the critique of authoritarianism. It also poses fundamental questions about the justification of political power and political obligation.

"The forms of anarchism anchored in social and philosophical theories do not deny the value of security and order, but they believe that these are maintainable without a state, without a government, without a monopoly of power." Gans, *Philosophical Anarchism and Political Disobedience*

anarchism (scientific)

PHILOSOPHY OF SCIENCE A position concerning the growth of science, associated in particular with Paul

Feyerabend, who denied that there is an overall methodology of science. It is an illusion to believe that there are transcultural norms of rationality of science that guide scientific activities. Hence all attempts to seek universal paradigms of scientific development and its rules are futile. The success of science depends on rhetoric, persuasion, and propaganda, rather than on rational argument. To adhere to a set of theories and to demand consistency and invariable meaning discourages development. We should rather advocate the proliferation of conflicting and competing theories. Science should be an anarchistic enterprise that proceeds according to the maxim "anything goes." Feyerabend also called his position theoretical pluralism and claimed that pluralism is essential for the growth of knowledge.

"Science is an essentially anarchic enterprise: theoretical anarchism is more humanitarian and more likely to encourage progress than its lawand-order alternatives." **Feyerabend**, *Against Method*

anarchy, see anarchism

anatomic property

METAPHYSICS [from Greek ana, up + atomos, indivisible, not atomic] If a property of something is not peculiar to that thing, but is also possessed by at least one more thing, this property is anatomic. For instance, weighing 70 pounds is an anatomic property, for it is not the case that there is only one thing in the world that weighs 70 pounds. An anatomic property contrasts with an atomic or punctuate property, which can be instantiated only by one thing, but is the same as a holistic property, which is a property such that if anything has it, then other things have it. The distinction between anatomic and atomic properties is significant for the discussion of meaning holism. While traditional British empiricism, logical positivism, and behaviorism emphasize the relation between a symbol and what is symbolized in the non-linguistic world and hence treat properties atomistically, contemporary semantic holism claims that the meaning of a symbol is determined by its role in a language and is accordingly anatomic.

"A property is anatomic just in case if anything has it, then at least one other thing does." Fodor and Lepore, *Holism*

Anaxagoras (500-428 BC)

Pre-Socratic natural philosopher, born in the small Ionian city of Clazomenae, and emigrated to Athens in 480 BC. Anaxagoras claimed that in the beginning the world comprised an original boundless and indeterminate mixture containing all ultimate constituents or seeds. All other things in the cosmos are generated out of this mixture through rotation, and every stuff contains a portion of every other stuff. The theory was a result of his attempt to answer Parmenides' denial of change. Anaxagoras also suggested that the mind (*nous*), as an allpowerful and omniscient agency, ordered the cosmos. This teleological idea excited Plato and Aristotle, although they complained that Anaxagoras failed to develop it.

Anaximander (flourished c.550 BC)

Pre-Socratic natural philosopher, born in Miletus, a student of Thales. Anaximander was said to have been the first person to construct a map of the world. He believed that there was one material stuff out of which everything in the cosmos came and into which everything returned in the end. Probably thinking that every ordinary material element could be destroyed by its opposite, he took the single cosmic stuff to be something boundless or indeterminate (*apeiron* in Greek). The *apeiron* is eternal and encompasses all the opposites. He held that the generation and destruction of things follow a principle of cosmic justice.

Anaximenes (flourished c.550 BC)

Pre-Socratic Greek philosopher, born in Miletus, a student of Anaximander. Following Thales and Anaximander, Anaximenes believed that there was one underlying principle from which everything comes and to which everything returns. For him, this principle is air. Air is boundless, but not as indeterminate as Anaximander's *apeiron*. It is through the process of condensation and rarefaction that air is transformed into everything else.

Anderson, John (1893–1962)

Scottish-Australian philosopher, born in Scotland, Professor of Philosophy at University of Sydney. Anderson was a crucial figure in establishing a distinctive school of Australian philosophy. He considered philosophy to be concerned with spatio-temporal states of affairs, events, and processes and to be continuous with science. He was an empiricist committed to the real existence of material objects in epistemology and was a naturalist in ethics and aesthetics. Several of his most influential essays are included in *Studies in Empirical Philosophy* (1962).

androcentrism

FEMINIST PHILOSOPHY [from Greek *andro*, the stem of the word man] Androcentrism is a male-centered perspective. According to many feminists, Western culture is androcentric because it is preoccupied with theoretical rather than practical issues and with reason rather than experience. It devalues women's experience and does not take women's concerns seriously. On this view, an androcentric bias is implicit in virtually every aspect of social life. One of the goals of **feminism** is to deconstruct the traditional androcentric philosophical framework. Androcentrism is opposed by gynocentrism [from Greek *gene*, woman], a female-centered perspective.

"The radical feminist position holds that the epistemologists, metaphysicians, ethics, and politics of the dominant forms of science are androcentric." Harding, *The Science Question in Feminism*

Anglo-American philosophy, another term for analytic philosophy

Angst, German term for anxiety

anguish

MODERN EUROPEAN PHILOSOPHY [French, *angoisse*, also translated as dread] One of the typical **existentialist** attitudes toward the world, similar to **anxiety**. A person is both free to act as he or she chooses and to be conscious of this **freedom**. The feeling of anguish arises when a person is brought face to face with this consciousness or recognition of freedom. If a choice is original and cannot be justified by reasons outside one's own choice, then a person will always enter upon self-questioning concerning the rightness of the choice or the failure to choose and, hence, will experience a sort of uncertainty. Anguish is connected with the absurdity of the world, rather than directed at any particular danger. Most people flee from anguish through **bad faith**, while an **authentic** person is aware, through this feeling, of the gap between what is present and what is possible for him or her, and proceeds to increased creativity in the use of his own potentiality. Some existentialists also call this feeling "ontological guilt," a sense of guilt arising not from the violation of some particular prohibitions, but from the self-awareness of free choice. Both the moral psychology and the **ontology** of this central existentialist notion can be called into question.

"It is by anguish that man becomes conscious of his freedom, or in other words, anguish is the manner of existence of freedom as consciousness of existing." **Sartre,** *Being and Nothingness*

anima, Latin term for soul

anima mundi, Latin term for world-soul

animal

PHILOSOPHY OF SCIENCE, PHILOSOPHY OF MIND [from Latin anima, soul, corresponding to Greek, psyche; Aristotle's Peri Psyche (On the Soul) is generally translated as De Anima] The distinction between living and non-living things lies, according to Aristotle, in the fact the former have souls, although there is a hierarchy of souls, from vegetative, locomotive, and sensory to rational souls. Only man has a rational soul, and plants have no more than vegetative souls. The Bible says that living things are animated with "the breath of life." Thus, the mark of living things is that they are animated or ensouled. Nowadays we distinguish between plants and animals, with humans considered to be a special kind of animal. Descartes, as a consequence of his dualism, described animals as mechanical automata and preferred to call them beasts rather than animals. The normal way to distinguish between human beings and nonhuman animals appeals to the fact that humans alone are self-conscious and genuine language users.

"In my opinion the main reason for holding that animals lack thought is the following... It has never been observed that any brute animal has attained the perfection of using real speech, that is to say, of indicating by word or sign something relating to thought alone and not to natural impulse." **Descartes,** *The Philosophical Writings* **animal-centered ethics,** see animal liberation, environmental ethics

animal liberation

ETHICS The term comes from the title of a book by Peter Singer in 1975. The movement to liberate slaves demanded the cessation of prejudice and discrimination against black people on the grounds of skin color. The women's liberation movement demanded the cessation of prejudice and discrimination against women on the grounds of gender. Analogically, the animal liberation movement calls for an end to prejudice and discrimination against animals on the grounds of species. Traditional ethics excludes animals from the ethical community because they lack the full range of human rationality, and animals have been exploited for food, in experiments, and as the victims of hunting. Singer accuses this tradition of speciesism. He argues that animals are capable of suffering and should be included in the community of beings that merit moral consideration. We need a new ethics to deal with human relationships with non-human animals. He claims that abusing and killing animals is not morally justified. Although there is controversy whether animals can have rights and whether these rights would entail that humans should be vegetarians, the animal liberation movement has greatly influenced human attitudes and behavior toward animals. It is widely accepted that we should at least avoid unnecessary animal suffering and avoid killing animals in brutal ways.

"Animal liberation is human liberation too." P. Singer, Animal Liberation

animal rights, see rights, animal

animal spirits

PHILOSOPHY OF ACTION A term **Descartes** adopted from **scholasticism** for the principle of movement in automata rather than something spiritual. It was a key term in his theory of animal movement. "Animal" here included both humans and other animals. "Animal spirits" were claimed to be a subtle matter, something in the blood that is distributed through the pineal gland and moves the limbs causing various internal muscular motions. They were likened to "the fire without light in the heart." Animal spirits could be lively or sluggish, coarse or fine, and it was claimed that due to this fact an animal machine could move itself.

"The parts of the blood which penetrate as far as the brain serve not only to nourish and sustain its substance, but also and primarily to produce in it a certain very fine wind, or rather a very lively and pure flame, which is called the animal spirits." **Descartes,** *The Philosophical Writings*

animal symbolicum

METAPHYSICS, PHILOSOPHY OF MIND A term used by the German neo-Kantian Ernst Cassirer. The tradition since Aristotle has defined a human being as animal rationale (a rational animal). However, Cassirer claimed that man's outstanding characteristic is not in his metaphysical or physical nature, but rather in his work. Humanity cannot be known directly, but has to be known through the analysis of the symbolic universe that man has created historically. Thus man should be defined as animal symbolicum (a symbol-making or symbolizing animal). On this basis, Cassirer sought to understand human nature by exploring symbolic forms in all aspects of a human being's experience. His work is represented in his three-volume Philosophie der Symbolischen Formen (1923-9, translated as The Philosophy of Symbolic Forms) and is summarized in his An Essay on Man.

"Hence, instead of defining man as an *animal* rationale, we should define him as an *animal symbolicum*." Cassirer, An Essay on Man

animism, another term for panpsychism

anomalous monism

PHILOSOPHY OF MIND [from Greek *a*, not + nomos, law, order] Donald **Davidson**'s term for his theory about the relationship between the mental and the physical. There is only one fundamental kind of thing, physical objects, upon which all mental events are **supervenient**. Hence this theory is a type of **monism** rather than a dualism. This theory asserts that there are no psychophysical laws that relate mental phenomena to physical ones. It is therefore impossible to reduce all mental phenomena to physical phenomena, or to explain **mental events** fully in terms of the physical structure of the brain. For this reason, Davidson calls this monism anomalous. Davidson contrasts his theory with three possible alternative theories about the mind–body relationship: nomological monism, which affirms the existence of laws correlating the mental and the physical; nomological dualism, which is ontologically dualist and which assumes a conceptual correlation between mind and body; and anomalous dualism, which is ontologically dualist but denies the possibility of mental reduction. Anomalous monism is a combination of ontological monism and conceptual nonreductionism. It considers mental events not as types but as particulars, as individual token events, and therefore replaces the widely accepted type-type identity theory by the token-token identity theory.

"Anomalous monism resembles materialism in its claim that all events are physical, but rejects the thesis usually considered essential to materialism, that mental phenomena can be given purely physical explanations." **Davidson**, *Essays on Actions and Events*

Anscombe, G(ertrude) E(lizabeth) M(argaret) (1919–2001)

British philosopher, born in Limerick, Ireland, taught in Oxford and Cambridge. Anscombe was a student and friend of Wittgenstein and one of his literary executors. Her translation of Philosophical Investigations (1953) and her study An Introduction to Wittgenstein's Tractatus (1959) helped to bring Wittgenstein's views to a wider public. She was a major philosopher in her own right. Intention (1957), which founded contemporary philosophy of action, was considered by Davidson to be "the most important treatment of action since Aristotle." Her paper "Modern Moral Philosophy" (1958) offered penetrating criticism of modern philosophical ethics and led to the contemporary revival of virtue ethics. Her many important papers were included in the Collected Philosophical Papers, 3 vols. (1981). As a committed Catholic, she published numerous influential articles on contemporary moral issues.

Anselm of Canterbury, St (1033–1109)

Medieval Italian philosopher, theologian, and archbishop of Canterbury, born in Aosta, Piedmont. As a founder of scholasticism, Anselm held that reason is essential to understanding faith. He is most famous for devising the ontological argument for the existence of God, which infers from the premise that God is a being than which nothing greater can be conceived to the conclusion that God must exist in reality as well as in thought. Consideration of this and later formulations of the ontological argument have been continued to the present. Anselm's most important works are *Monologion* and *Proslogion*.

anthropological holism

PHILOSOPHY OF LANGUAGE A thesis derived from the later **Wittgenstein**, **Austin**, and others, claiming that there is an internal relation between a symbol and its non-linguistic role in **conventions**, rituals, practices, and performances. Hence, language cannot be narrowly understood as a set of sentences and linguistic philosophers should not concentrate only on establishing phrase-structure trees for sentences. Instead, they should take language as belonging to **forms of life** and explore the relation between linguistic symbols and their cultural and practical background.

"Anthropological holism is distinct from semantic holism only in so far as it concerns the relation between language and its intentional background – that is, the relation between language and the cultural background of beliefs, institutions, practices, conventions, and so forth upon which, according to anthropological holists, language is ontologically dependent." Fodor and Lepore, *Holism*

anthropomorphism

PHILOSOPHY OF RELIGION [from Greek anthropos, man, human kind + morphe, shape, form, figure] The ascription of human forms and qualities to non-human things, in particular God. In Homer and Hesiod, gods are described in terms of human characteristics and feelings. This type of religious anthropomorphism was first attacked by the Greek philosopher Xenophanes, who claimed that if horses or oxen had hands and could produce works of art, they too would represent the gods after their own fashion. Others replied to this objection by claiming that we can talk of God in terms of human attributes because man is made in the image of God. Man is the medium through which God manifests or reveals himself. According to this understanding, anthropomorphism, while explaining God in terms of man, ascribes man a theomorphic nature. The Christian doctrine of the incarnation is a typical example of anthropomorphism because God himself becomes

a human being. According to G. H. Lewes (1817–78), anthropomorphism describes animals, plants, and the universe in terms of such attributes as consciousness, feelings, thought, and communication, which are ordinarily thought to belong only to human beings.

"Anthropomorphism, ... is the attribution to things not human of characteristics that apply only to humans." **Regan**, *The Case for Animal Rights*

anticipation

MODERN EUROPEAN PHILOSOPHY [German Vorlaufen, an existential attitude towards one's death and the future] Heidegger distinguished anticipation from expectation [German, Erwarten]. In the face of death, that is, in confronting that one's existence is limited and finite, expectation seeks a secure and stable relationship with other human beings and the world of the "they," forgetting one's past and passively awaiting the occurrence of death. Anticipation, on the other hand, views death as revealing one's uttermost possibility and seeks the meaning of what lies ahead. In anticipation Dasein finds itself moving toward itself as its ownmost potentiality-for-Being. It faces up to one's past. Rather than maintaining or continuing the process already dominant in the past and present, anticipation contains the possibility of drastic changes in one's future life. While the authentic future is called "anticipation," the authentic present is called "moment-of-vision," and the authentic past is called "repetition."

"Anticipation turns out to be the possibility of understanding one's ownmost and uttermost potentiality-for-Being – that is to say, the possibility of authentic existence." **Heidegger**, *Being and Time*

anticipations of perception

EPISTEMOLOGY, METAPHYSICS [German, Antizipatione, Kant's translation of Epicurus' Greek, prolepsis, a preconception that renders perception possible] For **Kant**, the rules intended to show the objective employment of the categories of quality: reality, negation, and limitation. Kant extended the meaning of anticipations to all knowledge that determines *a priori* the qualitative form of empirical knowledge. The leading principle for these categories is that any given perception will have an intensive magnitude, that is, a degree of reality. The qualities we sense must come in degrees, for example, the acuteness of a pain or the loudness of a noise. According to Kant, it is impossible for us to perceive appearances unless they possess this intensive magnitude. Anticipations of perception are contrasted to axioms of intuition, whose leading principle is that any perception has extensive magnitude. Both anticipations of perception and axioms of intuition are mathematical principles, in contrast to the dynamic principles of the analogies of experience and the postulate of empirical thought. By anticipations of perception, Kant claimed that the mathematics of intensity must apply to our experience. However, he did not specify what these anticipations are, and his discussion linking the principles to the categories remained vague.

"The principle which anticipates all perceptions as such is as follows: In all appearances sensation, and the real which corresponds to it in the object (*realitas phaenomenon*), has an intensive magnitude, that is, a degree." **Kant,** *Critique of Pure Reason*

anti-individualism

POLITICAL PHILOSOPHY, PHILOSOPHY OF MIND A term used in contrast to individualism. In social philosophy, it is the claim that the value of **community** is prior to individual freedom. In political theory, it is the view that a society should have a common goal and that the individual should be subordinate to this goal. Social coherence and uniformity of view are emphasized, rather than diverse individual voices. Anti-individualism does not accept the value of individual experience and is intolerant of difference. In some versions, the existence of an individual is regarded as being determined by his place in society, and individual existence is considered to be a fiction. This position is reinforced through combination with social Darwinism, which suggests that individual experience contributes little to the progress of mankind. Other anti-individualist positions also involve claims limiting the role of individuals in social explanation as well as claims limiting the value of individuals.

In another use, anti-individualism in the philosophy of mind is the view that a person's mental events are fundamentally related to his social and linguistic contexts and hence cannot be individuated solely by appeal to the properties of their owner. "His [Comte's] 'organic' interpretation of society involves the extremist anti-individualism, derealization of the human individual, worship of Humanity as the only real individual." Kolakowski, *The Alienation of Reason*

antilogism

LOGIC A term for any situation in which three propositions cannot all be true simultaneously and at least one of them must be false. In a strict sense, it involves syllogistic reasoning whereby the conjunction of two premises implies the negation of the conclusion. Seeking an antilogism was a basic method to test the validity of a syllogism. A syllogism can only be valid when its two premises and the negation of its conclusion are inconsistent. Such an inconsistency is also called an inconsistent triad.

"When limited to three propositions constituting a disjunctive trio, the antilogism may be formulated in terms of illustrative symbols as follows: 'the three propositions p, q, and r cannot be true together.' " **Johnson**, *Logic*

antinomianism

PHILOSOPHY OF RELIGION, ETHICS [from Greek *anti*, against + *nomos*, law or rule, hence, against law] A term introduced by **Luther** for the position that rejects the legitimacy of all regulations and laws. The position was embraced by certain early Christian sects, which believed that divine grace enables Christians to determine which conduct is right or wrong. Hence law should be superseded by the gospel. The term is now also used for the extreme relativist position that rejects all moral norms and claims that only sensitivity to a particular given situation can provide it with an ethical solution. The resolution of moral conflicts should depend upon the circumstances. **Existentialist** ethics is sometimes described as a type of antinomianism.

"Antinomianism . . . is the approach with which one enters into the decision-making situation armed with no principles or maxims whatever, to say nothing of rules." **Fletcher**, *Situation Ethics*

antinomy

EPISTEMOLOGY [from Greek *anti*, against + *nomos*, law, an extreme form of paradox] A pair of opposed

propositions, called a thesis and antithesis, each of which seems to be supported by formally valid argument, but which are inconsistent with one another. Guintilian (AD 35-100) presented antinomies as conflicting arguments side-by-side. Kant used this form, which was widely adopted in sixteenthcentury jurisprudence, in the dialectic of all three Critiques to show that reason will inevitably lead to antinomies when it extends beyond the limits of experience in the hope of finding completeness and unity in explanation. Kant's most influential account of antinomies appears in the Transcendental Dialectic of his first Critique. He claimed that the rational cosmology of traditional metaphysics inevitably leads to antinomies. These are four sets of dialectical inferences about the nature of the world, corresponding to the four groups of categories. (1) Quantitative antinomy: thesis: the world is finite in space and time; antithesis: the world is infinite. (2) Qualitative antinomy: thesis: everything is made up of simple constituents; antithesis: nothing is made up of simple constituents. (3) Relational antinomy: thesis: everything has a cause, and there is no freedom; antithesis: not all things have a cause, and there is freedom. (4) Modal antinomy: thesis: a necessary being exists that explains the universe; antithesis: no necessary being exists.

In the second *Critique*, Kant presented the practical antinomy: thesis: the desire for happiness must be the motive for maxims of virtue; antithesis: the maxim of virtue must be the efficient cause for happiness. In the third *Critique*, he presented the antinomy of aesthetic judgment: the judgment of taste is not based on concepts; antithesis: the judgment of taste is based on concepts. All of these Kantian antinomies are drawn from opposing positions in the history of philosophy. According to Kant, once we show how these antinomies are generated from malfunctions of reason, they are shown to be illusory and preventable. Logical positivists were indebted to this aspect of Kant's thought.

Hegel claimed that antinomies are not confined to those uncovered by Kant, but appear in each area of thought. This contributed to the development of Marx's materialist account of dialectic, and the notion of antinomy continues to be employed by Western Marxists and others as a tool for criticizing society. "The second kind of pseudo-rational inference is directed to the transcendental concept of the absolute totality of the series of conditions for any given . . . The position of reason in these dialectical inferences I shall entitle the antinomy of pure reason." **Kant, Critique of Pure Reason**

Antiochus (*c*.130–68 вс)

Hellenistic philosopher, born in Ascalon. He claimed to return to authentic Platonism by reviving the doctrines of the Old Academy, although his thought combined Stoicism with Platonism. He abandoned Academic skepticism and argued that Plato's epistemological stance was consistent with the Stoic doctrine of cognitive certainty. All of his works were lost.

anti-realism

METAPHYSICS, LOGIC, PHILOSOPHY OF LANGUAGE, EPISTEMOLOGY, PHILOSOPHY OF SCIENCE, PHILOSOPHY OF MATHEMATICS, MORAL PHILOSOPHY, AESTHETICS Antirealism opposes realism, but its meaning varies according to how we formulate realism. Various sorts of realism argue for the objective existence of different objects and properties, such as the external world, mathematical objects, universals, moral and aesthetic properties, other minds, scientific laws, or theoretical entities. Correspondingly, anti-realism has many forms involving the denial of the objective existence of these objects and properties. Realism claims that the items under dispute exist independently of our experience, knowledge, and language and that the world is more than we can know. Antirealism argues that since we know the world only through our mind-related perceptual and conceptual faculties, we cannot sensibly talk about a mindindependent world. The debate between realism and anti-realism takes different forms for different issues. For example, materialists and idealists debate the existence of the external world, and realists and nominalists debate the existence of universals.

An influential kind of anti-realism, particularly associated with M. **Dummett**, C. **Wright**, and J. **McDowell**, is sometimes called semantic antirealism. According to this view, realism has an arbitrary metaphysical assumption that an objective reality exists independent of our knowledge. The position is characterized by following **intuitionist logic** in denying the principle of bivalence. Truth and falsity are not exhaustive, as they would be according to realism, because truth or falsity are determined by the conditions under which we can correctly assert or deny a sentence. Because there are circumstances in which neither assertion nor denial is justified, bivalence and realism fail. This position is influenced by **Frege** and by later **Wittgenstein**'s use of the theory of meaning and is seen by critics as being closely related to verificationism.

"The general argument Dummett has given for anti-realism starts from the following thesis: that the content of a sentence is determined by the class of recognizable situations with respect to which it would be acknowledged as true and the class of recognizable situations with respect to which it would be acknowledged as false." **Peacocke**, *Thoughts: An Essay on Content*

Antisthenes (*c*.444–*c*.366 BC)

Greek philosopher, born in Athens, one of the founders of the Cynic school. As a follower of Socrates, Antisthenes claimed that definition was a major goal of philosophy. He emphasized the role of education and self-improvement. Although accepting that pleasure resulting from labor was good, he condemned luxury and advocated a simple life. He argued that virtue is sufficient for happiness. Only a few fragments of his many works survived.

anti-theory

ETHICS A contemporary ethical movement represented by figures such as Annette Baier, Bernard Williams, John McDowell, Martha Nussbaum, Charles Taylor, Alasdair MacIntyre, Richard Rorty, and Stuart Hampshire. The "theory" that this movement opposes is modern moral theory, which takes it as its central task constructing and justifying a set of abstract universal moral rules and principles to guide and evaluate the moral behavior of all rational beings. These principles are completely context-free and can be applied in an almost computational way to any particular case. Correct moral judgments and practices seem to be deducible from these timeless principles, and all moral values are commensurable with respect to a single standard. Any moral conflict can be solved in a rational way. The anti-theory movement claims that moral theory of this sort is unnecessary, narrow, and impossible, for it cannot specify moral norms embedded in cultural and historical traditions, it cannot account for virtue that is culturally informed and it is incompatible with the fact that there are irresolvable moral conflicts and dilemmas. In contrast, this movement suggests that ethics should return to Aristotelian virtue ethics, claims the primacy of social moral practice over rational principles and the primacy of ethical perception over rules, and emphasizes the plurality of social conventions and customs. It is united in its opposition to modern moral theory, but varies in its positive doctrines. Authors supporting this movement have their own versions of what ethics should be. In many cases, this movement leads to moral contextualism, conservatism, or communitarianism.

"The expression 'anti-theory' emphasises opposition to any assertion (whether in the form of a substantive moral principle or a meta-ethical theory about the nature of moral claims) that morality is rational only insofar as it can be formulated in, or grounded on, a system of universal principles." **S. G. Clarke and E. Simpson (eds.)**, *Anti-Theory in Ethics and Moral Conservatism*

anxiety

MODERN EUROPEAN PHILOSOPHY [German, Angst, also translated as dread or uneasiness] A type of existential experience similar to Sartre's "anguish." The topic was introduced into philosophy by Kierkegaard in his The Concept of Dread (1844). Heidegger distinguished anxiety from fear. Fear arises from a specific threat, and there is some external entity about which to be afraid. Anxiety, on the other hand, is a state of mind arising not from any particular and determinate affliction, but from one's own indefinite existence. Anxiety comes to us from nowhere and in the face of nothing. For Heidegger, it is simply concerned with our "thrownness in the world," that is, with Being-in-the-world itself. Anxiety reveals to us how we are in the world and brings us to face the alienated, not-home-like world. The framework in which we make sense of our own existence and of the world is not given once and for all. For each of us, anxiety makes our individuality, our determinate self and our own possibility. In particular, it reveals to us that no individual can escape death with the aid of the public. For Heidegger, anxiety is closely related to Dasein (the Being of human beings, which is Being-in-the-world). Thus through individuating *Dasein*, anxiety is a distinctive way in which *Dasein* is disclosed. Anxiety discloses *Dasein* as Being-possible, and in the meantime, as a state of mind it is also a basic kind of Beingin-the-world. The affirmative or passive attitude toward anxiety may lead respectively to authentic or inauthentic existence.

"That in the face of which one has anxiety is Beingin-the-world as such." **Heidegger**, *Being and Time*

apathy

ETHICS [from Greek a, not + patheia, affection, passion, emotion] A state of indifference to pleasure or pain in which one gains peace of mind or tranquillity by being emotionally unaffected by the external sensible world. In apathy, the control of emotion by reason is justified on the grounds that emotion is irrational, and it therefore stands in contrast to ordinary indifference or insensitivity. For Stoicism, apathy is the highest virtue, with the Stoic sage characterized as being emotionally detached and acting purely out of reason. This ideal is echoed in religions that despise worldly pleasures and in philosophical systems that devalue the role of emotion. Critics claim that at least some emotions are rational, thus undermining the general claim for the value of indifference.

"Apathy is a sort of depression which stops us doing anything, a weariness with work, a torpor of spirit which delays getting down to anything good." Aquinas, *Summa Theologiae*

apeiron

METAPHYSICS, PHILOSOPHY OF NATURE, ANCIENT GREEK PHILOSOPHY [Greek, from *a*, not + *peras*, limit or boundary, hence unbounded, infinite] The unbounded was contrasted with *peras* or *kosmos* (world), which was widely believed by the Greeks to be bounded. The Milesian philosopher **Anaximander** took the unbounded to be the first principle or ultimate generative force for all the things and events in the world. The *apeiron* is immortal and imperishable, unbounded both in space and in time, and does not have the characteristics of ordinary elements and their composites. **Aristotle** interpreted the *apeiron* of Anaximander as a material cause, analogous to **Thales**' water or **Anaximenes**' air. But because *apeiron* appears to be more abstract than other material elements, what Anaximander meant by this term has been a subject of debate. **Pythagoreans** took *apeiron* and *peras* as two principles from which the world evolved and considered *peras* to be good and *apeiron* to be evil. **Parmenides** believed that what is cannot be incomplete and infinite and thus confined his **ontology** to *peras* and denied *apeiron*. For **Anaxagoras**, mind is *apeiron*, which is infinite or indefinite in extent.

"[Anaximander] said that the *apeiron* was the principle and element of things." **Simplicius**, *Physics*

apodeictic

LOGIC [from Greek *apo*, from + *deiktikos*, to be able to show] Also spelled apodictic, that which is demonstrable, necessarily true or absolutely certain. **Aristotle** contrasted the apodeictic (beyond dispute) with the eristic (subject to dispute). **Kant** distinguished the apodeictic (necessary) from the problematic (possible) and the assertoric (actual). All three belong to the modal categories. An apodeictic judgment has the form of "X must be Y" or "X cannot be Y."

"Geometric propositions are one and all apodeictic, that is, are bound up with the consciousness of their necessity." **Kant, Critique of Pure Reason**

apodeictic practical principle, another expression for categorical imperative

apodictic, another expression for apodeictic

Apollonian, see Dionysian

apologetics

PHILOSOPHY OF RELIGION [from Greek *apologia*, defence against a charge, answering back; hence **Plato**'s *Apology* describes **Socrates**' defence against accusations in an Athenian court] A dimension of Christian theology aimed at defending orthodox theistic beliefs against external criticism or against other world views. While theology is a rational inquiry by the faithful for the faithful, apologetics is a discourse between the faithful and those outside the faith that seeks to defend the validity of belief with reasons that will be meaningful to those who do not share the same faith. Historically, apologetics

has had different forms and has employed different standards of judgment in expounding and defending religious belief according to its intended audience. Each generation has developed an apologetics in response to the criticism of religion of its time. For example, **Augustine**'s *City of God* was written in reply to the pagans; **Aquinas**' *Summa contra Gentiles* is an argumentative work directed at Muslim theology; and **Butler** wrote *The Analogy of Religion* to refute deism. The contemporary apologetic, represented by Paul **Tillich**, is characterized by its appeal to value as against fact. The practice of apologetics has impact upon hermeneutics.

"The essential task of apologetics is the defence or 'answering back' of religion, and particularly the Christian faith against the doubts or accusations of its 'cultured despisers'." Ferré, Basic Modern Philosophy of Religion

apophatic theology, another expression for apophaticism

apophaticism

PHILOSOPHY OF RELIGION Also called apophatic theology or negative theology, a doctrine rejecting our capacity to know God. It belongs mainly to **Neoplatonism** and eastern Christian thought. **Clement of Alexandria** is credited with its formulation, and its major exponents include Meister Eckhart and Moses **Maimonides**. Apophaticism claims that God cannot be conceptualized in any way, nor can God be an object of intellect or sense. No language provides us with real knowledge of God, for he is beyond positive human understanding. The soul can come close to God only through faith and prayer.

"Apophaticism teaches us to see above all a negative meaning in the dogmas of the church; it forbids us to follow natural ways of thought and to form concepts that would usurp the place of spiritual realities." Lossky, *The Mystical Theology of the Eastern Church*

aporia

PHILOSOPHICAL METHOD, ANCIENT GREEK PHILOSOPHY [from Greek *a*, not + *poros*, path, passage; literally, no way through, a puzzle or perplexity] In the early Platonic dialogues, **Socrates** raises various problems without offering solutions to them, whilst showing that the people he questions are unable to offer acceptable solutions either. This aporetic method leads to the development of the dialectical method, by which Socrates elicits truth through questioning. The term "aporia" is introduced by **Aristotle** for puzzles concerning incompatibilities that arise either among the views we hold without prompting, or among the reputable beliefs adopted commonly or by the wise. His approach is to seek the minimal adjustments needed to reconcile these conflicting views. According to him, philosophy exists to solve these kinds of aporia. Recently, "aporia" has also been used to refer to a text or an approach that contains contradictory lines of thinking.

"The aporia of our thinking points to a knot in the object; for in so far as our thought is in aporia, it is in like case with those who are bound; for in either case it is impossible to go forward." **Aristotle**, *Metaphysics*

apparent variable, Russell and Whitehead's term for bound variable

appeal to authority

LOGIC [Latin: *argumentum ad verecundiam*, argument to reverence or respect] A fallacious argument that tries to establish its conclusion by appeal to the opinion of an expert or authority. It is a misuse of authority. For instance, "Something is true because some expert says that it is true." This argument is widely employed in everyday life, but it is logically fallacious because it uncritically accepts anything an expert or a great figure says rather than proving the conclusion by appeal to positive evidence. The view of a trained or legitimate expert nevertheless carries some weight although it is open to challenge. An argument of this form is especially poor if its conclusion goes beyond the field for which the authority has expertise.

"The appeal to authority typically involves three persons: the arguer, the listener or reader, and the person whom the arguer cites as an authority." **Hurley**, *A Concise Introduction to Logic*

appearance

METAPHYSICS, EPISTEMOLOGY [from Latin a, as, to, toward + *parere*, come forth, become visible; what

is seen or what is immediately given to consciousness, equivalent to Greek, phainomenon, to appear to be so, but also to be so manifestly. Thus Aristotle took the opinion of the majority, especially of wise men, as phainomenon] Appearance, what things seem to be, is often contrasted to reality, what things are themselves. It is a major distinction in philosophy; and different philosophers offer different accounts of the relationship between appearance and reality. Some philosophers, such as Plato, say that appearance is an incomplete and imperfect copy of reality. Some, such as Aristotle, say that reality is in appearance. Some, such as Descartes, say that appearance is regrettable and even spurious. Some, such as Kant, say that our knowledge is restricted to appearance (phenomena), but that for morality we can make sense of a more fundamental reality (noumena). And some, such as Hegel and Bradley, say that appearance is a partial aspect of reality. In metaphysics appearance is generally regarded as less valuable than reality. Contemporary linguistic philosophers distinguish two groups of appearance idioms. Seeming idioms, such as "appears to be" or "gives the appearance," are not strictly related to senses, while looking idioms, such as "looks" or "feels," are strictly related to senses.

"Appearance means that one perceives it so." **Plato**, *Theatetus*

appearance (Kant)

METAPHYSICS, EPISTEMOLOGY Traditionally, appearance (phenomenon) is contrasted to reality. Appearance is thought to be the object of perception or belief, while reality is characterized as the object of knowledge. Kant transformed this contrast in his distinction between appearance (phenomenon) and thing-in-itself (noumenon). Appearances are objects as we experience them with our spatial and temporal forms of sensibility and our categories of understanding, while things-in-themselves are those objects as they might be in themselves and known by a pure intellect. He further claimed that appearance (German, Erscheinung) should be distinguished from illusion (Schein). Illusion is an abnormal perception of an actually present object and signifies a representation to which nothing real corresponds. In contrast, appearance is always the appearance of a given object and is constant and universal. Contrary

to the traditional view, he argued that appearance is the only object of science and is that to which the concepts of the understanding apply. In contrast, the thing-in-itself is beyond knowledge, although Kant argued that its existence is a necessary condition for an object of one's awareness to count as an appearance, for appearance itself presupposes that there is something that appears. He held that if the objects of experience were not appearances, then all the problems of reason falling into conflict with itself would re-emerge. Nevertheless, this claim and the relation between appearance and thing-in-itself remain matters of dispute.

"The undetermined object of an empirical intuition is entitled appearance." Kant, *Critique of Pure Reason*

apperception

Epistemology, philosophy of mind [from Latin ad, to, towards + percipere, perceive] In contrast to perception, which refers to the external world, apperception is introspection, conscious thought, or the **consciousness** of **internal states**. It is at the same time consciousness of, or reflection on the "I" or the self, that is the subject of these states. In apperception the self is aware of itself as being a unity and as possessing the power to act. For Leibniz, all monads have perception, but only a special kind of monad, which he called "rational soul," has apperception. According to him, it is by virtue of this consciousness that we become persons, or members of a moral world. Leibniz's distinction implies that there can be unconscious perception. The concept of apperception played a central role for Kant. Kant distinguished between empirical apperception (inner sense), which amounts to introspection, and the transcendental unity of apperception (I think) that accompanies all of our representations and combines concepts and intuitions in knowledge.

"It is well to make the distinction between perception, which is the internal state of the monad representing external things, and apperception, which is consciousness or the reflexive knowledge of this internal state itself and which is not given to all souls nor at all times to the same soul." **Leibniz**, *Principles of Nature and Grace*

application

MODERN EUROPEAN PHILOSOPHY Application in the scientific world applies general knowledge or a universal law to particular instances by subsuming the instances under a general concept and rule. In the humanities, on the other hand, application is not so straightforward, for the distance between general laws (if there are any) and their instances is very great. Application is rather a process of intertwining theory and practice. Traditional hermeneutics classifies application as the third fundamental element in the act of understanding, besides "understanding" and "interpretation." In Gadamer's hermeneutics, application becomes an essential and integral part involved in all interpretative understandings. Aristotle argues that ethical or practical knowledge must be tied to particular circumstances and modified to suit these circumstances. The meaning of an ethical norm can only be shown in a concrete situation of action. Analogically, Gadamer claims that all understanding must be historically situated. A text can only be understood in relation to the present and through modifications in accordance with changed historical circumstances. This is the moment of application in understanding. Understanding is always applied understanding, even when application is not the intended purpose. Understanding that is independent of the particular situation to which it is applied must be abstract and reductive. Since the situations in which applications occur are constantly changing, an historical text must be understood in every situation in a new and different way. According to Gadamer, application therefore involves the distinction between past and present, rather than the distinction between general and particular.

"We consider application to be as integral a part of the hermeneutical act as are understanding and interpretation." **Gadamer**, *Truth and Method*

applied ethics

ETHICS Also called practical ethics. The study of how to apply ethical principles, rules, and reasons to analyze and deal with moral concerns arising in practical and social areas. Such a practical application of ethical theory has been a dimension of traditional ethics. **Aristotle** claimed that all universal moral standards must be adjusted and modified through their application to particular circumstances. However, applied ethics as a distinctive discipline, in contrast to other aspects of ethics, such as metaethics, normative ethics, and ethical theory, started to flourish in the middle of the twentieth century. Thus far, relatively well-established branches of applied ethics include academic ethics, agricultural ethics, bioethics, business ethics, environmental ethics, legal ethics, medical ethics, and nursing ethics. Since the moral principles to be applied are derived from different ethical systems, and are hence various and subject to conflict, applied ethics can seldom provide fixed answers to practical problems. It can, however, contribute to making discussion of these problems as clear and rigorous as possible. The development of applied ethics has also led philosophers to involve themselves in committees dealing with policy making, decision making, and evaluation.

"While some saw 'applied ethics' as a straightforward task of applying moral principles to particular situations and professions, others were working out complex modes of interrelation." Edel, Flower, and O'Connor (eds.), *Morality, Philosophy, and Practice*

apprehension

Epistemology, ancient Greek philosophy [from Greek katalepsis, holding or grasping, also translated as cognition, an important epistemological concept for Stoicism and Epicureanism] In Stoicism, recognition has four stages: reception of visual appearance (represented by an open hand); perception or attention, which results from the conjunction of visual appearance and the assent of mind (represented by a closed hand); apprehensive impression, which is accurate perception (represented by a fist); and knowledge (represented by grasping the fist with the other hand). At the third stage, apprehension instantaneously grasps an impression that reveals the real object and results in apprehensive or cognitive impression (Greek, phantasia kataleptike). Epicurus used apprehension as the criterion of truth by guaranteeing the clarity of an image. Because of ambiguity in the extant writings, some scholars interpret this as a kind of intuition, while others explain it as concentration or attention.

"Zeno did not attach reliability to all impressions but only to those which have a peculiar power of revealing their objects. Since this impression is discerned just by itself, he called it 'apprehensive'; ... But once it had been received and accepted, he called it an apprehension, resembling things grasped by the hand." **Cicero**, *Academic*

apprehensive impression, see apprehension

appropriate act

ETHICS, ANCIENT GREEK PHILOSOPHY [Greek, kathekon, fitting] A key Stoic ethical term for an action that accords with nature and can be rationally justified. An appropriate act is a virtuous act and is the opposite of an inappropriate or vicious act. Other acts, for example walking, are neither inappropriate and vicious nor appropriate and virtuous, but intermediate between these two by being for natural ends that are indifferent as to virtue and vice. An intermediate act, however, can be either virtuous or vicious in some particular instance according to the disposition of the agent. The behavior of a good man is a continuous series of appropriate selections and rejections, and such a man knows that by the performance of appropriate acts he makes virtuous progress.

"Zeno was the first to use this term 'appropriate act', the name being derived from *kata tinas hekein*, 'to have arrived in accordance with certain persons'; appropriate act is an activity appropriate to constitutions that accords with nature." **Diogenes Laertius**, *Lives of Eminent Philosophers*

appropriation

EPISTEMOLOGY, PHILOSOPHY OF MIND William James's technical term for the hanging together or continuity of **experience**. For James, experience is a continuous stream or chain, each link of which is inseparable from its predecessors and successors. Our present experience constitutes one point, but one point in a chain. It appropriates past experience, and is appropriated by future experience. This appropriating capacity of one's experience forms one's self-consciousness, representative of the entire past stream. It is hence the basis of **personal identity**. Other than this, there is no independent self. The relationship between appropriation and the self has been charged with circularity, for appropriation allegedly presupposes an existence of a self. But James claimed that what performs appropriation is not an ego, but only the passing experience that one's body feels.

"Its appropriations are therefore less to itself than to the most intimately felt part of its present object, the body, and the central adjustments, which accompany the act of thinking, in the head. These are the real nucleus of our personal identity." **W. James,** *Principles of Psychology*

a priori/a posteriori

EPISTEMOLOGY [Latin, a priori, from what is earlier; a posteriori, from what comes after] This epistemological distinction was originally applied to two kinds of arguments in Aristotle and in medieval logic. If an argument proceeds from a cause to its effect, it is called *a priori*, and if it proceeds from an effect to its cause it is a posteriori. The distinction was later applied to concepts, propositions, knowledge, and truth. Leibniz distinguishes truth a priori (truth of reason) from truth a posteriori (truth established by experience). This corresponds to Hume's distinction between knowledge about matters of fact and knowledge about relations of ideas. For Kant, knowledge is a priori if it is independent of experience and does not require experience to establish its truth, and is a posteriori if it is based on experience. He also connects this dichotomy with the distinction between the analytic and the synthetic, and claims that all analytic judgments are a priori. His major concern in the Critique of Pure Reason is how synthetic a priori judgment is possible. The distinction between the a priori and the a posteriori is also related to the distinction between the "necessary" and the "contingent." But the relations among these distinctions pose various problems. Philosophers have been debating whether a priori propositions must be necessary, or universal, and whether a posteriori propositions must be contingent. Kripke argues that a posteriori necessity is logically possible.

"There are two kinds of cognition. An *a priori* one, which is independent of experience; and an *a posteriori* one, which is grounded on empirical principles." **Kant,** *Lectures on Logic*

a priori knowledge

EPISTEMOLOGY Knowledge that is believed to be universally certain and necessarily true. It is known and justified independently of experiential evidence. *A priori* knowledge is in contrast to empirical or *a posteriori* knowledge. Rationalism assumes the existence of *a priori* knowledge mainly from the necessity of mathematical and logical truths. This is elaborated in detail by **Kant**, who also argues that *a priori* knowledge can be synthetic. His three distinctions, i.e. *a priori/a posteriori*, **necessary/contingent**, **analytic/synthetic**, have been the focus of the contemporary discussion of *a priori* knowledge.

Some empiricists admit the existence of *a priori* knowledge, but claim that it is trivial and only expresses the relations between our ideas (**Locke**), or that it can only be analytic truth based on the meanings of the words rather than knowledge about the world. Other empiricists tend to reject the existence of this form of knowledge, by claiming that prominent examples of *a priori* knowledge such as mathematical truths can be inductively justified (**Mill**), or that the distinction between analytic and synthetic is not tenable, and that no necessity can be known other than empirically (**Quine**). **Kripke** and **Putnam** also deny the internal relation between necessity and the *a priori*.

The proponents of *a priori* knowledge usually claim that we have a faculty of intuition by which we may ascertain the truth of *a priori* propositions. On the other hand, the opponents of *a priori* knowledge insist that there is no psychological evidence to suggest that we have such a mysterious cognitive faculty.

"An instance of knowledge is *a priori* if and only if its justification condition is *a priori* in the sense that it does not depend on evidence from sensory experience." **Moser (ed.),** *A Priori Knowledge*

a priori proposition

EPISTEMOLOGY A proposition or statement whose truth is not based on empirical investigation. In contrast to empirical or *a posteriori* propositions, which are known through experience. Mathematical axioms, logical laws, and metaphysical propositions are generally regarded as examples of *a priori* propositions. If all the concepts in an *a priori* proposition are *a priori* concepts, the proposition is called an absolutely *a priori* proposition. Otherwise, it is called a relatively *a priori* proposition. **Empiricism** holds that all knowledge must be based on experience. Consequently, it tends to reject speculative metaphysics, although it then becomes a major task to provide a satisfactory empiricist account of mathematical and logical truths.

"It is traditional to say that an *a priori* proposition is a proposition that is 'independent of experience', and is such that 'if you understand it, then you can see that it is true'." **Chisholm**, *Person and Object*

A-proposition

LOGIC In syllogisms, categorical propositions are divided into four kinds, according to their quality (affirmative or negative) and quantity (universal or particular). The medieval logicians designated them by letter names corresponding to the first four vowels of the Roman alphabet: A, E, I, O. An A-proposition is the universal affirmative (All S are P), meaning that every member of the S class is a member of the P class. An E-proposition is the universal negative (No S are P), meaning that no member of the S class is a member of the P class. An I-proposition is the particular affirmative (Some S are P), meaning that at least one member of the S class is a member of the P class. An O-proposition is the particular negative (Some S are not P), meaning that at least one member of the S class is not a member of the P class.

"The central concern of traditional logic is the investigation of the logical relations of four propositional forms – Universal affirmative (A), Universal Negative (E), Particular Affirmative (I), Particular Negative (O)." **D. Mitchell**, *An Introduction to Logic*

Aquinas, St Thomas (1224/5–74)

Medieval Italian philosopher and theologian, the greatest scholastic thinker, born at Roccasecca, near Aquino, Naples, studied under Albertus Magnus in Paris and Cologne, taught at the University of Paris from 1252 to 1259 and again from 1266 to 1272, canonized in 1323. Aquinas systematically interpreted and defended Aristotle's thought and sought to reconcile it with Christian doctrines. He held that

faith in God's existence could be justified by human reason and proposed the famous "**five ways**" to prove the existence of God on the basis of Aristotle's account of causes. Because he held that reason could not have complete knowledge of the nature of God, Aquinas argued that faith and reason must supplement each other. Aquinas constructed the most comprehensive Christian philosophical system and also contributed an important theory of natural law. Among his voluminous works, the most important are the two encyclopedic syntheses of philosophy and theology: *Summa contra Gentiles* (1259–64) and *Summa Theologiae* (1266–73). He also composed commentaries on Aristotle that are of great philosophical interest.

arbitrariness of grammar, another term for autonomy of language

Arcesilaus (c.315–240 BC)

Hellenistic skeptic philosopher, born in Pitane, Aeolis, the founder of the Middle Academy. He rejected Stoic dogmatism and claimed that nothing could be known, including the knowledge that one knows nothing. Hence, no one should assert anything, and life can be guided only by probability. For this reason, he did not write a single book, but his views were recorded by Cicero and Sextus Empiricus.

archaeology of knowledge

MODERN EUROPEAN PHILOSOPHY A term introduced by the French philosopher and historian Michel Foucault. Archaeology here is not a study of origin (arche in Greek), but is rather a study of what Foucault calls an "archive," that is, the deep structure or form that determines the conditions of possibility of knowledge in a particular period. An archive, which is also called the "historical a priori," is timebound and factual. It is discovered rather than deduced. Archaeology is hence a distinct approach to the analysis of the history of thought, in contrast to the standard history of ideas. While the history of ideas is an interpretative discipline and defines the thoughts, themes and representations that are revealed in discourse, archaeology is concerned with the discourses themselves, taking them as practices obeying certain rules. While the history of ideas seeks continuity and coherence to relate discourses to their predecessors, their backgrounds, and their impacts, archaeology seeks to show the specificity of discourses and the irreducibility of the sets of rules that govern the operations of particular discourses. While the history of ideas places emphasis on individual thinkers and their relations, archaeology of knowledge claims that the consciousness and statements of individual thinkers are determined by the underlying conceptual structures at a given time. Accordingly, we should aim to delineate this structure, which is beyond the beliefs and intentions of individual thinkers. Finally, while the history of ideas intends to identify what has been said and bring back the distant, archaeology seeks to provide a systematic description of discourse. Archaeology has four basic methodological principles: attribution of innovation, the analysis of contradictions, comparative descriptions, and the mapping of transformations. These principles are fully discussed in Foucault's The Archaeology of Knowledge.

"The rights of words – which is not that of the philologists – authorises, therefore, the use of the term archaeology to describe all these searches. This term does not imply the search for a beginning; it does not relate analysis to geological excavation. It designates the general theme of a description that questions the already-said at the level of its existence: of the enunciative function that operates within it, of the discursive formation, and the general archive system to which it belongs." Foucault, *The Archaeology of Knowledge*

arche

PHILOSOPHICAL METHOD, ANCIENT GREEK PHILOSOPHY [from Greek *archein*, to start; hence archê the startingpoint or beginning, first principle or origin; plural, *archai*] **Aristotle** claimed that philosophy should investigate the fundamental *archai* and causes of generation, existence, and knowledge. He described how at the very beginning of philosophy **Thales** sought the *arche* to account for the generation of the world. Thales believed this to be water. **Anaximander** is said to be the first person to use the word *arche* to name such a first entity. Aristotle called each of his four causes *arche*. He also called the basic premises for scientific deduction *archai*, discoverable by an intuitive faculty *nous*. In ethics the end, that is, the good to be pursued, is called *arche* as well. "It is common, then, to all *archei* to be the first point from which a thing either is or comes to be or is known." **Aristotle**, *Metaphysics*

archetype

METAPHYSICS [from Greek arche, first + typos, pattern or stamp, the original model or pattern from which things are formed or from which they become copies] One of the main claims of Plato's Theory of Forms or Ideas is that Ideas are archetypes for sensible things. Locke, like Descartes, took archetypes as the referents or external causes of ideas. Real ideas conform to real beings or archetypes, and adequate ideas are those that perfectly represent their archetypes. However, complex ideas of modes and relations are not copies, but are themselves originals or archetypes. Berkeley considered archetypes to be ideas in the mind of God. In Kant, archetypes in metaphysics can only be regulative principles. Hence, he criticized Plato for hypostatizing Ideas by making them into the constitutive principles of the origin of things. On the other hand, archetypes in ethics are ideals for imitation. In the analytical psychology of Carl Jung, archetypal images and symbols are said to emerge from the collective unconscious of humankind.

"Adequate ideas are such as perfectly represent their archetypes." Locke, An Essay Concerning Human Understanding

architectonic

PHILOSOPHICAL METHOD Kant's conception for the systematic relations of all human knowledge and for the art of constructing such a system. These two senses are interconnected, for he believed that human reason possesses by nature such a function of construction and that all knowledge arising from pure reason belongs to one system. Architectonic is contrasted with the technical, for while a technical investigation starts from empirical criteria, architectonic anticipates these criteria. Kant himself designed an architectonic system. He began by distinguishing first (pure) philosophy from empirical philosophy and then subdivided pure philosophy into a propaedeutic investigation of pure reason (criticism) and the system of pure reason (metaphysics). He divided metaphysics in turn into the metaphysics of morals, dealing with what ought

to be, and the metaphysics of nature, dealing with what is. He further divided the metaphysics of nature into transcendental philosophy, which is concerned with the understanding and reason, and the physiology (natural science) of given objects. This rational physiology again had two branches, transcendental and immanent. Transcendental physiology includes rational cosmology and rational theology. For Kant, this framework was supported by traditional logic.

The notion of architectonic has been used to oppose attempts to break up human knowledge into different independent branches, although some critics claim that overemphasizing the demands of system can frustrate philosophical work that is critical of a particular system or philosophical systems in general. The idea of architectonic was developed by **Hegel** and also by the **Logical Positivists** in their ideal of **unified science**.

"By an architectonic I understand the art of constructing systems. As systematic unity is what first raises ordinary knowledge to the rank of science, that is, makes a system out of a mere aggregate of knowledge, architectonic is the doctrine of the scientific in our knowledge." **Kant, Critique** of Pure Reason

archive, see archaeology of knowledge

Arendt, Hannah (1906–75)

Jewish political philosopher, born in Hanover, Germany, a student of Martin Heidegger at Marburg and Karl Jaspers at Heidelberg. Arendt moved to the USA in 1941 as a refugee from the Nazis and taught at a number of universities. Her work started from reflections on the moral and social issues raised by the catastrophic history of modern Europe. She examined Nazism and communism as major forms of totalitarianism and sought to explore politics as a distinct sphere of human activity. Her major works include The Origins of Totalitarianism (1951), The Human Condition (1958), On Revolution (1963), Eichmann in Jerusalem: a Report on the Banality of Evil (1963), On Violence (1970). She planned a threevolume work, Life of the Mind, as a systematic examination of the faculties of thinking, willing, and judging, but lived to complete only the first two volumes.

aretaic judgment, another name for judgment of value

arête, Greek term for virtue or excellence

argument

LOGIC [from Latin arguere, to make clear] The reasoning in which a sequence of statements or propositions (the premises) are intended to support a further statement or proposition (the conclusion). The passage from the premises to the conclusion is justified through following acceptable patterns of inference and often marked by means of locutions such as "so," "hence," "it follows that," or "because." Generally, arguments are divided into two types: deductive arguments, in which the conclusion makes clear something implied in the premises, and inductive arguments, in which the conclusion goes beyond what the premises provide. While a statement is said to be true or false, an argument is said to be valid or invalid, sound or unsound. To discriminate valid from invalid forms of argument is precisely the task of logic. In another technical use, especially in mathematics and logic, an argument, in contrast to a function, is a member of the domain of a function.

"The aim of argument is conviction; one tries to get someone to agree that some statement is true or false." **Strawson, Introduction to Logical Theory**

argument a posteriori

LOGIC, PHILOSOPHY OF RELIGION An argument a posteriori proceeds from an effect to its cause, in contrast to an argument a priori, which proceeds from a cause to its effect. The pair of terms a priori and a posteriori are used here in their pre-Kantian sense. The distinction between these two types of arguments or demonstrations was made by the scholastic philosopher Albert the Great, but the idea can be traced to Aristotle's view that we may either proceed from what is evident to us to what is evident in nature or proceed from what is evident in nature to what is evident to us. In the philosophy of religion, arguments that seek to prove God's existence from the current condition of the world are called proof a posteriori (a typical example being the argument from design), while the proofs that start from our concepts of God's nature are a priori.

"Since therefore the effects resemble each other, we are led to infer, by all the rules of analogy, that the causes also resemble, and that the Author of nature is somewhat similar to the mind of man . . . By this argument *a posteriori*, and by this argument alone, do we prove at once the existence of a Deity and his similarity to human mind and intelligence." **Hume, Dialogues Concerning Natural Religion**

argument a priori, see argument a posteriori

argument by analogy

Epistemology, philosophy of religion, philosophy OF MIND An inference from certain similarities between two things to the conclusion that these things are also alike in other respects. Such a form of inference is not decisive, for it depends upon an implicit premise that the fact that two things are similar in some given respects entails that they are similar in other respects as well, and this premise is not obviously true. Arguments of this form can, however, be suggestive and are therefore widely employed. The argument from design is a version of an argument by analogy. It infers analogically from the relationship between human agents and artifacts (for example between a watch-maker and a watch) to the existence of God as the designer of the world. Indeed, analogical argument is represented in various forms of teleological arguments for God's existence. In the philosophy of mind, some philosophers adopt this form of argument to attribute a mind and mental phenomena, which are generally assumed to be private, to other individuals.

"The following is the structure of an analogical argument. Two objects A and B share several properties, say, a, b, c; A has an additional property d, therefore B has the property d also." **Pap**, *Elements of Analytic Philosophy*

argument from design

PHILOSOPHY OF RELIGION A traditional and popularly accepted argument for the existence of God. Natural phenomena present a complex and intricate order, like that of a machine or a work of art. This provides evidence for thinking that there must be a designer who is responsible for the structural and adaptive order of natural things and who has capacities far exceeding human abilities. Hence, we may reasonably

presume that God exists as this designer. The argument from analogy, a version of this argument, argues that since the world is like a clock, it must derive from something like a clock-maker, which is God. The argument from design can be traced to the Stoics and is the fifth of Aquinas' Five Ways of proving the existence of God. It was attacked by Hume, who introduced many other possible explanations for natural order, thus providing methodological objections to the dogmatic acceptance of the divine origin of the world, especially where experience cannot test our judgment. Kant also rejected the validity of the argument from design. The argument was further challenged when Darwin's theory of evolution explained by natural selection the adaptive features of living things that were cited to prove that the world might be designed.

"The argument from design reasons, from the fact that nature's laws are mathematical, and her parts benevolently adapted to each other, that its cause is both intellectual and benevolent." **W. James,** *The Varieties of Religious Experience*

argument from differential certainty

EPISTEMOLOGY An argument for the existence of sense-data. Suppose I perceive something, for example a tomato, but I do not know what it is. What I can be certain that I am perceiving are some sense-data such as red, round shape. These sensedata are the objects of my direct awareness and are infallible. But I cannot be certain that I am perceiving a real tomato, or even a material thing, for what I am perceiving may be a fake, an illusion, or an hallucination. That of which I can be certain cannot be identical with that of which I cannot be certain; therefore there are sense-data whose existence is distinct from that of material things. Critics of this argument maintain that, even though it is true that there are different degrees of certainty in perceptions and statements, this does not entail that there are ontologically different kinds of things corresponding to my different levels of certainty.

"It might be true that for the speaker in our argument from differential certainty, the statement 'I see a tomato', in the conditions specified, is less certain than statements such as 'I am directly aware of something red and with a tomato-ish shape'." **Pitcher**, *A Theory of Perception*

argument from religious experience

PHILOSOPHY OF RELIGION An argument for the existence of God in terms of the inner, emotional experience of the presence and activity of something divine and transcendent. Some people have this kind of experience in daily life, but unless there is indeed something that is divine and transcendent, we cannot have experience of it. Hence God must exist. This kind of argument was developed in the nineteenth and twentieth centuries by philosophers of religion as a result of dissatisfaction with the traditional theistic arguments. Since religious experience provides a non-inferential mode of knowledge of God, analogous to sense perception of the external world, this argument is presented as the main proof of the existence of God. Critics argue that religious experience might be explained reductively through sociology, psychology, or other fields and as a consequence it begs the question to ascribe independent cognitive value to it. We can have the experiences without being obliged to explain them by the existence of God. However, we often accept reductive explanation in terms of other fields where the primary belief is irrational, but the rationality or irrationality of religious belief must be determined before this objection to the argument for religious experience can be assessed. Further, it is argued that because religious experience is inherently mysterious and untestable, it cannot constitute persuasive evidence for those who do not have similar experiences.

"As a method of showing the existence of a God not otherwise known or believed to exist the Argument from Religious Experience is indeed absurd. It is not absurd if considered as a method of getting to know something about a God already known, or believed, to exist." McPherson, *The Philosophy of Religion*

argument from the relativity of perception

EPISTEMOLOGY Under certain circumstances, the ways that things are perceived by us are not the ways that they really are. For instance, a straight oar with one end in water looks bent. When the conditions of a perceiver change, the same thing that he perceived before will be different from what he perceives now. For instance, the same food will taste differently when one is healthy and when one is sick. Hence, what is perceived to be and what really is are different. This argument has been employed by many philosophers from **Plato**, **Descartes**, **Locke**, and **Hume** to **Russell** and **Ayer**, but for different purposes. **Rationalism** makes use of it to prove the unreliability of sense-experience and to show the ontological difference between reality and **phenomena**. **Empiricism**, on the other hand, suggests that the properties we perceive are **sense-data** and are not properties of physical objects themselves. This argument is similar to the argument from illusion.

"[A]rguments from the relativity of perception ... start from the familiar observation that how things look to us is heavily dependent on the lighting, our angle of vision or whether we are wearing spectacles." Smith and Jones, *The Philosophy of Mind*

argumentum ad baculum

LOGIC [Latin, argument to a stick, meaning appeal to force] An attempt to win assent for a conclusion by appealing to force or by issuing threats concerning the consequence that will follow if the conclusion is not accepted. This sort of argument is frequently employed in international politics and in lobbying campaigns. It is a **fallacy** because the conclusion is not justified on a rational basis. It is perhaps not an argument at all, but a way to get one's position accepted, in particular when rational arguments in support of the position fail.

"The *argumentum ad baculum* is the fallacy committed when one appeals to force or the threat of force to cause the acceptance of a conclusion." **Copi, Introduction to Logic**

argumentum ad hominem

LOGIC [Latin, argument against or directed to the man] Rejecting a person's argument or view by attacking the person who is maintaining the view. There are various ways of making such an attack, and the standard way is to abuse the character of the opponent, for instance by claiming that he is a liar. Although in practical life the opinion of a person with a bad record regarding truthfulness is generally not respected, this argument is logically fallacious because even a person with a history of dishonesty can speak the truth. That a person is untrustworthy does not entail that his opinion is always mistaken. This **fallacy** is close to the genetic fallacy, which focuses on the source of a view rather than on the view itself.

"This is traditionally called the *ad hominem* argument – an argument, that is, directed against the man (*ad hominem*) rather than to the point (*ad rem*)." **Sullivan,** *Fundamentals of Logic*

argumentum ad ignorantiam

LOGIC [Latin, argument to ignorance] The inference that a conclusion A is false from the fact that A is not proved to be true or known to be true, or that A is true from the fact A is not proved to be false or known to be false. This kind of argument can be used to shift the burden of proof or to reach a tentative conclusion, but the conclusion cannot have much strength. Our ignorance of A entails neither that A is false nor that A is true. Truth is one thing, and whether or not the truth is known by us is another.

"The *argumentum ad ignorantiam* is committed whenever it is argued that a proposition is true simply on the basis that it has not been proved false or it is false because it has not been proved true." **Copi, Introduction to Logic**

argumentum ad misericordiam

LOGIC [Latin, argument to pity] An argument making use of an appeal to the pity, sympathy, and compassion of the audience in order to establish its conclusion. This widely employed argument is logically **fallacious** because it puts an emotional burden on the audience rather than concentrating on the argument itself. The fact that an argument is accepted out of pity or charity does not entail that it is logically strong. Argument is a matter of reason. Often, an argument *ad misericordiam* is offered to sway an audience in defiance of factual evidence and sound reasoning.

"The *argumentum ad misericordiam* is the fallacy committed when pity is appealed to for the sake of getting a conclusion accepted, where the conclusion is concerned with a question of fact rather than a matter of sentiment." **Copi,** *Introduction to Logic*

argumentum ad populum

LOGIC [Latin, argument to the people] An argument that seeks to get its conclusion accepted by appeal to popular opinion, mass enthusiasm, group interests

Aristotelian principle

or loyalties, or customary ways of behaving. For example, "Since most people believe that this thing is true, it is true." This kind of argument is widely used in social life, but it is logically **fallacious** because it does not establish its conclusion on the basis of facts and relations between premises and the conclusion. Broadly conceived, this argument contains an *argumentum ad misericordian* if the enthusiasm appealed to is based on pity.

"We may define the *argumentum ad populum* fallacy a little more narrowly as the attempt to win popular assent to a conclusion by arousing the emotions and enthusiasms of the multitude rather than by appeal to the relevant facts." **Copi,** *Introduction to Logic*

argumentum ad verecundiam, the Latin term for appeal to authority

argumentum ex consensu gentium

LOGIC [Latin, argument from the consensus of the nations, an argument that supports a conclusion by appeal to common human consent] An argument that because all people consent that this is the case, so it is. The argument has been widely used in the history of philosophy to attempt to establish divine existence (the common consent argument for the existence of God) or to establish a variety of general moral principles. Sometimes it is treated as an instance of *argumentum ad populum*. It is difficult to distinguish cases in which common consent might have some weight in justifying claims or show that no justification is necessary from cases in which common consent cannot provide needed justification.

"The argument *ex consensu gentium* is that the belief in God is so widespread as to be grounded in the rational nature of man and should therefore carry authenticity with it." **W. James,** *The Varieties of Religious Experience*

Aristippus (*c*.435–356 BC)

Greek philosopher, born in Cyrene, North Africa, a follower of Socrates and the founder of the Cyrenaic school of hedonism. He claimed that pleasure was the highest end of life and that pleasure and suffering were the criteria of good and evil. All pleasures are equal in value, but differ in degree and duration. However, he also emphasized that happiness consists in the rational control of pleasure and not in the slavery of subordination to pleasure. His grandson, also named Aristippus, was said to have systematized the theory of the Cyrenaic school.

aristocracy

POLITICAL PHILOSOPHY [from Greek *aristos*, best + *kratia*, rule, hence rule by the best] The form of constitution that appoints the best people to the offices of government. In ancient Greek society, the best people were determined by their good birth, property, education, and merit. Thinkers such as **Plato** and **Aristotle** believed that because aristocracy carries with it a high sense of honor, responsibility, and duty, it is better than its rivals, that is, monarchy (rule by one) and democracy (rule by the people). The degenerate form of aristocracy is **oligarchy** (rule by a rich minority), which regards only the interest of the ruling class. Aristocracy has been widely rejected by modern liberal egalitarianism.

"The sovereign may confine the government to the hands of a few, so that there are more ordinary citizens than there are magistrates: this form of government is called aristocracy." **Rousseau**, *The Social Contract*

Aristotelian logic, see traditional logic

Aristotelian principle

ETHICS, PHILOSOPHY OF ACTION, POLITICAL PHILOSOPHY A principle of motivation or a psychological thesis that everyone's central goals in life are bound up with the exercise of one's natural or acquired abilities or faculties. The greater our ability, the greater satisfaction we can expect to get from the exercise of our skill. Believing that this idea is implicit in Aristotle's ethics, Rawls has introduced this term and uses the principle to explain both why certain things are recognized as primary goods and how to rank primary goods in importance. Hence this principle is essential for Rawls's thin theory of the good and its role in his theory of justice. Basing his theory of the good upon this psychological principle strikingly distinguishes his theory from utilitarianism, which is based on psychological hedonism.

"It will be recalled that the Aristotelian principle runs as follows: other things equal, human beings enjoy the exercise of their realised capacities (their innate or trained abilities), and this enjoyment increases the more the capacity is realised, or the greater its complexity." **Rawls**, *A Theory of Justice*

Aristotelianism

PHILOSOPHICAL METHOD The tradition of translation, commentary, and interpretation of Aristotle's doctrines by various groups in different historical periods. Each group or period has read into Aristotle its own preoccupations and has focused on different aspects of Aristotle's thought. Hence Aristotelianism presents different and even contradictory outlooks. It is sometimes also called peripateticism, after the Aristotelian *peripatikos* (Greek, walking) school whose members liked to discuss philosophical issues while walking.

The interpretation of Aristotle starts with Aristotle's disciple and successor **Theophrastus**. In the first century BC, Andronicos of Rhodes edited and published the first Complete Works of Aristotle, containing all the esoteric works. Other exoteric works survive only in the form of fragments, which were first collected by V. Rose in the nineteenth century.

The Neoplatonists Plotinus and Proclus took Aristotle's thought as a preface to Plato's philosophy and attempted to reconcile them. Plotinus' disciple Porphyry wrote a famous commentary to Aristotle's Categories that set the stage for the subsequent long-standing discussion between realism and nominalism regarding the nature of universals. This tendency was further reinforced in the sixth century by Boethius's commentary to Porphyry's Isogage, a book that was based on Aristotle's Organon. Boethius also translated the Categories and On Interpretation, which were the only primary Aristotelian materials that were available to Western Europeans until the twelfth century, and constituted the major basis for the development of medieval logic. Arabic Aristotelianism developed in the ninth century, largely through the work of Avicenna (Ibn Sina) and Averroes (Ibn Rushd), who translated Aristotle's works into Arabic and commented on them. They paid much attention to Aristotle's doctrine of active intellect in the De Anima. Their work helped Western Europeans to understand Aristotle, particularly through the study of their commentaries in the arts faculties of Paris and Oxford during the thirteenth century. Their influence led to the condemnation of Aristotle's philosophy by the Bishop of Paris in 1277 and to a short-lived prohibition of the study of Aristotle. In the late twelfth and early thirteenth centuries, Aristotle's texts in Greek reached Paris and Oxford and stimulated a renaissance of interest in Aristotle. Aristotle's works were systematically translated and studied. The major contributors to this movement included Roger Bacon, Robert Grosseteste, St Bonaventura, and, above all, St Thomas Aquinas. Aquinas, the most important philosopher of the medieval age, was preoccupied with justifying the claims of Christian teachings in terms of Aristotle's doctrines. Aristotelianism is therefore associated with scholasticism and Thomism. Aristotle was simply called the philosopher, or in Dante's words, the master of those who know.

The scientific revolution launched by **Copernicus** and **Galileo** in the sixteenth and seventeenth centuries attacked Aristotle's system as an obstacle to the progress of learning, although this claim is more justly leveled at the Aristotle of the scholastics rather than Aristotle himself. Nowadays Aristotle's views about the physical and animal world have been superseded, but much of his writing over a wide range of fields can still inspire important philosophical work.

In the early part of the twentieth century, the study of Aristotle benefited from the Oxford translation of his works edited by W. D. **Ross** and was influenced methodologically by W. Jaeger's genetic method. The study has developed greatly since the middle of this century, stimulated by the work of excellent scholars, such as G. E. L. **Owen** and John Ackrill, and many other Oxford and Cambridge philosophers have been influenced by the study of Aristotle. Recent developments in metaphysics, philosophy of mind, philosophy of language, and virtue ethics, have generated a new revival of Aristotelianism, sometimes called neo-Aristotelianism.

Philosophically, Aristotelianism is contrasted with the contrary tendency of Platonism. The distinction between them has been roughly portrayed as being that between empiricism and rationalism or naturalism and idealism, although the real relationships linking the thought of Plato and Aristotle are still a matter of scholarly debate. "'Aristotelianism' certainly means an emphasis on the primacy of the subject matter, the experienced world encountered." **Randall**, *Aristotle*

Aristotle (384–322 BC)

Greek philosopher, born in Stagira in Macedon, moved to Athens in 367 to become Plato's student until Plato's death at 347, tutor of Alexander the Great. In 355, Aristotle established his own school in Athens, the Lyceum. He believed that by nature human beings desire to know, and classified knowledge into theoretical sciences (including mathematics, physics or natural philosophy, and theology or first philosophy), practical sciences (including ethics and political science), and productive sciences (including poetics and rhetoric). Although most of his writings were reported to be lost, the surviving works contain great contributions to nearly all of these areas.

In theoretical sciences, the major works include Physics; De Caelo; De Anima; De Partibus Animalium; De Motu Animalium; De Generatione Animalium; and Metaphysics. He claimed that philosophy is a science of being qua being. The primary being is substance, while all other beings are attributes of substance. Hence the study of substance, the primary being, is the core of the science of being. Substance can be analyzed into form, matter, and the composite of form and matter. Of these, form (which is identified with essence) is primary substance or ultimate reality. Each thing has its own nature, that is, its inner principle of motion, and form and matter are two natures. The relation between soul and body should be understood in terms of the relation between form and matter. To know each thing, one needs to know its four causes (the material cause, the formal cause, the efficient cause, and the final cause). In natural things, the formal cause, efficient cause, and final cause coincide, and they are different operations of the same form. Natural things develop from potentiality to actuality. The whole universe is ordered, for everything in the world, in its pursuit of eternity, is moved by the Prime Mover.

In practical sciences the important works include *Nicomachean Ethics* and *Politics*. According to Aristotle, ethics should focus on character and virtue and should address the issue of how to lead a good or flourishing life. Furthermore, ethics and politics are inseparable, for human beings are political animals and politics should mainly concern the best constitution in which citizens can develop their character. Aristotle's ethics is the intellectual source of the contemporary revival of virtue ethics.

In productive sciences, Aristotle left us *Rhetoric* and *Poetics*. In addition, Aristotle's six treatises on logic (*Categories*; *De Interpretatione*; *The Prior Analytics*; *The Posterior Analytics*; *Topics*; and *The Sophistical Elenchi*) were grouped together by later commentators under the title of "Organon" (literally, tool, or instrument). In the *Organon* Aristotle developed syllogistic logic and an analysis of demonstrative science. For a long time in the history of Western philosophy, Aristotle was referred to simply as "The Philosopher." Scholars differ over understanding Aristotle's philosophy in terms of a process of development involving different stages or as a unified system.

Armstrong, David (1926–)

Australian philosopher of knowledge, philosopher of mind, philosopher of science, and metaphysician, born Melbourne, Professor of Philosophy at University of Sydney. Armstrong is an empiricist and realist. His early work on epistemology was followed by his influential formulation of a non-reductionist materialist theory of mind. Armstrong's ontology, based on states of affairs, accepts the reality of individuals, properties, and relations on the grounds that what is real is a matter of what has causes and effects. He is committed to the reality of universals, although it is an empirical question which predicates stand for universals and which do not. Laws of nature are empirically discovered relations of nonlogical necessity between universals. Among his prolific writings are Perception and the Physical World (1961), A Materialist Theory of Mind (1968), Universals and Scientific Realism (1978), and What is a Law of Nature? (1983).

Arnauld, Antoine (1612–94)

French theologian, mathematician, and philosopher. Arnaud was a leading figure among the Port-Royal Jansenists. His objections to Descartes's *Meditations* raised the problem of the Cartesian circle, namely, we know that God exists because we have a clear and distinct idea of God, but what we perceive clearly and distinctly is guaranteed to be true only if God exists. His major work is *Port-Royal Logic* (with Pierre Nicole, 1662).

Arrow, Kenneth (1921–)

American economist and theorist of social choice, Professor of Economics at Stanford University, winner of Nobel Prize in 1972. Arrow is best known to philosophers for Arrow's paradox, which shows that there is no function meeting certain commonsense conditions that can order options for a society in terms of the preferences of individual members of that society. This insight, discussed in his work *Social Choice and Individual Values* (1951), has important consequences for democratic theory.

arrow of time

METAPHYSICS, PHILOSOPHY OF SCIENCE One of the central notions in the philosophy of time. We ordinarily believe that time is inherently directional. Time seems to be asymmetric, for we can affect the future in a way that we cannot affect the past. The past is fixed and the future is open. This is why we can talk about **free will**. This seems to suggest that natural processes have a natural temporal order. We talk about this directionality of time as the arrow of time. However, physics claims that time as such does not have an intrinsic orientation. It does not move toward the future as it does not move toward the past. The philosophical basis of the so-called arrow of time has been a topic of dispute.

"It has become an almost universal practice to refer to the direction of time or the arrow of time in physics, with the implicit meaning of the direction of flow or movement of the now from past to future." **Davies**, *The Physics of Time Asymmetry*

Arrow's impossibility theorem

PHILOSOPHY OF SOCIAL SCIENCE, POLITICAL PHILOSOPHY Also called Arrow's paradox, first formulated by the American economist Kenneth J. **Arrow** in *Social Choice and Individual Values* (1951). Intuitively, a social choice can be obtained through the aggregation of individual preferences. Such a choice, if acceptable, must satisfy the following reasonable formal conditions: (a) a social ordering can be obtained from any set of individual orderings and preferences; (b) if at least one individual prefers A to B and nobody else objects to it, then the society should choose A (Pareto optimality); (c) the social choice cannot be determined dictatorially; (d) the choice with regard to A and B should be decided between them alone, independent of irrelevant alternatives. But Arrow proves that on these conditions there is no method to determine social ordering through the aggregation of individual preferences. Various attempts have been made to get out of this paradox, but none turns out to be satisfactory. The theorem indicates that the notion of general will conceived by **Rousseau** and prominent in social and political debate cannot easily be determined in practice. The **voting paradox** is an example of this theorem.

"'Arrow's impossibility theorem' brings about, in a dramatic way, the tension involved in ruling out the use of interpersonal comparisons of utility, in aggregating individual preferences into consistent and complete social choice, satisfying some mildlooking conditions of reasonableness." Sen, On Ethics and Economics

Arrow's paradox another expression for Arrow's impossibility theorem

art

AESTHETICS [from Latin ars, artis, skill, human products that can arouse aesthetic experience] Starting from the eighteenth century, art replaced "beauty" to become the central notion of aesthetics. However, it has been difficult to provide a suitable definition of art to enable one to distinguish artworks from other objects and to bring all artistic activities, such as painting, sculpture, architecture, music, and literature, under one heading. In an objective objectcentered account, Plato defined art as mimesis, that is, the representation or display of certain aspects of reality. However, not all arts are representational. Another traditional definition claims that art is the expression of emotions, feelings, and moods. Artexpression is a specific form of self-expression. This is a subjective artist-centered notion. Other accounts include art as **significant form** (aesthetic formalism); art as what is recognized by an institution (institutional theory of art); art as creation; and art as play. Another major issue dividing theories of art concerns the function of art. Some theorists hold that art is functional, serving psychological, moral, social,

and other practical purposes, while others claim that art is autonomous and not-functional. In their view art should be pursued for its sake and for pure aesthetic value.

"Art is the creation of forms symbolic of human being." Langer, *Feeling and Form*

art for art's sake, see aestheticism

artificial intelligence

PHILOSOPHY OF MIND, LOGIC, PHILOSOPHY OF LAN-GUAGE, EPISTEMOLOGY, PHILOSOPHY OF ACTION Often abbreviated as AI. The use of programs to enable machines to perform tasks that human beings perform using their intelligence, and to simulate on a computer human thinking and problem solving. Artificial intelligence aims to bypass the human brain and body and to achieve a fuller understanding of rationality. The idea can be traced to Turing's intelligent machine. In 1956, the first AI program, called "Logical Theorist," devised by Herbert Simon and others, was capable of proving on its own 38 of the first 52 theorems from Principia Mathematica. Today, AI has developed into a domain of research, application, and instruction within computer science and other disciplines, focusing on issues such as new programming languages, methods of inference and problem solving, visual recognition, and expert systems. Early AI avoided human psychological models, but this orientation has been altered due to the development of connectionism, based on theories of how the brain works. In connectionism, complex functions, including learning, involve the transmission of information along pathways formed among large arrays of simple elements. AI seeks to understand human intelligent processes in terms of symbol manipulation and raises questions about the conditions, if any, in which we would be justified in ascribing mental attributes to purely physical systems. It has also contributed to the development of cognitive science and to some controversies in the philosophy of mind. There is a distinction between the strong thesis of AI and the weak thesis of AI. The weak thesis, which proposes only that a computer program is helpful for understanding the human mind, is widely accepted. The strong thesis, that computer "minds" instantiate human psychological processes, is highly controversial. It is challenged by John **Searle**'s argument that the syntactic manipulation of symbols by a machine is not complemented by a semantic understanding of the meaning of the symbols for the machine, as it is for human beings.

"Artificial intelligence is not the study of computers, but of intelligence in thought and action. Computers are its tools, because its theories are expressed as computer programs that enable machines to do things that would require intelligence if done by people." **Boden,** *Artificial Intelligence and Natural Man*

artificial virtue, see natural virtue

artworld

AESTHETICS A word transformed into a technical term by the American philosopher Arthur Danto in his 1964 paper "The Artworld." For Danto, an artworld provides an atmosphere or context in which artworks are embedded. It is mainly constituted by the history and theory of art. Such a world varies according to time and place. According to Danto, this theoretical context takes an artwork up into the world of art and keeps it from collapsing into the real object that it is. Another American philosopher, George Dickie (1926-), developed the notion of an artworld from a figure of speech to something having an ontological status. He first defines it as a formal institution comprising such things as museums, galleries, and art journals on the one hand, and artists, art critics, organizers of exhibitions and others possessing relevant authority about art and the art market, on the other. Representatives of an artworld can confer upon an artifact the status of an artwork. This account of an artworld has become essential for his "institutional theory of art." Later Dickie modified his notion into one of an art circle, an interrelated structure of relationships among artists and their audiences. Dickie's notion of an artworld is more concrete than Danto's. Nevertheless, their common idea is that art has its own environment and is the product of a type of specialized and unique institutionalized activity. Accordingly, art does not serve human life, as Plato and Aristotle claim, but is disengaged from worldly concerns. Art is a world in which one can apply one's own set of practices. The theory may explain the transcultural and transhistorical nature of artworks.

"To see something as art requires something the eye cannot descry – an atmosphere of artistic theory, a knowledge of the history of art: an artworld." **Danto, "Artworld," in** *The Journal of Philosophy* 61

asceticism

ETHICS, PHILOSOPHY OF MIND, PHILOSOPHY OF RELIGION [from Greek askesis] Originally meaning a course of self-discipline such as that undertaken by athletes, and later associated with rigorous self-discipline, abstinence, simplicity, and the solitary and contemplative life, popular in ancient society, early Christianity, and some forms of Buddhism and Hinduism. Some ascetics also follow exercises that consist in many means of tormenting themselves. Philosophically, asceticism proposes that a person should repress desires. A strong version requires one to relinguish one's desires totally, while a weaker version demands only that one denies bodily or worldly desires. There have been various grounds for advocating this unnatural style of life. Morally, asceticism is seen as the way to free one's soul from the body's pollution. Epistemologically, it is considered to be the way to gain truth or virtue. Religiously, it is claimed that the ascetic life will be rewarded by God. For every grain of pain now, we shall have a hundred grains of pleasure by and by. Asceticism, in contrast to hedonism, approves of actions that tend to diminish present pleasure or to augment present pain.

"Asceticism has commonly assumed that the impulses connected with the body are base and are to be treated accordingly." Blanshard, *Reason and Goodness*

ascriptivism

PHILOSOPHY OF ACTION A position regarding the meaning of statements about the voluntariness of acts. It claims that in saying that "This act is **voluntary**," we are ascribing **responsibility** for the act to its agent, rather than describing the act as being caused by its agent in a certain way. Thus, to call an act voluntary or intentional is not a causal statement. Such statements are not matters of fact, but are matters of practical (legal or moral) decision. They are not true or false. The idea of ascriptivism was introduced by H. L. A. **Hart** and belongs to a more general position of non-cognitivism. Peter **Geach**, who named the view, rejects ascriptivism and insists that to ascribe an act to an agent is a causal description of an act.

"Ascriptivists hold that to say an action X was voluntary on the part of an agent A is not to describe the act X as caused in a certain way, but to ascribe it to A, to hold A responsible for it." Geach, "Ascriptivism," *Philosophical Review LXIX*

aseity

METAPHYSICS, PHILOSOPHY OF RELIGION, MODERN EUROPEAN PHILOSOPHY [from Latin aseitas, a, from + se, itself] The property of being completely and absolutely independent of anything distinct from oneself and deriving solely from oneself. As selfdetermination of the self as itself, it is absolute freedom. In the later medieval scholasticism, God was thought to be the only entity that has this status. God is responsible for his own existence and does not depend on anything else. Everything else, on the contrary, relies for existence on God. Based on aseity, God is ascribed various other perfections. In modern times, Schopenhauer used the term for the ontological status of Will. In existentialism, since God is dead, man comes to have aseity as absolute freedom. Nothing should be in man that is not by him. The problem of reconciling absolute freedom with the place of man in society was explored by Sartre in Critique of Dialectical Reason.

A related property perseity (from Latin *per*, by + *se*, itself, intrinsically) is a state in which a thing acts out of its own inner structure. Any substance, in contrast to its attributes, is in a state of perseity. However, only God can be in a perfect state of perseity, because through aseity God alone is completely independent of anything else, while other substances rely on God for their existence.

"Men have occasionally claimed that God is the cause of his own existence or of his being the kind of being which he is, although this is not a claim normally made by traditional Theologians. Etymology would suggest that this is what is meant when God is said to have 'aseity' (his existence deriving from himself, a se)." **Swinburne**, *The Coherence of Theism*

A-series of time

METAPHYSICS A term introduced by McTaggart for the temporal ordering of events according to whether they are past, present, or future, in contrast to the B-series of time, which orders events according to whether they are before or after one another or earlier or later than one another in time. These two kinds of temporal series are different. Events in the B-series of time will not change their ordering over time. Plato's time is always earlier than Hegel's time, and this relationship will never change. According to the A-series, every event will successively be future, present, and past. Although McTaggart admitted that the tense-distinctions in the A-series are essential to understanding the nature of temporality, he uses the A-series to introduce his famous argument against the reality of time. Since past, present, and future are contradictory attributes and since the A-series ascribes possession of these contradictory attributes to the same events, McTaggart concluded that time is not real. On this basis one is led to argue that the past and the future are not realms of true existence. Even if this timeseries were not real, however, we always perceive it as though it were real. McTaggart called this perceptible time-series the C-series.

"For the sake of brevity I shall give the name of the A-series to that series of positions which runs from the far past through the near past to the present, and then from the present through the near future to the far future, or conversely." McTaggart, *The Nature of Existence*

as if

METAPHYSICS, ETHICS, AESTHETICS FOr **Kant**, a form of analogical argument as a maxim of regulative judgment. In theoretical philosophy, traditional metaphysical entities such as God and the soul are beyond the limits of experience, and we cannot really know their nature. Nevertheless we may still suppose them as if they were working principles. We take them as guidance for determining the constitution and connection of empirical objects. This regulative principle can also be applied to practical philosophy and aesthetics. A moral agent should act as if he were a legislator in the kingdom of ends. A finished work of art should appear as if it were a product of nature, but without the constraint of rules. "We declare, for instance, that the things of the world must be viewed *as if* they received their existence from a highest intelligence." **Kant,** *Critique of Pure Reason*

assertion

LOGIC A term used synonymously with judgment for affirming or denying what can be true or false. Traditionally, an asserted sentence is composed of a subject-expression, a predicate-expression, and a copula. On this view, the copula is essential to unite any pair of terms into an assertion, but Frege, Wittgenstein, and others have offered different accounts of how a proposition or assertion has unity. An asserted sentence is contrasted to other sentences in terms of its assertoric force. In traditional logic assertoric force is bound up with the grammatical predicate. Assertion does not merely express a thought or hypothesis and does not issue a command or ask a question, but is committed to the truth of the sentence or puts forward a thought as being true. Wittgenstein criticized Frege's proposal of an assertion-sign to indicate whether a thought is asserted. Important questions arise about the asserted and non-asserted occurrence of sentences that are part of other sentences. If we assert "P and Q," we also assert both component sentences, but this is not the case in asserting "P or Q." In asserting "John believes that P," we do not assert "P." To reason is to infer any assertion from assertions already admitted.

"It is one thing merely to express a thought and another simultaneously to assert it. We can often tell from the external circumstances which of the two things is being done . . . This is why I distinguish between thoughts and judgements, expressions of thought and assertions." Frege, *Philosophical and Mathematical Correspondence*

assertion-sign

The symbol "⊢" that **Frege** placed in front of a **sentence** to indicate that the sentence is asserted (that is affirmed or denied) or is a judgment. Frege needed this symbol to distinguish asserted propositions from unasserted ones, because while in traditional logic assertoric form is marked by the grammatical predicate, Frege's concept-script disassociated assertoric force from **predication**. In this

symbol, "|" is called the judgment-stroke and "—" is called the content-stroke or horizontal stroke. "|" is crucial because without it, "—" only expresses a content, without being committed to its truth. In modern logic this symbol has two further uses. When it is written between sets of sentences, it indicates that the sentences following it can be derived from the sentences preceding it; for example, " $[A_1 \dots A_n] \vdash B$ " means that B may be deduced from the premises $A_1 \dots A_n$. Furthermore, $\vdash B$ also means that B is a theorem in a system, that is, it may be assumed without any proof.

"The assertion-sign – what Frege called the 'judgment-stroke' – can be attached only to the name of a truth-value, i.e. to a sentence." M. Dummett, *The Interpretation of Frege's Philosophy*

assertoric

A judgment or proposition by which one asserts that something is or is not the case. An affirmative assertoric judgment has the form: "X is Y," while a negative assertoric judgment has the form: "X is not Y." An assertoric is a **modal** form of proposition or judgment, in contrast to two other modal categorical judgments: problematic (possible) and **apodeictic** (necessary). Expressed adverbially, an assertoric judgment can be stated: "X is actually Y," or "X is actually not Y."

"In assertoric judgements affirmation or negation is viewed as real (true)." Kant, *Critique of Pure Reason*

assertoric force

Frege's term for the force that makes a sentence an assertion rather than a hypothetical, interrogative, or imperative sentence. Assertoric force is distinguished from assertoric sense. The former is the act of asserting, and is represented using the "assertion-sign," while the latter is the thought or judgeable content contained in a sentence. In English, the indicative mood of the main verb has assertoric force, for it makes the expression of a thought into an assertion. The idea of assertoric force inspired Austin to develop his **speech act** theory.

"Assertoric force can most easily be eliminated by changing the whole into a question; for one can express the same thought in a question as in an assertoric sentence, only without asserting it." **Frege,** *Collected Papers*

association of ideas

Epistemology, philosophy of mind A view, especially important in Hume, explaining the patterned occurrence of ideas in our minds. The human mind can synthesize and combine various simple ideas into complex ones that are previously unknown. Exploiting the analogy of the principle of universal gravitation in the natural world, Hume believes that there are certain principles according to which the mind operates to connect all sorts of ideas. The occurrence of one idea will lead the mind to its correlative. These principles are three in number: resemblance, contiguity in time and place, and causation. They were used by Hume to explain all the complicated operations of the mind that unify thought in the imagination. This constructive mechanism of the human mind became the basis for associationism, but was undermined by its own internal problems and by rival views, such as behaviorism.

"We have already observed that nature established connexions among particular ideas, and that no sooner one idea occurs to our thoughts than it introduces its correlative, and carries our attention towards it, by a gentle and insensible movement. These principles of connexion or association we have reduced to three, namely, resemblance, contiguity and causation." **Hume, Enquiries Concerning the Human Understanding and Concerning the Principles of Morals**

associationism

PHILOSOPHY OF MIND A position claiming that the association of elementary mental contents and representations is sufficient to account for complex mental states and processes, because the latter can be broken into or reduced to the elements of their association. Hence, all postulations of external entities that are supposed to explain mental phenomena are unnecessary. The position has been favored by British empiricism, including Berkeley, Hume, and J. S. Mill. Hume believed that there are three fundamental principles of association, that is, contiguity, resemblance, and causation based on constant conjunction. Associationism refers also to the psychological program, called associationistic psychology, developed by Hartley and in modern times by B. F. Skinner. Associationism is generally connected with ethical hedonism and metaphysical reductionism.

"Classical Associationists – Hume, say – held that mental representations have transportable constituents and, I suppose, a combinational semantics: the mental image of a house contains, as proper parts, mental images of proper parts of houses." Fodor, in *Mind and Action*

astrology

PHILOSOPHY OF SCIENCE As a theory, astrology is related to ancient cosmology and Ptolemaic astronomy, but it is mainly known as a divinatory art, to foretell one's future life according to the pattern of the heavenly bodies at birth or to predict future human events on the basis of current celestic movements. Astrology presupposes that a person's fate has been determined and written in the stars and leaves no place for human freedom. It has been a target of criticism in the Western rationalist tradition and is now presented as a prime example of a **pseudo-science**.

"Astrology ... pretends to discover that correspondence or concatenation which is between the superior globe and the inferior." **Bacon**, *The Philosophical Works of Francis Bacon*

asymmetric relation, see symmetric relation

atheism

PHILOSOPHY OF RELIGION [from Greek *a*, not + *theos*, God, the absence of belief in God] The belief that God - especially a personal, omniscient, omnipotent, benevolent God - does not exist. Throughout much of Western history, atheism has been a term of abuse, and atheists have been attacked for impiety and immorality. The non-believers of a particular religion have also been called atheists by the believers of that religion. As a philosophical position, atheism is supported by several arguments. Because science proves that matter is eternal, there is no need for God to be the creator of the material universe. The existence of so many evils and defects in the world is incompatible with the existence of a God with the traditional supreme attributes. God is claimed to exist necessarily, but it is difficult to make sense of the notion of necessary existence. These arguments contest important arguments for the existence of God. Of significant philosophers, Holbach, Feuerbach, Marx, Nietzsche, and Sartre were all atheists. Atheism should be distinguished

from **pantheism**, which claims to identify God with the world, and from **agnosticism**, which claims that we do not know whether God exists.

In another sense, atheism is the position of not being a **theist**. God might exist, but does not govern or care for the world. This view, which is faithful to the Greek etymology of the term, is sometimes called negative atheism, in contrast to the positive atheism discussed above.

"... the controversy between atheists and nonatheists in Western society has usually been about the question of whether an all-good, all knowing, all-powerful being exists." **M. Martin,** *Atheism*

a this

METAPHYSICS, ANCIENT GREEK PHILOSOPHY [Greek tode ti, sometimes translated as thisness] Unlike tode (this), which is simply a pronoun that can refer to everything, tode ti is a technical term introduced by Aristotle. In the Categories he defines it as "individual and numerically one" and takes it as a mark of a primary substance (sensible particular). In contrast, a secondary substance (species and genus) is marked by poion ti (a kind). In the Metaphysics, tode ti is one criterion for primary substance. In contrast, the universal is not substance and is labeled toionde (Greek, such, the equivalent of poion ti). Aristotle claimed that among form, matter, and the composite of form and matter, form best meets the criterion of tode ti, with the composite second. Since tode ti seems straightforwardly to denote a particular thing, Aristotle's form appears to be a particular. But this is a disputable point, for many who believe that Aristotelian form is a kind of universal maintain that tode ti is not necessarily a particular, but can mean a determination and that an infirma species can also be tode ti. The morphology tode ti suggests that one of its two constituent words is a class-name and that the other restricts the class to a single member, but it is disputable which function should be assigned to which word.

"Everything that is common indicates not 'a this', but 'such', but substance is 'a this'." Aristotle, *Metaphysics*

atom

METAPHYSICS, ANCIENT GREEK PHILOSOPHY, PHILO-SOPHY OF SCIENCE [from Greek *atomos*, in turn from *a*, not + *temos*, cut, hence the smallest unit, which

cannot be further cut or divided] The central conception of the Greek atomists, such as Leucippus and Democritus, who claimed that atom and void are the principles from which everything else in the world is composed. Atoms are ungenerated, imperishable, indivisible, homogeneous, and finite. The attributes ascribed to an atom are similar to the properties that Parmenides ascribed to his "is." Atoms move in the void and differ only in size, shape, and position. Thus sensible features like color, taste, and smell do not belong to external bodies but are the result of the interaction between atoms and ourselves. The conception of the atom is broadly viewed as one of the greatest achievements of ancient natural philosophy; and it has been a subject of dispute in the later development of philosophy and science, especially in the corpuscularian philosophy of the seventeenth and eighteenth centuries. In Greek philosophy, Aristotle also used the term atom for the infirma species.

"By convention are sweet and bitter, hot and cold, by convention is colour; in truth are atoms and the void." **Democritus, in Sextus Empiricus'** *Adversus Mathematicos (Against the Grammarians)*

atomic fact

METAPHYSICS, LOGIC, PHILOSOPHY OF LANGUAGE A term introduced by Russell and also employed by Wittgenstein in his Tractatus. For Russell, atomic facts are the simplest kind of facts given in experience, but Wittgenstein is less interested in this epistemological aspect than in the role of atomism in logic and in the possibility of language. Atomic facts consist in the possession of a quality by some particular thing (i.e. "This is white") or in a relation among some particulars (i.e. "A gives B to C"). The relation can be dyadic (between two things), triadic (among three things), tetradic (among four things), and so on. Russell also calls a quality a "monadic relation," allowing the integration of predication into his general account of relations. Each atomic fact contains a relation and one or more terms of the relation. Those propositions expressing atomic facts are called atomic propositions and assert that a certain thing has a certain quality or that certain things have a certain relation. Atomic facts determine the truth or falsity of atomic propositions, and there is a logical isomorphism between them. Atomic facts are the terminating points of logical analysis. A "molecular fact," that is, complex facts such as "p or q", is constituted by more than one atomic fact. Molecular facts are represented by the **truth-functional** compound propositions of atomic propositions, called molecular propositions.

"There you have a whole infinite hierarchy of facts – facts in which you have a thing and a quality, two things and a relation, three things and a relation, four things and a relation, and so on. That whole hierarchy constitutes what I call atomic facts, and they are the simplest sort of facts." **Russell,** *Logic and Knowledge*

atomic proposition

LOGIC A proposition asserting that a certain thing has a certain quality, or that certain things have a certain relation, such as "This is white," or "This is between a and b." Atomic propositions can be either positive ("This is white") or negative ("This is not white"). They express atomic facts and have their truth or falsity determined by atomic facts. An atomic proposition itself cannot be further analyzed into other component propositions, but the combination of two or more atomic propositions through logical connectives forms a **molecular proposition**.

"We may then define an atomic proposition as one of which no part is a proposition, while a molecular proposition is one of which at least one part is a proposition." **Russell, Collected Papers of** *Bertrand Russell*, vol. VII

atomism

METAPHYSICS, PHILOSOPHY OF SCIENCE, PHILOSOPHY OF LANGUAGE [from Greek *atom*, the indivisible] A position holding that the world is composed of a infinite number of indivisible small elements and the **void**. It was first proposed as a metaphysical hypothesis by the Greek philosophers Leucippus and **Democritus** in order to account for the phenomenon of **change** denied by **Parmenides**. This ancient atomism, which was later developed by **Epicurus**, claimed that there are an infinite number of imperceptible material **atoms**, differing in quantitative properties. The atoms meet in the void and join together to form various compounds that may again divide into atoms. Their quantitative differences determine the qualitative differences of the compounds. All movement in the world can be reduced to the arrangement and rearrangement of atoms in the void.

This metaphysical doctrine was revived in modern philosophy by **Gassendi** in the form of **corpuscularism**. Such speculation about the structure of the world was supported by the chemical investigations of John Dalton (1766–1844) and then in physics. In this century, **Russell** and early **Wittgenstein** developed a kind of logical atomism, claiming that the world is ultimately composed of elementary or atomic facts, to which elementary propositions correspond. Semantic atomism, developed by F. **Dretske** and J. **Fodor** and others, proposes that the meaning of a concept is determined by its relation to the thing to which it applies, rather than by its relation to other concepts.

"The logic which I will advocate is atomistic . . . When I say that my logic is atomistic, I mean that I share the common-sense belief that there are many separate things." **Russell, Logic and Knowledge**

atomistic property, another term for punctuate property

atonement

PHILOSOPHY OF RELIGION, ETHICS Originally, the condition of being at one after two parties have been estranged from one another, but later an act or payment through which harmony is restored. The Jewish Day of Atonement (Hebrew Yom Kippur) is a holy day requiring abstinence and repentance from all believers. In Christianity, the primary act of atonement was the self-sacrificial death of Jesus Christ in order to redeem humankind from sin, leading to the reunion of God and men. This mysterious account represents a primitive morality of paying back what one owes, but understanding the nature of this sacrifice has been a topic of debate. Interpretations include paying a ransom exacted by the devil, satisfying an outraged God, restoring God's honor insulted by sin, repaying what is our debt to God, substituting for us and giving an example of love that inspires repentance. It is difficult to render any of these theories coherent with the notion of a perfect deity. Jesus is innocent and human beings are sinful. How can the sacrifice of the former

substitute for that of the latter? If God accepts that sacrifice, how can he be just? The Resurrection of Christ and the identity between the Son and the Father make atonement even more problematic.

"Atonement, following our view, is a 'sheltering' or 'covering', but a profounder form of it." **Otto**, *The Idea of the Holy*

attitude

ETHICS, PHILOSOPHY OF ACTION A mental state of approval or disapproval, favoring or disfavoring. It is associated with emotion and feeling, but is contrasted to **belief**. While belief is concerned with fact and is cognitive, attitude is concerned with evaluation and emotional response. People having the same beliefs might have different attitudes, or have the same attitudes although they have different beliefs toward the same object. Hence the distinction between **value** and **fact**. Subjectivist ethics claims that attitude is more directly related to motivation and behavior and that ethical and other value judgments are matters of attitude rather than of cognition.

"The term 'attitude'... designates any psychological disposition of being for and against something." **Stevenson**, *Facts and Values*

attribute

METAPHYSICS, LOGIC [from Latin *ad*, upon + *tribure*, assign, bestow] In contrast to the notion of **sub-stance**, attributes are things that can be predicated of or attributed to a substance and are represented by **predicates** in logic. The development of metaphysics further distinguishes between essential and accidental attributes. An essential attribute is a characteristic a thing must possess during its existence, while an accidental attribute is a characteristic that a thing may or may not possess, and the alteration of which will not affect the nature of that thing. This distinction corresponds to that between essence and accident. An attribute is generally taken to be the same thing as a property, quality, or characteristic.

The basic description of attribute is from Aristotle's philosophy. Attributes are ontological complements to objects. While an object is concrete and

independent, an attribute is abstract and metaphysically incomplete. Attributes are the different ways of existing that an object exhibits. The notion of attribute also plays an important role in rationalism, especially in the philosophy of Spinoza. For him, attributes were the things that constitute, express, or pertain to the essence or nature of God or substance. Substance has an infinite number of attributes, each of which expresses one infinite and eternal essence. However, human intellect knows only two attributes, thought and extension. This account differed from Descartes, who claimed that thought and extension actually form two independent substances. However, Spinoza thought that there is a real distinction between thought and extension, and he developed a theory of psycho-physical parallelism to explain their interactions. Contemporary philosophy considers a state of affairs as comprising the having of an attribute by an object. Various discussions regarding the notion of attribute are based on the identification of attributes with universals. Philosophers debate questions such as the ontological status of attributes, whether there are uninstantiated attributes and how an attribute is related to an object. There is also a view that can be traced to Aristotle according to which an attribute can be a particular. The white color of Socrates' skin might be peculiar to Socrates himself and vanish along with his death. A universal attribute, according to this view, is merely a resemblance among particular attributes.

"By attributes I understand that which the intellect perceives of substance as constituting its essence." **Spinoza,** *Ethics*

attribute theory of mind, an alternative term for the double-aspect theory

attributive adjective

LOGIC, ETHICS Peter Geach distinguishes attributive adjectives from predicative adjectives. While predicative adjectives have the same application to different nouns to which they are attached, attributive adjectives can yield various applications with regard to different nouns. If X can be both A (a singer), and B (a criminal), and if X can be a CA (an intelligent singer) and CB (an intelligent criminal), then C is a predicative adjective. If X can be both A (a singer) and B (a criminal), and X can be DA (a nice singer), but cannot be DB (a nice criminal), then D is an attributive adjective. The purpose of the distinction is to illuminate the meaning of the concept good by showing that good is an attributive rather than a predicative adjective.

"I shall say that in a phrase 'an A B' ('A' being an adjective and 'B' being a noun) 'A' is a (logically) predicative adjective if the predication 'is an A B' splits up logically into a pair of predications 'is a B' and 'is A'; otherwise I shall say that 'A' is a (logically) attributive adjective." Geach, in Foot (ed.), *Theories of Ethics*

aufheben, German word for sublation

Augustine of Hippo, St (354–430)

Medieval theologian and philosopher, born in Thagaste, North Africa, moved in 383 to teach in Rome and Milan, converted from Manichaeism to Neoplatonism and then to Christianity, and, after returning to North Africa, became Bishop of Hippo in 395. Augustine played a crucial role in the transition from classical antiquity to the Middle Ages. For him, Neoplatonism is a preparation for Christianity, and philosophy can discover wisdom and help to achieve human blessedness. He provided Neoplatonic interpretations of major Christian teachings and made significant contributions to topics such as the corruption of human nature, free will, predestination, sin, love, grace, Divine law, and time. His masterpiece Confessions (397-400) is both a spiritual autobiography and a philosophical classic. His other important works include City of God (413-26) and The Trinity (420).

Augustinian picture of language

PHILOSOPHY OF LANGUAGE A view that **Wittgenstein** attributed to St **Augustine** and criticized at the beginning of *Philosophical Investigations*. According to this view, each word has a **meaning** which is the **object** for which it stands, and so it has a meaning in virtue of its being correlated with some entity. This view is criticized as being oversimplified because it concentrates excessively on **names** and ignores other kinds of words that function very differently from names. Furthermore, even in the case of names the meaning-relation is more complicated. From this view Wittgenstein himself proceeded to develop an alternative approach to language that emphasizes the multiplicity of different kinds of words and uses of language.

"In this [Augustinian] picture of language we find the roots of the following idea: Every word has a meaning. This meaning is correlated with the word. It is the object for which the word stands." Wittgenstein, *Philosophical Investigations*

Augustinianism

PHILOSOPHY OF RELIGION, MEDIEVAL PHILOSOPHY A philosophical and theological tradition based on the thought of St Augustine and defended by his followers. Augustine applied Plato's teaching to Christian dogmas. The main elements of Augustinianism are its doctrines of grace and predestination. Human beings have inherited the sin of Adam and Eve, and have lost the capacity that they had in the original paradisal state to will and do good. Individuals themselves are incapable of ameliorating the situation, and only God's grace can save them. God's grace provides humanity with the knowledge of the good and the capacity to will the good and the joy in doing the good. The Scriptures constitute a special revelation that is beyond the reach of philosophy and reason. Faith in Christ alone enables man to understand the world and his own position in it on a rational basis. This later became the official doctrine of grace in the Latin Christian Church. Augustine also claimed that the chance of salvation is predestined and that man's will is impotent to attain it. The choice of God as to who would be saved and who would be condemned is hidden from us. This view of predestination gives rise to much debate in medieval philosophy. Augustinianism dominated medieval thought until the time of Aquinas. In the twelfth and thirteenth century it became the main rival of Aristotelianism and Thomism and has remained a major part of Western theology.

"The gulf between nature and God can be bridged only by grace. This is the governing principle of Augustinianism." Leff, *Medieval Thought*

Austin, John (1790–1859)

British legal philosopher, born in Creeting Mill, Suffolk, legal positivist. Austin was appointed to the chair of jurisprudence at the newly founded University College, London, in 1826. He founded analytic jurisprudence, which examines the concepts and terminology common to any legal system, rather than focusing on the historical and sociological dimensions of the law. Influenced by his friend Bentham, his view of law was utilitarian, and his command theory of law initiated legal positivist accounts of the distinctive nature and normativity of the law. His masterpiece is *The Providence of Jurisprudence Determined* (1832).

Austin, J(ohn) L(angshaw) (1911-60)

British philosopher, born in Lancaster, educated and taught at Oxford. As a leading figure of Oxford ordinary language philosophy, Austin maintained that the main task of philosophical investigation is to examine and elucidate the concepts of ordinary language. His most significant contribution to philosophy is the speech act theory, according to which what an utterance is used to do is a main factor in determining its meaning. He understood saying something as performing linguistic acts and classified speech acts into three kinds: locutionary, illocutionary, and perlocutionary. According to him, we can remove many traditional philosophical problems by distinguishing these acts. His papers are collected in Philosophical Papers (1961), How to Do Things with Words (1961), and Sense and Sensibilia (1962).

authenticity

MODERN EUROPEAN PHILOSOPHY [German Eigentlichkeit, from eigen, own, literally, my ownness, what is mine] Anxiety, the feeling arising from our sense of freedom, reveals to us that each person is uniquely himself or herself and no one else. According to Heidegger, each of us has our own potentialities to fulfill and has to face our death on our own. If, as Heideggerian Dasein, one has a resolute attitude in facing this lonely condition and holds a responsible position toward one's uniqueness and individuality, that person is said to lead an authentic existence and to be aware of what this condition means. Authenticity holds onto both the future and the past and provides a constancy of the self. It also requires Dasein to accept its own death. Indeed, Heidegger claims that the real authentic self is revealed when one encounters one's own death. In authenticity, "I" always comes first, although this "I" is not a Subject. If one is led by anxiety to protect oneself through absorption into the mass and the anonymous "they," as people generally do, then that person leads an inauthentic existence. In inauthenticity, "they" comes first, and one's own existence is lost. This attitude is what Heidegger calls *Dasein's* "fallingness," that is, *Dasein's* turning away from itself and allowing itself to be engrossed in day-to-day preoccupations and to drift along with trends of the crowd.

"As modes of Being, authenticity and inauthenticity (these expressions have been chosen terminologically in a strict sense) are both grounded in the fact that any *Dasein* whatsoever is characterized by mineness." **Heidegger**, *Being and Time*

authoritarianism

POLITICAL PHILOSOPHY A political view that claims that subjects should obey some authority whose excellence or legitimacy is not open to question. In practice, within an authoritarian political system the government has unlimited power and lacks proper constitutional constraint. The authority can make decisions without needing to consult or negotiate with those to whom the decisions will apply. Such a society is ruled by a person or persons rather than by law. Hobbes's Leviathan provides a rationale for subjects to obey an authoritarian ruler. In modern times, authoritarianism has been displayed in various forms of dictatorship. It is opposed to liberal individualism and is widely condemned for suppressing individuality and encroaching upon personal rights. Defenders of authoritarianism claim that it can provide security and order for society and that it is preferable to the limitations and corruption of a liberal democratic system. In ethics, authoritarianism is an ethical system that presupposes that the majority are ethically incompetent and need to obey ethically competent authority.

"Authoritarianism in its pure form . . . states its basic prescription of obedience in such a way that there is no need for a higher validating principle." Ladd, *The Structure of Moral Code*

authority

POLITICAL PHILOSOPHY, PHILOSOPHY OF LAW The right possessed by a person, organization or state to issue commands and have them obeyed. This right implies an obligation upon those who are subject to the authority to respect and obey the commands. Authority is a kind of power, but not every kind of power is authority. Several kinds of power are merely coercive and do not have any legitimacy. A major problem in political philosophy is to justify the grounds of state authority that provides the final appeal in settling dispute. Social contract theory is one attempt to provide a solution. It claims that legitimate authority among men can come only through covenants. The scope and limits of state authority also need explanation. Authority can hold in some areas but not in others or over some people but not over others. Max Weber distinguished three kinds of authority: rational-legal authority, which is from reason and law; traditional authority, which is from tradition; and charismatic authority, which is from some special qualities a person has [Greek charisma, divine gift]. Outside political and legal contexts, an authority is a reliable source of information.

"To have authority to do something is to have the right to do it." **Raphael,** *Problems of Political Philosophy*

authority de facto, see authority de jure

authority de jure

POLITICAL PHILOSOPHY, PHILOSOPHY OF LAW Legitimate authority that is derived from rules that people are legally or morally obliged to obey. In contrast, de facto authority is based on power rather than legitimacy. For authority to be stable, power and legitimacy must be combined, and in practice there is no clear way of distinguishing between de jure and de facto authority. Authority de jure is a normative concept that is intrinsically related to the notion of rights. In contrast, authority de facto is a causal concept based on tradition or power. The distinction plays a central role in contemporary discussions of authority and brings together the characteristic concerns of political philosophy with legitimacy and political science with power. The validity of the distinction is questioned by theorists, who hold that one kind of authority is basic and that the other kind of authority must be reduced to it.

"So long as men believe in the authority of states, we can conclude that they possess the concept of *de jure* authority." Wolff, *In Defense of Anarchism*

automaton

PHILOSOPHY OF MIND, PHILOSOPHY OF ACTION A moving thing whose motion is due to the internal structure of its parts rather than to an external cause. Descartes uses automaton as a synonym of selfmoving machine. For him, the whole world is an automaton, for it contains in itself the corporeal principle of the movements for which it is designed. All animated bodies (including human bodies) are automata and they are not essentially different from inanimate matter but simply exhibit greater complexity in the disposition and function of their parts. Non-human animals are automata pure and simple. All their actions and reactions can be accounted for in terms of the automatic movements of their organs, which are essentially like those performed by any artificially constructed machine. Humans are distinguished from automata because some of their actions are initiated freely by the will. Currently "automaton" may refer either to a machine that imitates human intelligence or to a machine running according to a program.

"We do not praise automatons for accurately producing all the movements they were designed to perform, because the production of these movements occurs necessarily. It is the designer who is praised for constructing such carefully-made devices." **Descartes**, *The Philosophical Writings*

autonomy

POLITICAL PHILOSOPHY, ETHICS [from Greek auto, self + nomos, law, self-rule] A term traced to Machiavelli, who used it to mean both free from dependence and self-legislation. Rousseau claimed that the people of a politically autonomous society are bound only by the laws that they legislate themselves. Kant applied this notion to the moral domain and established it as a central concept in his ethical theory. A moral agent is autonomous if his will is not determined by external factors and if the agent can apply laws to itself in accordance with reason alone. Such agents respect these laws and are bound only by them. In Kant, autonomy contrasts with heteronomy (from Greek hetero, other + nomos, law, ruled by others) in which one's will is controlled by outside factors, including one's desires. Autonomy is linked to freedom and is a necessary condition for ascribing responsibility to an agent. Respect for

a person as a self-determined being is a common moral theme. However, since each of us lives in a society and is inevitably constrained by various external elements, it is possible to dispute the extent to which true individual autonomy is possible and practical. In other areas, autonomy is logical or conceptual independence.

"Autonomy is the ground of the dignity of human nature and of every rational nature." Kant, *Groundwork for the Metaphysics of Morals*

autonomy of grammar, another term for autonomy of language

autonomy of language

PHILOSOPHY OF LANGUAGE, METAPHYSICS Also called arbitrariness of grammar, or autonomy of grammar. The view that the grammar of language and its constituent linguistic rules do not mirror the essence of reality or the world, as held by linguistic foundationalism. If language is autonomous, it does not correspond to extra-linguistic reality, nor is it constrained by such a reality, and an account of reality cannot be justified by what is represented in language. Language is not a product of the rational representation of an external reality. This idea has led **Leibniz**, **Frege**, and **Russell** to attempt to invent an ideal language to construct a better representation of the world than ordinary language.

Wittgenstein disagrees with the autonomy of language in his Tractatus, but later embraces and develops it in great detail in his account of language games. He argues that the meaning of a word is determined by grammatical rules governing its use rather than by the external metaphysical nature of the world. Language is like a game, which is determined by its rules. The aims of language are fixed by the rules of grammar. If we change the rules, a word has a different meaning. The autonomy of language does not imply that what a term means is a matter of personal choice, but indicates that language is not merely an instrument to depict what is outside language. In this sense of autonomous, Wittgenstein claims that speaking a language is part of a communal activity and is embedded in a form of life. The idea of the autonomy of language is criticized by essentialists such as Kripke and Putnam, who argue that the meaning of a word is determined by the nature of that to which it refers, and that our understanding of the meaning of a word changes in accordance with the development of scientific knowledge of that nature.

"The analogies of language with chess are useful in that they illustrate the autonomy of language. Thus in the case of chess there is no temptation to think that it is essential to point outside to some object as the meaning." **Wittgenstein**, *Manuscript*

autonomy of morals

ETHICS The claimed independence of morality or ethics as a discipline from other fields such as biology, psychology, sociology, or religion, and even from other disciplines of philosophy such as metaphysics, epistemology, or political philosophy. Instead, morality is claimed to have its own internal rational methods of justification and criticism. Moral terms do not refer to natural properties and hence cannot be defined by them. Moral judgments cannot be judged by any objective principles outside morality. Value judgments are not derived from statements of fact. The distinction between **fact** and **value**, between is and ought, and the alleged naturalistic fallacy are all derived from attempts to justify the autonomy of morals.

"The fundamental term of normative evaluation, the one in terms of which the others are defined, must itself be indefinable. This thesis, which many philosophers find quite plausible, may be called the doctrine of the autonomy of morals." F. Feldman, *Introductory Ethics*

auxiliaries

POLITICAL PHILOSOPHY, ANCIENT GREEK PHILOSOPHY [Greek *epikoupoi*] In the *Republic*, the class of warriors in **Plato**'s Ideal State or its executive branch of government. It was the second class, separated from the class of **guardians**, which was composed of noble young men. The function of the auxiliaries was to carry out the executive orders of the guardians for the preservation and maintenance of the city. While the guardians had knowledge, the auxiliaries only had true beliefs. Their virtue was courage, and they corresponded to the spirited element in the soul. "Those young men whom we have called guardians hitherto we shall call auxiliaries to help the rulers in their decisions." **Plato,** *Republic*

averageness, another expression for everydayness

Averroes (c.1126–98)

The Latin name for Ibn Rushd, medieval Islamic philosopher, born in Cordoba, Spain. Averroes composed a massive set of commentaries on the whole corpus of Aristotle's works. The Latin translations of his commentaries formed an integral part of the educational curriculum in European universities of his time, and, as a result, he was simply called "the commentator." His careful explication and original discussion of Aristotle's doctrines, such as those of the soul and of active and passive intellect, exerted great influence on Western medieval philosophy from the thirteenth to the seventeenth centuries, although church leaders frequently condemned some Islamic aspects of teachings. His name is often associated with the doctrine of double truth. His own major work is The Incoherence of the Incoherence (c.1180).

Avicenna (980–1037)

The Latin name of Ibn Sina, medieval Islamic philosopher and physician, born near Bukhara, Persia. Avicenna introduced Aristotle to the Islamic world and developed a system that combined the philosophy of Aristotle and Plotinus with Islamic thought. God is necessary being and the necessitating cause of all existents. Essence and existence are identical only in God. Avicenna also described the spiritual journey to God in terms of Islamic mysticism. He wrote more than a hundred works on philosophy, religion, and science. His most important philosophical works are Healing: Directives and Remarks and Deliverance, and his Canon of Medicine was a standard textbook until the seventeenth century. The translation of his writings into Latin initiated the Aristotelian revival of the twelfth and thirteenth centuries and had profound effects on the Latin West, particularly through the writings of Aquinas. His works were a major influence on Christian theology.

avowal

PHILOSOPHY OF MIND, PHILOSOPHY OF LANGUAGE A term associated with Wittgenstein's later account

of the mind and introduced into philosophy by Ryle. Along with expression and utterance, it is an English translation of the German word Ausdruk. An avowal is the utterance of a first-person present-tense sentence to express a mental state (for example "I am in pain") rather than to describe something. For Wittgenstein, an avowal is not a cognitive claim that can be true or false, and it makes no sense to justify what I avow by reference to further grounds. Rather, an avowal is an act that characterizes being in the inner state which it expresses. It is nonsense to say that "I know that I am in pain." This notion is associated with Wittgenstein's private language argument. This argument rejects the traditional Cartesian claim that an expression of mind is a description of inner mental states and raises many issues in contemporary philosophy of mind. However, it remains controversial whether first-person psychological sentences must be understood as something other than reports of facts about ourselves.

"Not many unstudied utterances embody explicit interest phrases, or what I have elsewhere been calling 'avowals', like 'I want', 'I hope', 'I intend', 'I dislike'...; and their grammar makes it tempting to misconstrue all the sentences in which they occur as self-descriptions. But in its primary employment 'I want...' is not used to convey information, but to make a request or demand." **Ryle,** *The Concept of Mind*

awareness, direct and indirect, see immediate perception

axiarchism

ETHICS, METAPHYSICS [from Greek *axis*, value + *arche*, rule, rule by what is good and valued] A term invented by John Leslie for the belief that the world is largely or entirely determined by what is ethically valuable, and that things in this world have an intrinsic desire for the good. It is thought that this optimistic metaphysical outlook has been held by many philosophers throughout history. The belief that the universe is the product of a directly ethical requirement is extra axiarchism.

"Axiarchism is my label for theories picturing the world as ruled largely or entirely by value." Leslie, *Value and Existence*

axiological ethics, see axiology

axiology

ETHICS [from Greek axios, worthy + logos, theory or study] The general study of value and valuation, including the meaning, characteristics, and classification of value, the nature of evaluation, and the character of value judgments. The topics have traditionally been attached to the general study of ethics, but have developed into a special branch since the last century. Axiology is also called the theory of value and is mainly an epistemology of value. The word "axiology" was first introduced into philosophy by Urban as a translation of the German Werttheorie. Major contributors to axiology as a special discipline include Ehrenfels, Meinong, Brentano, Max Scheler, N. Hartmann, G. E. Moore, R. B. Perry, H. Rashdall, W. D. Ross, and C. I. Lewis. The ethics that extends the analysis of value to practical demands is called "axiological ethics."

"'Axiology' meant the study of the ultimately worthwhile things (and of course of the ultimately counterworthwhile things) as well as the analysis of worthwhileness (or counterworthwhileness) in general." Findlay, *Axiological Ethics*

axiom

PHILOSOPHY OF MATHEMATICS, LOGIC [from Greek axioma, something worthy of acceptance or esteem] An initial set of propositions selected as the foundations of a systematic field of knowledge. Axioms serve as the basis for a mathematical or logical system, although they themselves cannot be proved within the system. A system in which certain propositions are inferred from axioms in accordance with a set of inferring rules is called an axiomatic system. The propositions derived from axioms are called theorems. Traditionally, a proposition is chosen as an axiom because it is basic, in that it cannot be derived from other propositions in the system, self-evident and intuitively true. Axioms can be divided into non-logical axioms, which are propositions with non-logical contents, and logical axioms, which contain only logical constants and variables. A logical axiom is also called axiom schema, which is a distinctive form of axiom that can be embodied in an infinite number of specific statements.

"Axioms . . . require no such deduction, and for the same reason are evident – a claim which the philosophical principles can never advance, however great their certainty." **Kant, Critique of Pure** *Reason*

axiom of choice

LOGIC, PHILOSOPHY OF MATHEMATICS An axiom of set theory formulated by Zermelo. It states that for any infinite set, A, of non-empty subsets, no two of which having a common member, there is a set composed of choosing exactly one member from each of the subsets of the set A. Alternatively, it can be formulated that for a given class of classes, each of which has at least one number, there always exists a selector-function that selects one number from each of these classes. This axiom is independent of other axioms of set theory and many mathematical principles turn out to be equivalent to it. The axiom implies the existence of a set that we are unable to specify and hence challenges mathematical constructivism, which identifies the existence of a mathematical object with its construction by a rule. This axiom is essential for the development of set theory.

"The axiom of choice asserts that for every set S there is a function f which associates each nonempty subset A of S with a unique number f(A) of A." Moore, *Zermelo's Axiom of Choice*

axiom of infinity

LOGIC, PHILOSOPHY OF MATHEMATICS An axiom that is introduced by **Russell** to define the series of natural numbers in response to difficulties for such a definition arising from his **theory of types**. The axiom is a hypothesis that there is some type (the lowest type of individuals) with an infinity of instances. This axiom is widely criticized because its commitment to contentious claims about the world seem to exclude it from being a truth of logic. This in turn undermines Russell's original programme of deriving arithmetic from logic alone.

"It cannot be said to be certain that there are in fact any infinite collections in the world. The assumption that there are is what we call the 'axiom of infinity'." **Russell,** *Introduction to Mathematical Philosophy*

axiom of reducibility

LOGIC, PHILOSOPHY OF MATHEMATICS **Russell**'s ramified **theory of types** imposes too many restrictions upon mathematics, with the result that substantial mathematical theorems cannot be formulated and proved. To save them, Russell introduces the axiom of reducibility, which sorts **propositional functions** into levels and claims that for every propositional function of a higher order there exists a corresponding function of the first order which is extensionally equivalent to it. This axiom meets many difficulties, but Russell himself does not take it as a self-evident truth of logic.

"The axioms of reducibility, . . . could perfectly well be stated as a hypothesis whenever it is used, instead of being assumed to be actually true." **Russell, Introduction to Mathematical Philosophy**

axiom schema, see axiom

axiomatic method

LOGIC, PHILOSOPHY OF MATHEMATICS The basic procedure of the axiomatic method is (1) the assumption of a set of propositions, **axioms**, or fundamental truths that are logically independent of one another, and (2) the deduction of theorems (that is, propositions that are logically implied or proven by the axioms) from them in accordance with a set of rules of inference, as we infer a conclusion validly from a set of premises. Its result is to produce an axiomatic system. Axiomatic method has powerfully influenced philosophy, although each feature of the method has been criticized as inappropriate for philosophy.

"Familiar in mathematics is the axiomatic method, according to which a branch of mathematics begins with a list of undefined terms and a list of assumptions or postulates involving these terms, and theorems are to be derived from the postulates by the methods of formal logic." **Church,** *Introduction to Mathematical Logic*

axiomatic system

LOGIC, PHILOSOPHY OF MATHEMATICS A system in which a series of propositions are derived from an initial set of propositions in accordance with a set of formation rules and transformation rules. The members of the initial set of propositions are called **axioms**. They are independent, that is, not derivable from within the system. The derived series of propositions are called theorems. The formulation rules specify what symbols are used and what combinations of the symbols are to count as axioms and propositions directly derived from axioms. It is thus a system in which all axioms and theorems are ordered in a hierarchical arrangement and the relations between them are necessarily deductive. All propositions conforming to formation rules are called well-formed formulae (wff). The transformation rules determine how theorems are proved. If there is a decision procedure with respect to which all theorems of the system are provable, the system is said to be sound. If all provable formulae are theorems of that system, the system is said to be complete with respect to that decision procedure. If a system does not involve contradiction, it is said to be consistent. Soundness, completeness, and consistency are the characteristics required of an axiomatic system.

"In an axiomatic system a change anywhere ramifies into a change everywhere – the entire structure is affected when one of its supporting layers is removed." **Rescher**, *Cognitive Systematization*

axioms of intuition

EPISTEMOLOGY, METAPHYSICS For **Kant**, in order for quantitative experience to be possible, we must apply the **categories** of quantity, unity, plurality, and totality. We need rules to make these categories conform to the conditions of **intuitions** of objects. These rules for showing the objective validity of the categories of quantity are the axioms of intuitions. The leading principle for these axioms is that all intuitions are extensive magnitudes, meaning that they have magnitudes that are spatially or temporarily extended. This principle is purported to explain the application of geometry to empirical objects and to render possible the measurement of the experiential world. Kant did not, however, specify what these axioms are. This omission raises questions about the relations between the axioms of intuition and their leading principle and about the relation between the axioms of intuition and the categories of quantity.

"Axioms of intuition. Their principle is: All intuitions are extensive magnitudes." Kant, Critique of Pure Reason

Ayer, Sir A(lfred) J(ules) (1910-89)

British philosopher, born in London, taught at Oxford and London, knighted in 1970. Ayer's widely read *Language, Truth and Logic* (1936) linked logical positivism to the British tradition of linguistic analysis, especially Hume's philosophy, and effectively introduced this anti-metaphysical philosophical movement to the English-speaking world. Ayer discussed various philosophical topics, such as perception, memory, other minds, personal identity, and skepticism and was a pioneer of ethical emotivism. His other books include the *Foundations of Empirical Knowledge* (1940), *Thinking and Meaning* (1947), *The Problem of Knowledge* (1956), *The Central Questions of Philosophy* (1972).