

Classical Theory of Concepts

The classical theory of concepts is the view that at least for the ordinary concepts, a subject who possesses a concept knows the necessary and sufficient conditions for falling under the concept, that is, the definition of the concept. This entry first introduces the theory, and then discussed a couple of powerful objections to it.

There are now many alternative theories of concepts on offer, but they all are, in some way or another, reactions to “the classical theory of concepts”, or “the definitional view of concepts”. The classical theory has two different aspects, though they are often insufficiently distinguished. First, it is assumed that all concepts (except, perhaps, some specific basic or primitive concepts; see below) have a classical analysis, or a definition, in terms of simpler concepts – a definition which gives necessary and sufficient conditions for falling under the concept, or, in other words, for belonging to its extension. Second, it is presupposed that if a subject has or possesses a concept – grasps it – then she must know the relevant definition or correct analysis.

Consider thus the worn out example, *bachelor* (italicized expressions are here used to designate concepts which are expressed by the corresponding words and phrases; the latter are mentioned by putting them in quotes; e.g. “bachelor”). Now according to the traditional view, *bachelor* is constituted by the more primitive concepts *unmarried* and *man*; thus *bachelor* can be defined with the latter; or, they provide its analysis. Hence it is necessary and sufficient for something to fall under the concept *bachelor* to be unmarried and man. Moreover, anyone who possesses the concept *bachelor* must know this. Or, to change the example, presumably the concept *vixen* can be defined in terms of the concepts *female* and *fox*; and anyone who has the concept *vixen* must know that this is the case.

In accordance with such suggestive paradigms, it has been thought that virtually all concepts have a definition in an analogous way. For example, *tiger* might get analysed along the lines *large, carnivorous quadrupedal feline, tawny yellow color with blackish transverse stripes and white belly*; consequently, something would fall under the concept *tiger* if and only if has the latter properties. Or, perhaps *lemon* can be defined as, say, *pale yellow, tart, oval citrus fruit*; and so forth; it is necessary and sufficient for belong to the extension of *lemon* to have these features. And once again, the idea is that a subject would possess the concept *tiger*, or *lemon*, only if she knows these definitions.

It is commonplace to use specific Latin terminology in such cases: if it is definitions that are under discussion, the concept being defined, e.g. *bachelor*, is called “the definiendum”, and what is offered as the definition, e.g. *unmarried man*, “the definiens”. Analogously, in the case of analysis, what is analyzed is “the analysandum”, and what provides the analysis “the analysans”.

The classical theory of concepts is deeply rooted in the tradition of western philosophy: in Plato's dialogues, Socrates is described as asking classical analyses of various concepts; definitions also have an important place in Aristotle's thought. In early modern philosophy, the classical theory was also dominant; one can find expressions of it in the works of René Descartes, Blaise Pascal, Baruch Spinoza and especially of John Locke, for example. It is also clearly present in the early 20th century in the thinking of Bertrand Russell, G.E. Moore, and the logical positivist, and has indeed been a cornerstone of the traditional analytic philosophy, which emphasized so much conceptual analysis. In more recent philosophy, Frank Jackson and Christopher Peacocke, for example, have advocated variants of the classical theory.

Apparently some classical thinkers expected every concept to have a classical definition, but in a closer scrutiny, such a view is very difficult to defend. As a result, beginning at least with Pascal (in the 17th century), it has been widely granted that some concepts must be primitive and cannot be further defined. The question then arises, though, how these basic or primitive concepts are possessed or grasped? In the rationalistic tradition following Descartes, it has been typical to think that these are grasped with some sort of immediate intuition. Moreover, it has been characteristic for this school to think that these concepts are not acquired at all but innate. Empiricists such as Locke, Hume and their followers, in contrast, have always been skeptical about such ideas, and have held that all concepts must be ultimately grounded in sense perception. Accordingly, it has been suggested that primitive concepts are somehow made to correspond to simple sensations or impressions, or "sense data". Such classical empiricist views of concepts have headed in considerable troubles in the last half a century or so. The idea of innate concepts, on the other hand, has experienced a new revival, largely due to the works of a distinguished linguist Noam Chomsky and especially Jerry Fodor, a leading philosopher of cognitive science influenced by Chomsky. Fodor himself does not, though, combine this idea with the classical theory, but argues that almost all concepts have no definition but are primitive. In any case, the idea of plentiful inborn concepts remains far from uncontroversial.

Objections to the Classical Theory

Though once the prevailing view of concepts, the classical theory has been under much attack more recently. To begin with, it is an undeniable fact that we have really achieved satisfactory definitions of none too many concepts. In psychology and cognitive science, the classical theory has also been criticized from the direction of competing theories such as the prototype theory. Moreover, it has been argued that a number of vague concepts such as *bald* and *short* cause troubles for it. Let us, however, in the rest of this entry, focus on a couple of more general problems of principle.

Quinean Doubts: Definitions as Episodic

There is an argument due to W.V. Quine, and developed further by Hilary Putnam, which suggests that there are many concepts which do not have a definition, in the sense of the classical theory of concepts. The gist of Quine's argument is that even if a concept is originally introduced into science via an explicit definition, definitions in science are "episodic"; that is, the status of the resulting equivalence of the new concept and its "definiens" need not be eternally privileged one, a necessary truth, or true by convention. Putnam has developed this view further by introducing his notion of "law-cluster concepts". These are concepts which are implicated in a number of scientific laws. And if any one of these laws is treated as a necessary condition for the concept, one is, Putnam submits, in trouble.

For example, in the classical Newtonian physics the concept *momentum* was defined as *mass times velocity*. Soon after, it became clear that momentum is a conserved quantity. The law of conservation of momentum, in contrast to the definition of momentum per se, was originally treated as an "empirical law". But later it and the above definition functioned on a par. When Einstein later developed his special theory of relativity, it turned out that this theory was in conflict with the assumption that momentum is mass times velocity. It was the latter thought that got revised – however much it was treated as a definition earlier.

Such considerations strongly suggest that at least for certain kind of scientific concepts, the classical theory of concepts fails. Note that this line of argumentation does not claim that there are no analytic truths, or that *vixen*, for example, could not be correctly analysed as *female fox*. The point is, rather, that concepts such as *vixen* or *bachelor* are very special (in Putnam terminology, "one-criterion" concepts) and not representative, and do not offer a good model for a general theory of concepts. Many other concepts do not have any such standing definitions, if the argument is sound.

Concept Externalism

A different line of critique derives from "semantic externalism", developed by Saul Kripke, Hilary Putnam and others. Though the arguments originally focused on linguistic expressions and their meaning, it didn't take long before they were also applied to concepts. In this latter development, the work of Tyler Burge has been especially influential. At the core of this approach are various "arguments from ignorance and error". They aim to demonstrate that the classical view and its kin require, from the average persons, knowledge they plainly do not have, and emphasize how fallible and ignorant we all tend to be. Often they are based on the plausible general assumption that the underlying reality may go beyond perceptual appearance.

Consider thus, for example, the concept *dolphin*, or *dinosaur*. Ignorant persons might suggest that *fish* is a constituent of the concept *dolphin*; or *prehistoric lizard* a part of *dinosaur*. But in

fact dolphins are not fishes, and dinosaurs are not lizards. The definitions these people would provide would go wrong. Or let us reflect the above examples, *tiger* and *lemon*, and their proposed definitions. Now whether something really is a tiger, or a lemon, is in part a matter of “inner nature” (such kinds are standardly called “natural kinds”). Therefore, it is not impossible that a creature had tawny yellow colour, stripes etc. – indeed, was indistinguishable from tigers – and still failed to be a tiger; it might have a radically different inner nature. Similarly, a fruit might well be pale yellow, tart and oval, and nevertheless not count as a lemon, because it has a wrong kind of inner nature. On the other hand, such kinds may have untypical members: a tiger might have only three legs, lack stripes, be very tame and a vegetarian. Or some lemons may not be yellow, tart, or oval. Nevertheless these would counts as tigers, or lemons, respectively, because they have the right genetic structure and lineage. Hence, the conventional definitions that people would associate with concepts may fail to provide either necessary or sufficient conditions.

The most famous externalist argument is the Twin Earth thought experiment due to Putnam: Imagine that somewhere, there is a planet very much like Earth, “Twin Earth”. Even languages similar to ours are spoken there. There is, however, a difference: the liquid called “water” there is not H₂O but a totally different substance; call it XYZ. It is assumed that it is indistinguishable from water in normal circumstances; it tastes like water and quenches thirst like water, lakes and seas of Twin Earth contain XYZ, etc. Let us further assume that modern chemistry has not yet developed in either planed. Consequently, nobody would have been able to differentiate between XYZ and H₂O, and people in Earth and Twin Earth would associate exactly the same “definition” with the substance they call “water”, along the lines, *liquid, bright, tasteless, quenches thirst, fills lakes and seas, ...* Nevertheless, their respective concepts, so the argument continues, must be different, for they have different substances in their extension. The best definition people could give would not be sufficient.

The essential idea of externalism thus is that what entities really fall under a concept, say *tiger*, or *water*, may partly depend on external features of the environment unknown by the subject. The soundness of externalism itself is certainly a vividly debated topic, but it is fair to say that even the critics typically give up some essential features of the classical theory of concepts.

See also: “Atomism about Concepts”, “Concepts, Philosophical Issues”, “Innate Ideas”, “Internalism and Externalism”, “Prototype Theory of Concepts, Philosophical Perspectives”

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Further Readings

Burge, T. (2007). *Foundations of Mind. Philosophical Essays, Volume 2*, New York: Oxford University Press.

Jackson, F. (1998). *From Metaphysics to Ethics: A Defense of Conceptual Analysis*. Oxford: Oxford University Press.

Kripke, Saul A. (1980). *Naming and Necessity*. Cambridge, MA: Harvard University Press.

Margolis, E. & Laurence, S. (Eds.) (1999). *Concepts: Core Readings*. Cambridge, MA: MIT Press.

Peacocke, Christopher. (1992). *A Study of Concepts*. Cambridge, MA: M.I.T. Press.

Putnam, Hilary (1975) *Mind, Language and Reality: Philosophical Papers, Volume 2*. Cambridge: Cambridge University Press. (Essays 2 and 11-13).

Putnam, Hilary (1988). *Representation and Reality*. Cambridge, MA: M.I.T. Press. (Chapters 1 and 2).

Quine, W. V. (1966). *The Ways of Paradox and Other Essays*. New York: Random House. (Essays 6 and 10)