

Definitions

Definitions are a useful way of clearing up the many instances of vagueness and ambiguity in natural language (that is, the ordinary use of language by speakers in a linguistic community).

Vagueness and Ambiguity:

Vagueness: no clear meaning to a word or expression, e.g., words such as: bald, large, quick, wealthy, cold, capitalism, euthanasia.

Ambiguity: unclear which of several meanings is to be understood. Words that have more than one meaning are said to be ambiguous, multi-vocal or homonyms; e.g., 'chair' (piece of furniture vs. person holding a certain position of authority); 'free' (legal, political, or social standing vs. having no monetary cost); 'bat' (flying animal vs. stick used to hit thrown objects). This kind of ambiguity is sometimes called semantic ambiguity because it is unclear which of the several meanings of a word is being used.

Another kind of ambiguity is syntactic ambiguity (amphibole), where the grammatical construction makes the meaning of the sentence ambiguous, e.g., "Last night I shot a burglar in my pajamas. What he was doing in my pajamas I don't really know." Sign over entrance to a restaurant: "Serving good food since 1990."

Ambiguity can lead people to argue at cross-purposes, that is, to engage in a merely verbal dispute.

Equivocation: fallacy in reasoning involving ambiguity in the words used in an argument, e.g., we cannot be running out of energy because energy is indestructible.

Definitions:

Definiendum: the word to be defined; *definiens:* the definition, that is, the words doing the defining.

Definitions come in two kinds: 1) nominal (or verbal) definitions, which fix the reference of a word or expression by looking at how it is used; 2) real definitions, which state the nature of something by classifying it, that is, by assigning it to an existing category or kind of thing, or by giving instances of the kind of thing being defined.

1) **Nominal definitions** typically take two forms:

a) **Conventional definition:** describes how a word is used by speakers of a language or dialect; also known as a reportive or lexical definition: it reports how a word is conventionally used, typically as found in a dictionary or lexicon.

b) **Stipulative definition:** prescribes the meaning of term by specifying how it will be used by a speaker or group of speakers (as opposed to its conventional meaning).

2) **Real definitions** typically take two forms:

a) **Intensional definition:** categorizes something by identifying the essential properties that make it to be a member of a certain class of things. Often involves substituting more familiar terms for less familiar ones. [**Intension of a term:** (essential) properties common to the set of things referred to by that term.] Sometimes done by way of formal classification, by specifying a genus and specific difference, that is, the general class to which something belongs,

plus the specific characteristics of the sub-class to which that thing belongs, that is, what distinguishes the members of a sub-class from other members of its general class, e.g., human beings are rational animals.

b) **Extensional definition:** defines a class of things by identifying some or all of its members. [**Extension of a term:** the set of things referred to by that term.] Sometimes done by giving an example or by an ostensive definition. **Definition by example:** gives examples of the kind of thing being defined, e.g., spruce trees as example of conifers. **Ostensive definition:** non-verbal definition; points to a member of the class of things being defined.

Rules for good definitions:

- 1) Rule of Equivalence: the defining phrase should include in its extension neither more nor less than what is included in the extension of the term being defined. Requires equivalence between the extension of the *definiendum* and the *definiens*.
- 2) Rule of Essential Characteristics: The defining phrase of an intensional definition must specify the essential features of the thing being defined, the necessary and sufficient conditions for being that kind of thing, not its accidental features.
- 3) Rule of Clarity: the defining phrase must clarify the meaning of the *definiendum* by using words that are clear to the intended audience. Forbids circular definitions, that is, definitions that use the term to be defined.
- 4) Rule of Neutrality: The defining phrase must avoid terms heavily charged with emotion.

Examples of bad definitions:

Too broad: An eagle is a bird of prey. Tea is a beverage.

Too narrow: a chair is a green piece of furniture on which humans can sit.

Too broad and too narrow: A cat is a furry house pet.

Non-essential: a polar bear is an arctic bear that is dangerous to humans.

Unclear because circular: You are healthy when you are not ill (where the word 'ill' is understood to mean not being healthy).

Non-neutral: Capitalism is an economic system that sucks the blood out of all of the people who participate in it.

The Problem of Nominal Definitions:

Through the Looking Glass, Lewis Carroll

'I don't know what you mean by "glory",' Alice said.

Humpty Dumpty smiled contemptuously. 'Of course you don't — till I tell you. I meant "there's a nice knock-down argument for you!"'

'But "glory" doesn't mean "a nice knock-down argument",' Alice objected.

'When **I** use a word,' Humpty Dumpty said, in rather a scornful tone, 'it means just what I choose it to mean — neither more nor less.'

'The question is,' said Alice, 'whether you **can** make words mean so many different things.'

'The question is,' said Humpty Dumpty, 'which is to be master — that's all.'

Some useful distinctions:

- 1) **Use vs. Mention of a word:** distinction between **using** a word to refer to something else vs. **mentioning** a word in order to discuss the word itself. Typically, when we use a word, we are referring to something else other than that word, namely the thing or things to which the word refers. When we mention a word, we consider the word itself, not the thing or things to which it refers. Example: A table is a piece of furniture. vs. 'Table' has five letters. To indicate that a word is being mentioned, rather than used, it is usually put inside single quotation marks, e.g., 'table' in the previous sentence.
- 2) **Denotation vs. Connotation:** The **denotation** of a word is what it literally means in the sense of what it refers to. The denotation of a word is typically determined by its definition. The **connotation** of a word is the set of emotional or conceptual associations that are connected to a word through its usage, but not part of its literal definition. An example of the difference between the denotation and connotation of a word: a dove as a type of pigeon, that is, a wild and domesticated bird having a heavy body and short legs vs. a dove as a symbol of peace; 'scent' and 'smell' are synonyms because they refer to the same kind of thing, an odor, but the one often has a positive connotation and the other a negative one.

Extensional definitions use the denotation of a word to define it because they define a word simply by means of the set of things denoted by that word, namely its extension.

Sometime intensional definitions are called connotative ones, but this is inaccurate with respect to real definitions, and works, at best, only for nominal definitions. The distinction between intensional and extensional definitions, then, is not the same as the distinction between denotative and connotative definitions; these two distinctions are also not co-extensive, that is, they do not divide up the world in the same way.

3) **Semantics vs. Syntax:**

Every language has a semantics and a syntax, although they may not be explicitly or rigorously specified.

Semantics: determines how the elements of a language have a meaning, significance, or denotation. Languages are systems of signs, marks or signals—typically in the form of words and verbal expressions—that have a meaning in the sense that they refer to something other than themselves. Usually the vocabulary of a language acquires its meaning through some process of definition, although that process need not be explicit or rigorous; indeed, often words acquire their meaning simply through an informal process of common usage.

Syntax: determines how larger linguistic units in a language, including sentences and parts or sentences, are composed by looking at their formal structure; typically part of the grammar of a language.