

Some Short Histories of Common Scientific Terms: A Walk Through the Oxford English Dictionary

Science editors work with scientific terms but rarely have occasion to explore their origins. Below are the derivations of some familiar and not-so-familiar scientific words. The *Oxford English Dictionary Online*¹ and other sources²⁻⁸ were used to obtain the etymologies. Remember the stories, and see the words anew!

Algebra comes from the Arabic *al-jabr*, “the reunion of broken parts”.² In the 1500s, it was used to refer to bone setting and mathematical tricks for simplifying (or unifying) equations.¹

Apoptosis, the programmed death of individual cells in an organism, is a Greek composite word derived from *apo* (from) and *ptosis* (falling), and it was used to describe leaves falling from trees. In a 1972 paper, Australian and Scottish biologists John F R Kerr, Andrew H Wyllie, and Alastair Currie credit the Scottish scholar James Cormack for suggesting the term *apoptosis* for the phenomenon they were investigating.¹

Buckminsterfullerene, a hollow, dome-shaped molecule composed of 60 carbon atoms, is named after the architect Buckminster Fuller, whose buildings it resembles. The term was coined in 1985 by the discoverers of the molecule. They wrote: “We are disturbed at the number of letters and syllables in the rather fanciful but highly appropriate name we have chosen. . . . A number of alternatives come to mind (for example, ballene, sphereene, soccerene, carbosoccer), but we prefer to let this issue of nomenclature be settled by consensus.”³ Consensus has decreed that the name remain; the nickname is *buckyball*. The name has spread to a whole family of related compounds—the fullerenes.⁴

Catalysis comes from the Greek *kata* (down) and *lysis* (a loosening). When it entered English around 1655, *catalysis* meant dissolution, ruin, or destruction. The term *catalysis* was used in 1836 by the Swedish chemist Jöns Jakob Berzelius when he discovered materials that facilitate chemi-

cal reactions without being used up themselves; these *catalysts* drove “decomposition” of a reactant.¹

Datum, the neuter past participle of the Latin *dare* (to give), means “what is given” in Latin, so *data* literally means “the givens”. *Data* entered English in 1646 in the work of Henry Hammond, an English churchman, orator, and scholar.^{1,2}

Domain shares a root with the Latin *domus* (house or home).² It entered English around 1400 via the Old French word *demeine* (a property belonging to a lord). *Domain* means related but different things in information technology, mathematics, molecular biology, and physics.¹

Electric comes from the Latin *electrum* and Greek *elektron* (both meaning amber). In 1600, the English physician William Gilbert first used the word *electrical* to refer to a material that, like amber, generates static electricity when rubbed.^{1,5}

Formula entered English in the 16th century from Latin, originally meaning instructions given by an authority for a ceremony. By the 1800s, *formula* meant both a recipe for preparing a medicine and a mathematical principle expressed in symbols. In 1837, a Scottish church leader, Alexander Carlyle, interpreted the word to mean “a rule slavishly followed without question”.¹

Galaxy is from the Greek *gala* (milk).¹ The name comes from the first known galaxy, the Milky Way.

Gengineer, short for *genetic engineer*, entered the *Oxford English Dictionary Online* in June 2008. *Gengineer* apparently was first printed in 1987 in *The Economist* in an article supposedly written in 2187 about alien and human interbreeding.⁶

Hormone came to English in 1905 from the Greek *hormon* (that which sets in motion). After the British physiologists William Bayliss and Ernest Henry Starling discovered secretin, a hormone that controls

acidity in the duodenum, Starling coined *hormone* to describe similar substances.¹

Matrix meant a female animal kept for breeding in classical Latin.² In postclassical Latin, it also meant womb, source, or origin. The word entered Old English around 1425.¹

Parasite originally came from the Greek *para* (along) and *sitos* (food). In Greek, it meant “he who sits at another’s table”. When it entered English in 1539 in the work of Richard Taverner, a well-known translator of the Bible, it meant a person who lives at the expense of another.¹

Placebo means “I shall please” in Latin. In English, it was first used in liturgy around the 13th century. The first recorded use of *placebo* to mean a medicine given more to please than to benefit the patient was in 1785, in a medical dictionary.¹

Satellite came to English in 1611 from the French *satellite* (an attendant of an important person).¹ After Galileo discovered the moons of Jupiter, he sent a report to the German astronomer Johannes Kepler, who then referred to the moons as *satellites*

in his treatises.^{1,7} Galileo had originally named the moons after the rulers of his native Tuscany, the Medici family.⁷

Ubiquitin entered the *Oxford English Dictionary Online* in June 2008. It was coined by Gideon Goldstein, the discoverer of this small protein found in all multicellular organisms. Proteins that are slated for destruction are tagged by one or more *ubiquitins*.¹ Goldstein had thought that the protein would be found in all organisms—that it was ubiquitous.⁸

Vector means carrier in Latin.² The first known use in English was in 1704, in the *Lexicon Technicum: Or, An Universal English Dictionary of Arts and Sciences*, by the English writer and clergyman John Harris. Harris defined *vector* as a line imagined to be drawn between a planet and the center it orbits, “because ‘tis that Line by which the Planet seems to be carried round its Center.”¹

References

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