

GLOSSARY OF TERMS AND CONCEPTS IN GEOGRAPHIC THOUGHT*

[A-adj.; N-noun; V-verb]

* see alphabetic listing for words underlined in definitions

- anthropocentric** [A]: focussed on human needs and demands; denying intrinsic value to any non-human being or thing; in contrast to the stance of ecosophy.
- androcentric** [A]: applied to philosophic approaches that privilege the experiences, interests, values and actions of men while minimizing or ignoring those of women.
- apodictic** [A]: necessarily true; logically certain (see tautology).
- a posteriori** [A]: reasoning which moves from effects to causes; a near parallel to induction.
- a priori** [A]: reasoning which moves from causes to effects; a near parallel to deduction.
- areal differentiation** [N]: methodology (as opposed to topic) proposed to define geography; introduced to North American geography by R. Hartshorne (1899-1992), following German geographer A. Hettner (1859-1941); see also chorology, landschaft.
- chaos theory** [N]: short term for the recently-emerged set of theories for phenomena that cannot be modelled by simple, deterministic equations; see also fractal, nonlinear dynamics.
- chorology** [N]: ‘regionalising’ goal and method—the latter never provided with an operational definition—for geography used in works of I. Kant, A. von Humboldt, J. Fröbel, F. von Richtofen, A. Hettner, R. Hartshorne, and K. Sauer (see landschaft).
- deconstruction** [V]: procedure developed by philosopher Jacques Derrida (1930-) and favoured in postmodernism; with it, social constructs (texts, ideologies, maps, etc.) are taken apart to reveal the social power relations behind their creation and operation, intending to debunk positivism's claim for the ever-increasing rationality, coherence and efficiency of said constructs, with impacts on the use of language much like those of Gödel's Theorem on logic.
- deduction** [V]: derivation of a particular truth-candidate from a general law-like statement; a reasoning approach opposite to induction; see also a priori.
- determinism** [N]: philosophic position asserting that most, perhaps all, events may be known with predictive certainty; *environmental* determinism in geography asserted that human cultures (and even individuals' characters) are predictable from environmental variables, mainly climatic ones; compare to possibilism.
- dialectic** [N/A]: process of conceptual refinement in which *thesis* provokes critical *antithesis* that is in its turn criticised and merged with parts of the thesis to yield *synthesis*, a process that is inherently both iterative and recursive; associated with (though not originated by) German philosopher G.W.F. Hegel (1770-1831); adopted by K. Marx (1818-1883).
- dichotomy** [N]: imposed binary classification—e.g. Aristotle's “everything either is or is not”—with implied opposition between the two resulting categories; a common source of logical fallacies and semantic traps.
- ecosophy** [N]: philosophic position asserting that ethical valuation of all life forms (and their required habitats) is central to epistemology; opposed to anthropocentric positions including both modernism and post-modernism; also termed *deep ecology* (from works of Norwegian philosopher Arne Naess, 1912-).
- eidetic** [A]: exact and comprehensive visual recall; by extension, pertaining to abstraction, pure form, or essence.
- empirical** [A]: pertaining to knowledge gained by material experience, as opposed to immaterial speculation or theorising.
- empiricism** [N]: philosophic position asserting that knowledge may only be had by empirical (i.e. experiential, experimental) means.

entropy [N]: irreversible time trend leading from ordered (information-rich) to disordered (information-poor) configurations of matter and energy in the universe; closely matched to the ‘second law of thermodynamics’.

epistemology [N]: branch of philosophy focussed on the origin, nature, methods, and limits of human knowledge.

eschatology [N]: branch of theology focussed on the final end toward which individuals (and their world) move; see also teleology.

ethnocentrism [N]: naive (i.e. rarely brought to conscious attention) assumption that an observer’s or commentator’s culture of origin provides the ‘natural’ or ‘universal’ framework through which to view the world.

existentialism [N]: philosophic position asserting that human freedom of choice is absolute, but that no rational criteria on which to base free choices exist; hence, the universe is an absurd, anxious and alienating place (associated with French philosopher J-P. Sartre, 1905-80).

falsificationism [N]: variant of logical positivism originated by Austrian-born philosopher of science Sir Karl Popper (1902-94), emphasizing testing of hypotheses by falsification (one contrary observation does the job) in place of verification (an infinity of confirming observations fails to do it).

fractal [N,A]: figure in space that is identically complex at many scales of observation, &/or complex due to recursive patterning, hence at a fractional (non-integer) dimension; from American mathematician B.B. Mandelbrot (1932-), of ‘Mandelbrot Set’ fame.

gestalt [N]: a figure or pattern in space that is perceived, stored and interpreted as a whole, not as a collection of parts; from Swiss psychologist C. Jung (1875-1961).

Gödel's theorem: no self-consistent closed logical system is possible; with its proof, this little bomb from Czech-born U.S. mathematician K. Gödel (1906-1978) demolishes huge logico-mathematical structures such as that built by British philosophers B. A. W. Russell (1872-1970) and A. N. Whitehead (1861-1947) in *Principia Mathematica*.

Heisenberg's uncertainty principle: measurement of one member in a pair of related quantum physical dimensions (e.g. position/momentum, energy/time) excludes certainty in concurrent measurement of the other (from German physicist W. K. Heisenberg, 1901-76).

hermeneutic [A]: mode of knowing focussed on enhancing the sense (or illusion) of shared experience, rather than on finding laws of predictive regularity in experience; associated with the philosophies of M. Heidegger (1889-1976) and Hans-Georg Gadamer (1900-2002).

heuristic [A]: explanation, procedure, concept, etc., designed for ease of use, recollection, instruction, etc., rather than precise truth or logical rigour.

idealism [N]: philosophic position asserting that there exist truths or realities which cannot be comprehended by way of sense experience; taken to the extreme, this becomes solipsism.

ideographic [A]: type of knowledge that admits only unique cases, not categories (i.e. laws) covering multiple non-unique cases (see nomothetic); from German philosopher I. Kant (1724-1804).

induction [V]: derivation of general truths from many particular instances or observations; opposite to deduction (see also a posteriori).

iterative [A]: type of procedure that repeats an operation, usually in order to generate successively more precise approximations of a desired answer (see also recursive).

landschaft / landscape [N]: German term proposed by geographer O. Schlüter (1872-1959) to define geography by topic, as *landschaftskunde*, rather than method (i.e. chorology) but ambiguous between ‘panorama’ and ‘local district’ meanings in German; in English, the former meaning prevails, particularly as used by C. Sauer (1889-1975).

logical positivism [N]: philosophic framework from Auguste Comte (see positivism) as revised by intellectuals of the ‘Vienna Circle’, of whom G. Bergmann (1906-87) had the largest impact on North American geography by way of F. Schaefer, W. Bunge, D. Amadeo & R. Golledge.

materialism [N]: philosophic position asserting that all phenomena are reducible to deterministic interactions of matter and energy.

meme [N]: label for the unit elements from which human cultures are constructed, transmitted, and evolved (as behaviours, beliefs, or language-labeled categories), in analogy to the role of *genes* in organisms and their evolution; credited to Richard Dawkins (1941-) as presented in *The Selfish Gene* (1976).

meta- [prefix]: strictly, ‘after’ or ‘beyond’, but often used to indicate recursive or self-referential application of a term (as in *metatheory*: theory about theories).

metaphysics [N]: topics in philosophy covered by books later than *Physics* in Aristotle’s writings, i.e. consideration of the ultimate nature of existence, reality, and experience.

modernism [N]: recent collective term for philosophic positions from the Enlightenment period such as materialism, positivism, etc., in which increasing law-like knowledge of the universe is valued as ‘progress’ and ‘development’; see also postmodernism, ecosophy.

negentropy [N]: the inverse of entropy; that is, increase in order, structure and information in the arrangement of a portion of the universe, necessarily built on equal or greater increase in disorder elsewhere.

nomothetic [A]: type of knowledge that admits scientific laws, or at least law-like regularities, which remain true over entire classes of objects or events; opposite of ideographic; from German philosopher I. Kant (1724-1804).

nonlinear dynamics [N]: alternative term for chaos theory.

observational paradox: the more closely and effectively one observes, the more interfering impact one has on the subject of observation; moreover, observation without impact is impossible.

ontology [N]: study of properties, processes, procedures, etc., required to establish the existence of entities or ‘things’; a subtopic of epistemology and core topic of phenomenology.

operational definition [N]: specification of meaning for a word based on a list of criteria for measurements that must (or at least conceivably might) be carried out; see parameter.

paradigm [N]: model or structure of explanation or meaning (originally, a complete table of inflections modifying a word ‘stem’, particularly for fully inflected languages such as Greek, Latin, or Russian); best known from the ‘paradigm shift’ metatheory of American philosopher of science T.S. Kuhn (1922-96).

parameter [N]: term or variable in a function that affects the specific, but not the general, form of that function; a measurable characteristic (usually one in a set) from the operational definition of a term or entity.

phenomenology [N]: recursive ontology; study of the underlying properties of people and universe that allow ‘things’, ‘events’, and phenomena in general to be perceived and defined at all.

positivism [N]: universal, materialistic, and deterministic framework for science (both physical and social) proposed by French philosopher A. Comte (1798-1857).

possibilism [N]: alternative to environmental determinism initiated by P. Vidal de la Blache (1845-1918), asserting that human responses to physical environments are constrained to a range of possibilities rather than to any one outcome.

postmodernism [N]: recent philosophical ‘trend’ that rejects modernism, but so far fails to offer or to justify any one clear alternative position; see also ecosophy, deconstruction.

postmodernist [A]: properly applied only to forms of art, and especially architecture, devised as antitheses to ‘functionalist’ buildings and ‘structuralist’ paintings.

pragmatism [N]: philosophic position asserting practical consequences as the principal criterion for epistemology; associated with the work of U.S. philosophers W. James (1842-1910) and J. Dewey (1859-1952).

realism [N]: philosophic position aimed at reconciling the assumptions of idealism and materialism by asserting that abstract universals have real, objective existence.

recursive [A]: application of a rule, process, philosophy, etc., to itself (see also iterative).

reductionism [N]: philosophic position asserting that seemingly diverse phenomena may be reduced to a smaller set of entities; at the extremes, strict materialism or idealism.

Sapir-Whorf hypothesis: assertion that linguistic structure of the language in which thought is conducted modifies the content, and limits the possibilities, of that thought; similar views are associated with philosophers M. Heidegger (1889-1976) and L. Wittgenstein (1889-1951); from U.S. linguists/ anthropologists E. Sapir (1884-1939) and B.L. Whorf (1897-1941).

scientific law [N]: empirically (usually experimentally) documented descriptive rule of behaviour, as opposed to legislative or *prescriptive* law.

self-fulfilling prophecy [N]: a behaviour in which belief in a particular outcome increases the likelihood of occurrence of that outcome.

semantic [A]: pertaining to the structure of language, whether through entities created by definition or relations created by grammar; often used to belittle the logical quality of an argument.

solipsism [N]: philosophic position asserting that certain knowledge of anything outside an individual consciousness is not possible; idealism taken to an absurd extreme.

stochastic [A]: type of knowledge that may be confirmed in general, but never in particular cases, by statistical procedures.

structuralism [N]: philosophic position associated with French Marxist philosopher L. Althusser (1918-90), asserting that empirically unreachable structures (especially *social class*) nonetheless exist, and have determining effects on empirically accessible events; a variant of materialist realism.

structuration (theory) [N]: theory by British sociologist A. Giddens (1938-) focussed on the recursive relationship of human agents and the social structures and systems in which they are embedded as both 'causes' and 'effects'.

tautology [N]: statement or assertion that is necessarily true by virtue of definition of terms (such as "2+2 = 4"), rather than by empirical observation.

teleology [N]: theological study of end purpose(s) toward which events are guided; presumes the existence of God(s) as purposeful, guiding entity(-ies).