

This glossary has three purposes: to be read through as a general orientation to Aristotle's thinking, for reference, and to point to those places in and outside the *Physics* in which Aristotle explains and clarifies his own usage. Bekker page numbers from 184 to 267 refer to the *Physics*; those from 980 to 1093 are in the *Metaphysics*.

abstraction
(*aphairēsis*)

The act by which mathematical things, and they alone, are artificially produced by taking away in thought the perceptible attributes of perceptible things (1061a, 28–b, 2). Within mathematics, this is the ordinary word for subtraction. It is never used by Aristotle to apply to the way general ideas arise out of sensible particulars, as Thomas Aquinas and others claim. Its special philosophic sense is not Aristotle's invention; as often as not he speaks of "so-called abstractions." He uses the word in this special sense rarely, only in reference to the origin of mathematical ideas, and not always then; in the *Physics* he says instead that mathematicians separate what is not itself separate (193b, 31–35).

active state
(*hexis*)

Any condition that a thing has by its own effort of holding on in a certain way. Examples are knowledge and all virtues or excellences, including those of the body such as health. Of four general kinds of qualities described in *Categories* VIII, these are the most stable.

alteration (*alloiōsis*)

Change of quality or sort, dependent upon but not reducible to change of place. One of the four main kinds of motion. Some things that we would consider qualities are "present in" the thinghood

ambiguity
(*homonymia*)

of a being, making it what it is, rather than attributes of it; change of any of them would be change of thinghood, rather than alteration of a persisting being (226a, 27–29). The acquisition of virtue is just such a change of thinghood, not an alteration but the completion of the coming-into-being of a human being, just as putting on the roof completes the coming-into-being of a house (246a, 17–246b, 3). For a different reason, learning is not an alteration of the learner; knowing is a being-at-work that is always going on in us, unnoticed until we settle into it out of distraction and disorder (247b, 17–18).

The presence of more than one meaning in a word, sometimes by chance (as in "bark"), but more often by analogy or by derivation from one primary meaning. (See especially *Metaphysics* IV, 2.) A city or society is called healthy by analogy to an animal, a diet by derivation. Derived meanings may have many kinds of relation to the primary meaning, but all point to one thing (*pros hen*). Arrays of this truthful kind of ambiguity reflect causal structures in the world. Book V of the *Metaphysics*, mistakenly called a dictionary, is called by Aristotle the book about things meant in more than one way. Thomas Aquinas uses the word "analogy" to cover all non-chance ambiguity, but it makes a great difference to Aristotle that the meanings of *good* are unified only by analogy, while those of *being* point to one primary instance.

art
(*technē*)

The know-how that permits any kind of skilled making, as by a carpenter or sculptor, or producing, as by a doctor or legislator. The artisan is not "creative"; in nature the form of the thing that comes into being is at work upon it directly, while in art the form is at work upon the soul of the artisan (1032b, 13–14). Aristotle agrees with sculptors that *Hermes is in the marble*, and is let out by taking away what obscures his image. Aristotle concludes that the origin of motion that produces statues is the art of sculpture, and

articulation
(*logos*)

being-at-work
(*energeia*)

incidentally the particular sculptor (195a, 3–8). The artwork or artifact has no material cause proper to itself (192b, 18–19—though a saw needs to be of a certain kind of material to hold an edge); in general the artisan uses the potencies of natural materials to counteract one another. The surface of a table strains to fall to earth, but the legs prevent it, while the legs strain to fall over and the tabletop prevents it, and similarly with the roof and walls of a house. The gathering in speech of the intelligible structure of anything, a combination of analysis and synthesis. A definition is one kind of articulation, but there are many others, including a ratio, a pattern, or reason itself. It can refer to anything that can be put into words—an argument, an account, a discourse, a story—or to the words into which anything is put—a word, a sentence, a chapter, a book. Translating *logos* as formula is misleading, since it has no implication of being the briefest, or any rigid, formulation of anything. In some translations, the word “formula” becomes a formula for a rich and varied idea; the word “articulation” is a slight improvement, used here wherever nothing better was appropriate. An ultimate idea, not definable by anything deeper or clearer, but grasped directly from examples, at a glance or by analogy (1048a, 35–37). Activity comes to sight first as motion, but Aristotle’s central thought is that all being is being-at-work, and that anything inert would cease to be. The primary sense of the word belongs to activities that are not motions: examples of these are seeing, knowing, and happiness, each understood as an ongoing state that is complete at every instant, but the human being that can experience them is similarly a being-at-work, constituted by metabolism. Since the end and completion of any genuine being is its being-at-work, the meaning of the word converges (1047a, 30–31; 1050a, 21–23) with that of the following, *entelecheia*.

being-at-work-
staying-itself
(*entelecheia*)

cause
(*aitia*)

chance
(*automaton*)

A fusion of the idea of completeness with that of continuity or persistence. Aristotle invents the word by combining *entes* (complete, full-grown) with *echein* (= *hexis*, to be a certain way by the continuing effort of holding on in that condition), while at the same time punning on *entelecheia* (persistence) by inserting *telos* (completion). This is a three-ring circus of a word, at the heart of everything in Aristotle’s thinking, including the definition of motion. Its power to carry meaning depends on the working together of all the things Aristotle has packed into it. Some commentators explain it as meaning being-at-an-end, which misses the point entirely, and it is usually translated as “actuality,” a word that refers to anything, however trivial, incidental, transient, or static, that happens to be the case, so that everything is lost in translation, just at the spot where understanding could begin. The source of responsibility for anything. It thus differs in two ways from its prevalent current sense: in always being a source (1013a, 17) rather than the nearest agent or instrument that leads to a result, and in referring more to responsibility for a thing’s being as it is than for its doing what it does. To understand anything is to know its cause, and such an understanding is always incomplete without an account of all four kinds of responsibility: as material, as form, as origin of motion, and as end or completion (*Physics* II, 3). Any incidental cause. At 197b, 29–30, Aristotle invents the etymology to *auto matēn*, that which is itself in vain (but produces some other result). Chance events or products always come from the interference of two or more lines of causes; those prior causes always tend toward natural ends or human purposes. Chance is thus derivative from the “teleological” structure of the world, and is the reason nature acts for the most part, rather than always, in the same way. When chance is peculiarly relevant to a human being, it is called fortune or luck.

contradictory
(*antiphasis*)

One of a pair of opposites which can have nothing between them, such as white and not-white.

contrary
(*enantion*)

One of a pair of opposites which can have something between them, such as white and black; but the opposition need not be extreme, and could be between two shades of gray.

contemplation
(*theōria*)

The being-at-work of the intellect (*nous*), a thinking that is like seeing, complete at every instant. Our ordinary step-by-step thinking (*diánoia*) aims at a completion in contemplation, but it also presupposes an implicit contemplative activity that is always present in us unnoticed. To know is not to achieve something new, but to calm down out of the distractions of our native disorder, and settle into the contemplative relation to things that is already ours (247b, 17–18). An analogy to the relation between step-by-step reasoning and contemplation may be found in two ways of looking at a painting or a natural scene; one's eyes may first roam from part to part, making connections, but one may also take in the sight whole, drinking it in with the eyes. The intellect similarly becomes most active when it comes to rest. The absence in something of anything it might naturally have. Aristotle regards the distinction between the deprivation, which is opposite to form, and the material, which underlies and tends toward form, as a clarification of and advance over the opinions that came out of Plato's Academy (*Physics* I, 9).

dog days
(*hupo kura*)

The hottest time of the year, when the dog-star, Sirius, first becomes visible above the horizon in the latitudes of Greece.

end
(*telos*)

The completion toward which anything tends, and for the sake of which it acts. In deliberate action it has the character of purpose, but in natural activity it refers to wholeness. Aristotle does not say that animals, plants, and the cosmos *have* purposes but that they *are* purposes, ends-in-themselves. Whether any of them is in another sense for the sake of anything outside itself is

example
(*epagoge*)

always treated as problematic in the theoretical works (*Physics* 194a, 34–36; *Metaphysics* 1072b, 1–3; *De Anima* 415b, 2–3), though *Politics* 1257a, 15–22, treats all other species as being for the sake of humans. As a settled opinion found throughout his writings, Aristotle's "teleology" is nothing but his claim that all natural beings are self-maintaining wholes.

The perceptible particular, in which the intelligible universal is always evident. The word induction, which refers to a generalization from many examples, does not catch Aristotle's meaning, which is a "being brought face-to-face with" the universal present in each single example. A famous simile in the last chapter of the *Posterior Analytics* (100a, 12–13) is often taken to mean that the universal must be built up out of particulars, just as a new position of a routed army is built up when many men have taken stands, but it means just the opposite: it only takes one man to take a stand, after which every other soldier, down to the original coward, will be identical to him. The rout corresponds to the condition of someone who has not yet experienced some universal in any of its instances. Evidence for this interpretation is found in many places, such as *Posterior Analytics* 71a, 7–9, and *Physics* 247b, 5–7, in which Aristotle unmistakably says that one particular is sufficient to make the universal known. That in turn is because the same form that is at work holding together the perceived thing is also at work on the soul of the perceiver (*De Anima* 424a, 18–19).

first philosophy
(*prōtē philosophia*)

The study of immovable being, or of the sources and causes of all being. Aristotle's organized collection of writings on this topic was called by Ilibarians *ta meta ta phusika*, "what comes after the study of natural things," but neither this phrase nor any like it is ever used by Aristotle. He names the topic in the order of the things themselves, rather than from the way we approach and think about them, and calls physics

form
(*morphē* or *eidos*)

second philosophy. What we call metaphysics, the post-natural, is for Aristotle the pre-natural, the source and foundation of motion and change. That form is present in all things is a starting-point for physics; what form is must be clarified by first philosophy (192a, 34–36). Being-at-work (1050b, 2–3). It is often said that Aristotle imports the form/material distinction from the realm of art and imposes it upon nature. In fact it is deduced in *Physics* I, 7, as the necessary condition of any change or becoming. In a compressed way in *Physics* II, 1, and more fully in *Metaphysics* VIII, 2, it is argued that arrangement is insufficient to account for form, which is evident only in the being-at-work of a thing. *Morphē* never means mere shape, but shapeliness, which implies the act of shaping, and *eidos*, after Plato has molded its use, is never the mere look of a thing, but its invisible look, seen only in speech (193a, 31).

fortune
(*tuchē*)

Chance which befalls human beings. Luck would ordinarily be a perfectly good synonym, except that Aristotle says that the word has connotations of the divine and of happiness (196b, 5–6; 197b, 4).

genus
(*genos*)

A divisible kind or class. It might arise from arbitrary acts of classification, in contrast to the *eidos* or species, the kind that exactly corresponds to the form that makes a thing just what it is. The highest general classes are the so-called categories, the irreducibly many ways of attributing being. *Metaphysics* V, 7, lists eight of these: what something is, of what sort it is, how much it is, to what it is related, what it does, what is done to it, where it is, and when it is. *Categories* IV adds two more: in what position it is, and in what condition.

impasse
(*aporía*)

A logical stalemate that seems to make a question unanswerable. In fact, the impasses reveal what the genuine questions are. Zeno's paradoxes are spectacular examples, resolved by Aristotle's definition of motion. In *Metaphysics* III, a collection

of impasses in first philosophy, Aristotle writes, "Those who inquire without first being at an impasse are like people who do not know which way they need to walk" (995a, 35–36). The word is often translated as "difficulty" or "perplexity," which are much too weak; it is only the inability to get past an impasse with one's initial presuppositions that forces the revision of a whole way of looking at things.

incidental
(*kata sumbebētkos*)

Belonging to or happening to a thing not as a consequence of what it is. The word "accidental" is appropriate to some, but not all, incidental things; it is not accidental that the housebuilder is a flute player, but it is incidental. To any thing, an infinity of incidental attributes belongs, and this opens the door to chance (196b, 23–29).

lead back
(*anaeinai*)

To produce an explanation while leaving the thing explained intact. Aristotle leads back all motion to change of place without reducing all motion to change of place.

material
(*hylē*)

That which underlies the form of any particular thing. Unlike what we mean by "matter," material has no properties of its own, but is only a potency straining toward some form (192a, 18–19). Bricks and lumber are material for a house, but have identities only because they are also forms for earth and water. The simplest bodies must have an underlying material that is not bodily (214a, 13–16).

motion
(*kinēsis*)

The being-at-work-staying-itself of a potency as a potency (*Physics* III, 1–3). Any thing is the being-at-work-staying-itself of a potency as material for that thing, but so long as that potency is at-work-staying-itself as a potency, there is motion (1048b, 6–9). Motion is coextensive with, but not synonymous with, change (*metabolē*). It has four irreducible kinds, with respect to thinghood, quality, quantity, and place. The last named is the primary kind of motion but involves the least change, so that the list is in ascending order of motions but descending order of changes.

mover
(*kinoun*)

Whatever causes motion in something else. The phrase "efficient cause" is nowhere in Aristotle's writings, and is highly misleading: it implies that the cause of every motion is a push or a pull. In *Physics* VII, 2, it is argued that in one way all motions lead back to pushes or pulls, but this is only a step in a long argument that concludes that every motion depends on a first mover that is motionless (258b, 4–5), and the only kind of external mover that is included among the four kinds of cause in II, 3, is the first origin of motion (194b, 29–30). That there should be incidental, intermediate links by which motions are passed along when things bump explains nothing. That motion should originate in something motionless is only puzzling if one assumes that what is motionless must be inert; the motionless sources of motion to which Aristotle refers are fully at-work, and in their activity there is no motion because their being-at-work is complete at every instant (257b, 9).

nature
(*phusis*)

The internal activity that makes anything what it is. The ideas of birth and growth, buried in the Latin origins of our word, are close to the surface of the Greek word, sprouting into all its uses. Nature is evident primarily in living things, but is present in everything non-living as well, since it all participates in the single organized whole of the cosmos (1040b, 5–10). Everything there is comes from nature, since all chance events and products result from the incidental interaction of two or more prior lines of causes, stemming from the goal-seeking activities of natural beings, and all artful making by human beings must borrow its material from natural things.

now
(*nun*)

The indivisible limit of a time. The word "moment" is not a suitable translation, because it refers to a *stretch* of a continuous process, not to the word "instant" appropriate, since the now is relative to a soul that can recognize it. Time arises from the measurement of motion, which can only take place in

number
(*arithmos*)

a soul that can relate two motions by linking them to a now (223a, 21–26).

Any multitude, whether of perceptible things, definite intelligible things, or empty units. The last named, the pure numbers of mathematics, Aristotle calls the numbers *by* which we count (219b, 8), but the word normally refers to the first kind, the numbers which we count, such as the dozen eggs in a carton, a multitude of something. The remaining kind of number is alluded to at 206b, 30–33; Plato seems to have taught that higher and lower forms are not related as genus and species but in the same way as a number and its units. That is, the unity of wisdom, courage, temperance, and justice, for example, would not be a common element contained in them all, but the sum of them all as virtue, the eidetic number four. A number in any of its senses is something discrete and countable, and never includes continuous magnitude; it therefore excludes fractions, irrationals, negatives, and all the other things brought under the idea of number when Descartes fused the ideas of multitude and magnitude, or of how-many and how-much, into one. It is thus a paradox, lost on us, when Aristotle says that time is both continuous and a number, but only in resolving that paradox is it possible to see how he understands time.

of-this-kind
(*poion*)

Being of one or another sort is a more direct and immediate feature of things than having a quality (*poiotēs*), a word that Aristotle rarely uses.

original being
(*archē*)

A ruling source; but the word can also mean any beginning or starting point. The usual translations "principle" or "first principle" are rarely adequate, since the word almost never refers to a highest proposition or descriptive rule. The pre-Socratic thinkers posited various original beings as responsible for all being—the one, love and strife, intellect, and so on—as though they were actors in a drama, ancient rulers. Aristotle pokes fun at them in the first chapter of the *Physics*, and argues that our beginnings cannot be *the* beginnings, finally

deducing that the starting points that should govern an inquiry into things that change are the ideas of form, material, and deprivation. But the whole of the *Physics* becomes a deduction that a ruling original being has been present all along, a motionless first mover.

The stable surroundings in which certain kinds of beings can sustain themselves, in which alone they can be at rest and fully active. When displaced, anything strives to regain its appropriate place. This idea of place depends on the prior idea of the cosmos as an organized whole, in which there is no void. The contrary idea of space, as empty, homogeneous, and infinite, Aristotle regards as an abuse of mathematical abstraction: the positing of an extension of body without body.

The innate tendency of anything to be at work in ways characteristic of the kind of thing it is; the way of being that belongs to material (1050a, 15). The word has a secondary sense of mere logical possibility, applying to whatever admits of being true (1019b, 32–33), but this is never the way Aristotle uses it. A potency in its proper sense will always emerge into activity when the proper conditions are present and nothing prevents it (1047b, 35–1048a, 16).

First in responsibility. It is translated as “first” when it means first in time.

Motionlessness in whatever is naturally capable of motion (202a, 4–5). A natural being at rest is still active. Nothing is inert.

Always the reception of organized wholes. Never sensation as meant by Hume or Kant, as the reception of isolated sense-data. The primary object of sense perception is a *this*, a ready-made whole at which one may point.

Able to hang together as a whole, intact, on its own. Aristotle never uses the word to mean “separable.” Mathematical things are not separable, not because they happen never to be found in isolation, but because they do not compose anything

that could be at work. By the same token, the form *is* separate (1017b, 25–26, and 1029a, 27–30). When the form is remembered or reconstructed in thought as a universal, it is separate only in speech or articulation, but the form as it is in itself, as a being-at-work and a cause of being, is separate simply (1042a, 30–31). In a number of places, such as 193b, 4–5, Aristotle says that form is not separate except in speech, but this is always a first dialectical step, articulating the way form first comes to sight; at 194b, 9–15, he already balances it with the opposite opinion, and points to the inquiry in which the question is resolved.

Not isolated quantity but the muchness or manyness that belongs to something. The former is studied by the mathematician; the latter is present in nature.

The way of being that belongs to anything which has attributes but is not an attribute of anything, which is also separate and a *this* (1028b, 36–37; 1029a, 27–28). Whatever has being in this way is an independent thing. In ordinary speech the word means wealth or inalienable property, the inherited estate that cannot be taken away from one who is born with it. Punning on its connection with the participle of the verb “to be,” Plato appropriates the word (as at *Meno* 72B) to mean the very being of something, in respect to which all instances of it are exactly alike. Aristotle elaborates this meaning into a distinction between the thinghood of a thing and the array of attributes—qualities, quantities, relations, places, times, actions, and ways of being acted upon—that can belong to it fleetingly, incidentally, derivatively, and in common with things of other kinds. He concludes that thinghood is not reducible to any sum of attributes (1038b, 23–25; 1038b, 35–1039a, 2). It thus denotes a fullness of being and self-sufficiency, which the Christian thinker Augustine did not believe could be present in a created thing (*City of God* XII, 2); he concluded

place
(*topos*)

potency
(*dynamis*)

primary
(*protē*)

rest
(*trēmia* or *stasis*)

sense perception
(*aisrēsis*)

separate
(*choriston*)

so much
(*poson*)

thinghood
(*ousia*)

that, while *ousia* meant *essentia*, things in the world possess only deficient kinds of being. *Substantia*, the capacity to have predicates, became the standard word in the subsequent Latin tradition for the being of things. A blind persistence in this tradition gave us "substance" as the translation of a word that it was conceived as negating.

this
(*to de ti*)

That which comes forth to meet perception as a ready-made, independent whole. A *this* is something that can be pointed at, because it holds together as separate from its surroundings, and need not be constructed or construed out of constituent data, but stands out from a background. The mistranslation "this somewhat" reads the phrase backward, and is flatly ruled out by many passages, such as 1038b, 24–25.

underlying thing
(*hupokeimenon*)

That in which anything inheres. It can be of various kinds. Change presupposes something that persists. Attributes belong to some whole that is not just their sum. Form works on some material. An independent thing is an underlying thing in the first two ways, but not in the third (1029a, 26–30).

universal
(*katholou*)

Any general idea, common property, or one-applied-to-many. It is never separate and can have no causal responsibility, unlike the form, which is a being-at-work present in things, making them what they are (1040b, 27–30; 1041a, 4).

virtue
(*aretē*)

Any of the excellences of the human soul, primarily wisdom, courage, moderation, and justice. Though they depend on learning or habituation, Aristotle regards them as belonging to our nature. Without them we are like houses without roofs, not fully what we are (246a, 17–246b, 3).

what it is for something to be
(*ti ēn einai*)

What anything keeps on being, in order to be at all. The phrase expands *ti esti*, the generalized answer to the question Socrates asks about anything important: What is it? Aristotle replaces the bare "is" with a progressive form (in the past, but with no temporal sense, since only in the past tense can the progressive aspect be

made unambiguous) plus an infinitive of purpose. The progressive signifies the continuity of being-at-work, while the infinitive signifies the being-something or independence that is thereby achieved. The progressive rules out what is transitory in a thing, and therefore not necessary to it; the infinitive rules out what is partial or universal in a thing, and therefore not sufficient to make it be. The learned word "essence" contains nothing of Aristotle's simplicity or power.