Chapter 3-Disputes and Definitions

3.1 Introduction

At this point, we must deal with one more consequence that the recognition of the pragmatic dimension of language has for the study of logic. When human beings construct arguments, they do so to establish that some conclusion follows from a set of premises. What is the context in which such an argument would normally be constructed? Often, arguments are constructed because there is dispute about the truth of some particular sentence. No sentence is worthy of belief unless we take it to be true. That is, to believe that P (some sentence) is just to believe that P is true. Remember that establishing that some sentence follows from a set of premises does not establish that the sentence is true, unless of course, all of the premises are true. That is, the way to settle disputes about whether a particular sentence is true or not is to establish that sentence as the conclusion of a sound argument. And as we have mentioned, constructing a sound argument is not always easy to do. We can, however, always make a first step in the resolution of disputes about the truth or falsity of a sentence by showing that a particular conclusion validly follows from a set of premises that are more or less uncontroversial.

While we might well settle a disagreement about the truth of a particular sentence by constructing an argument with this sentence as its conclusion, not all disputes hinge on whether some particular sentence is true or false. In fact, it is often the case that two people can agree on the truth or falsity of a particular sentence but differ in the attitudes that they have about it. Accordingly, we will say that disputes can be of two basic kinds: **disagreements in belief and differences in attitude**.

3.2 Disputes I: Attitudes and Beliefs

It is of course much more difficult to resolve differences in attitude than to resolve disagreements in belief. Much time and frustration will be saved, however, if we are clear about where our disputes lie. It is important to realize, for example, that a dispute you may be having with someone does not turn on a disagreement in belief but only on a difference in attitude. Sorting out differences in attitude from disagreements in belief, however, is not always easy, and indeed is complicated by the fact that many controversies involve both. Nevertheless, we can know what the possibilities are. In fact, there are only four such possibilities, and they are as follows: in a controversy, we can

> - *Disagree in belief*
> - *Differ in attitude*
> - *Disagree in belief and differ in attitude*
> - *Neither disagree nor differ.*

To illustrate these various combinations, consider the following examples:

1. **(Attitude) A:** Cats are great pets. **B:** Cats are nothing but trouble.
2. **(Belief) A:** The cat is on the mat. **B:** The cat is not on the mat
3. **(Both) A:** Cats are not good pets because they are so needy. **B:** Cats are good pets because they are so independent.
4. **(Neither) A**: Cats are friendly animals. **B:** cates are not social creatures.

Notice that in the second case above where there is a difference in attitude, the issue is not some matter of fact, or some true or false belief. Rather, one of the two likes cats and the other does not. This seems to be a matter of taste. Consider this similar case: we would not say that a person has a right (true) belief that sailing is fun and that a person who hates sailing has a wrong (false) belief. In addition, the same can be said of those who prefer tomato based BQ sauce as opposed to mustard based BQ sauce. There is no right or wrong here, only a pro or con attitude.

Now consider a case in which we might have both a difference in attitude and a disagreement in belief. There are some who approve of democracy and some who do not. Consider this dispute: one person thinks that democracy is a good form of government because popular opinion is wise more often than not, whereas another thinks that this is the worst form of government because popular opinion is unwise more often than not. I hope you see that this dispute involves a difference in attitudes and a disagreement in belief.

In the *Exercise Workbook*, the examples involve one of these various four possibilities. Your task will be to see if you can determine the nature of the disagreement, if there is any.

3.3 Disputes II: Genuine and Verbal

Having distinguished between disagreement in belief and difference in attitude, we must now add that not every appearance of disagreement in belief or difference in attitude, or in both, constitutes a genuine disagreement. Sometimes our disagreements and differences are merely apparent. We say of such apparent disagreements and differences that they are merely verbal. For the sake of clarity, then, we need to be able to discern the difference between *verbal* disputes and *genuine* ones.

Perhaps an example of a merely verbal dispute will help us to grasp this distinction. Suppose someone says: "John has a new computer." To this, someone replies, "No, he does not, his brother gave him his old computer when he upgraded, and that computer is at least three years old." So does John have a "new" computer or not? Well, it depends on how we define "new." If we mean by "new," "not used by a previous owner" then he does not have a new computer; if we mean by "new," "not previously in his possession," then he does have a new computer, that is, it is an old computer that is new to him. Here we have a clear case in which the two disputants have no genuine disagreement. In fact, the only difference between the two is the way they are using their terms. This is what makes their disagreement merely verbal.

The test for whether a dispute is merely verbal or genuine is to see if the two disputants would continue to disagree in their beliefs once they become aware that they were using the term "new" in different ways. When this happens, we say that the term is ambiguous, that is, it is unclear (ambiguous) because it is being used in two very different senses. When a term is used in this way, we say that the term is being used equivocally.

> A term is **equivocal or Ambiguous** when it is used, without clarification, in two different senses, that is, with two different meanings.

If the dispute goes away when this ambiguity is cleared up, then the dispute is not genuine, but merely verbal. In the example that I just gave about John's "new" computer, it is clear that once the meaning of the equivocally used term is clarified, the dispute is resolved.

Even though clarifications regarding the different definitions of terms that are used equivocally are almost always helpful, it may not resolve the dispute. Consider the following dispute between A and B:

> *A: Capital punishment is repulsive to me because it violates one of the Ten Commandments: "Thou shall not kill." The Bible prohibits killing for the simple reason that it is cruel and inhuman for human beings to take the life of a fellow human being.*
>
> *B: Capital punishment is far from being repulsive, for it is an honorable way for human beings to serve justice. It certainly does not violate one of the Ten Commandments, for when the Bible says: "Thou shall not kill" it means only that we should not murder. Capital punishment is certainly not murder, nor is it cruel or inhuman. Indeed capital punishment is nobly human, for it shows the high value that human beings put on justice.*

In this example, the two disputants apparently disagree in their beliefs and differ in their attitudes toward capital punishment. But is their disagreement in beliefs merely verbal? Would their dispute be resolved if we clarified the terms? It might seem so, for A and B are obviously using terms very differently. For example, consider how the two interpret the term "kill" in the biblical commandment, "Thou shall not kill." A takes it to mean "the taking a

fellow human being's life" and B interprets "kill" to mean "murder." So it appears that if A would just admit that the Bible prohibits murder and not simply the taking of a human life, she would have to agree with B that capital punishment does not violate the biblical commandment, since it is not murder. But would A agree that capital punishment is not murder? Well it depends on how we define "murder."

A might well believe that "murder" is primarily a moral term while B might well believe that "murder" is primarily a legal term. In this case, A might agree that capital punishment is not murder in the strict legal sense, but may insist that it is murder in the moral sense. It may turn out that A actually believes that any taking of human life is the moral equivalent to murder.

This clarification of terms, however, may show us that the dispute between the two is deep and genuine and not merely verbal. It would be genuine if a clarification of terms did not achieve a resolution to the disagreement.

A's belief that it is morally wrong for human beings to take the life of a fellow human being, suggests that she is a pacifist. Accordingly, we might wonder if she not only believes that capital punishment is morally wrong but also that all killing, including wartime killing, is morally wrong. Certainly some are given medals for killing in war, while others are court-martialed, at least if such killings are found to be murder. That is, some killing in war is treated as honorable and some killing as murder. We may need more precise definitions if we are to make such distinctions clear. Such clarifications are important in determining exactly what one's belief are.

We might also wonder what A would say about killing in self-defense. Is this also murder? And what about killing someone accidentally? Is this murder? And what about killing animals in hunting, for food in slaughter houses? Do we murder animals? As well, her belief also may imply that abortion is morally wrong because, even though it is not legally wrong, it is nevertheless the moral equivalent to murder for it meets her moral criterion for murder, namely it is the taking of a "human" life.

Or is it? Again, we have to define our terms. What do we mean by "human?" Is a zygote or a fetus a human being? Clarifying this may or may not resolve this issue, but it will make the points of the dispute clearer. The moral of this discussion is this:

> If clarifying the meaning of the terms that are used equivocally (with more than one meaning) in a controversy, resolves the dispute, then the dispute was merely verbal; if it does not, then the dispute may be

It should be clear then that it is important to determine whether a disagreement in belief is merely verbal or genuine, for if it is the former, it may be easily resolved by clarifying how the terms of the dispute are being used.

Using a term equivocally is not the only way that a term can be uses ambiguously. A term can lack clarity. If it is used vaguely. Using terms in this way can also lead to merely verbal disputes. Now we can define vagueness as follow s:

> A term is **vague** if the context does not make it clear what the term is intended to cover.

A classic example of vagueness is found in the term "pornography." Even if we have a clear sense of what the term means (that is, even if it is not used equivocally) we may not be clear as to what the term covers. In such cases, clarification is in order, and indeed, without it a dispute may be taken as genuine when it is merely verbal. Consider the following case:

> (A) Pornography is the graphic representation of sexually explicit themes that has no socially redeeming value. Accordingly, punk rock is pornographic.
>
> (B) I agree that such representations would be pornographic if they had no socially redeeming value, but that certainly cannot include punk rock, which can be understood as social commentary, if not social critique.

What makes the use of the term "pornography" vague is that it is not clear what does and what does not have "socially redeeming value." Both sides agree on the meaning but disagree on what is and what is not "socially

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redeeming". In order to see if this dispute is merely verbal or not, we will have to be clear as to what is covered under the umbrella of "socially redeeming value." When this is done it might turn out that the dispute is resolved, or it may turn out to be genuine. Even if someone conceded that social commentary and social critique have redeeming social value, he might insist that punk rock offers neither.

To make things more complicated in all of this, terms can be used both equivocally and vaguely. If a term is to be free from being equivocal (from being used in more than one meaning) and vague (from a lack of clarity regarding what it covers), it must be clearly defined. Unfortunately, it is not always easy to come up with good definitions that are neither equivocal nor vague. Fortunately, however, there are some guidelines to help us recognize when terms are clearly defined and when they are not

3.4 Defining Our Terms

The best way to avoid verbal disagreements in belief is to define one's terms very clearly. To do this, we need to talk about what makes for a good and clear definition, that is, a definition that could find its way into a dictionary and be accepted into common usage. Those terms that find their way into standard dictionaries are called **lexical definitions.** However, before can provide a clear definition of a lexical definition and discuss how they are formulated, evolve, and gain acceptance, we need to take a moment to point out that there are some definitions that are not usually included in dictionaries. There are **four** such **non-lexical** kinds of definition: (**1. Stipulative; (2) Precising; (3) Theoretical; (4) Emotive.**

1. **Stipulative Definitions:** In many cases, a discussion can be advanced when all of the parties in it agree to use a particular term in the same way throughout the discussion. Suppose, for example that we agree to use "murder" in only its legal sense, or even more particularly in the legal sense of the term that is found in the legal definition of "first degree murder." That is, we may, for the sake of a particular discussion agree to use "murder" to mean only cases in which there is a premeditated intention to murder. In this case, killing in self-defense, or manslaughter would not count as "murder." Since defining terms in this way depends on agreement, there is no way for such definitions to be mistaken or incorrect. In fact, there is nothing that keeps us from agreeing to use the word "cold" to mean "hot" if we agree to do so. The advantage of stipulating definitions is that it reduces ambiguity. This is especially useful when terms with many and varied meanings are at play in the discussion. Just keep in mind that stipulative definitions are neither true nor false and you will not find them in a dictionary.

2. **Precising Definitions:** In some cases, we need to use a particular term in a way that is more precise than what we might find in a dictionary. This need occurs, for example, in the writing of legislation. Most bills in fact have a section in which some of the important terms in the would-be law are given precise definitions. Suppose that we are drafting a Scenic Rivers Bill. We want to protect a green corridor on either side of a certain river. We propose that a corridor of 1000 feet on either side of the river be protected from development. The problem with this is that some riverbanks, especially in low country, are constantly shifting. So we give "riverbank" a precising definition as "the mean high water mark." In this case this precise definition is also a stipulative definition since it is introduced with the understanding that all the parties will agree to use the term "riverbank" in just this precise way. Such **a** move saves much potential confusion. Again, such definitions are not to be found in dictionaries.

3. **Theoretical Definitions:** Sometimes it is helpful to formulate definitions to fit theoretical discussions. In discussions of this kind we may find it useful to define "water" as H_2O, or "energy" as MC^2. Sometimes we will have to stipulate such theoretical definitions. In addition, often the purpose of such a stipulation is to make a particular term more precise. Sometimes we find theoretical definitions included in dictionaries but most often not.

4. **Emotive Definitions:** Finally, we may define terms emotively. We do this when we want to influence others. If I define abortion as "murder," I am clearly trying to get my audience to have a negative attitude toward abortion. Earlier we saw that many define "argument" as a fight. Such a definition evokes negative feelings toward arguments. Similarly, if we define "logical" as "cold and calculating" we are again trying to evoke negative feelings. If, on the other hand, we define "logic" as mankind's highest achievement, or define "rational thinking" as economic cost-benefit analysis, we are certainly trying to produce a positive attitude toward logic and economic cost-benefit analysis. Recently we have heard environmentalists referred to as "green Nazis." No doubt about what this definition is designed to provoke.

Lexical Definitions

For the most part when we think of definitions we are thinking of lexical definitions. Unlike stipulative definitions, these definitions can be correct or incorrect. The fact is, we can, and we often do, misuse words. Most of us have to consult a dictionary from time to time. Extension and Intension

Now we must ask, how are lexical definitions formulated? Lexical definitions are assignments of meanings to terms that are primarily based on etymology and common usage. But we must note here that there are two kinds of meaning that can be assigned to terms; they are: extensive and intensive meaning. The extension of a term consists of all of the objects named, or referred to, or denoted by that term. The intension (with an "s") of a term consists of the **common attributes** of the objects referred to by the term. The extension of a term is sometimes called its **denotative meaning** and the intension of a term is sometimes called its **connotative meaning**.

The extension of the term "human being" consists of the entire collection of human beings, dead and alive. Being a language using rational and moral agent is part of the intension of the term "human being." The extension of a term is related to its intension. Obviously, the intension of a term determines its extension but not vice versa. If we add the term "living" to the term "human being" we increase its intension (we add an attribute) and thereby decrease its extension (we decrease the number of objects it refers to.) Sometimes there is no variation when we increase the intension of term. For example, by adding "mortal" to "living human being," we increase the intension of the term but the extension remains the same. Accordingly, we adopt a simple rule: When the intension of a term causes a variation in its extension that variation will be an inverse one.

Lexical definitions can be formulated relative to either the extension or intension of a term. So let's consider definitions of both types.

- **Extensive Definitions**

To define a term by reference to an object in its extension is to define it **by example**. If we want to define "human being" we can say, "Joe, for example, is what I mean." As well, we can define a term by example by simply pointing to an object in the extension of a term. Conveying the meaning of a term by pointing with a gesture or with words, or with both, to an example of one of the objects in its extension, is to give the term what is called an **ostensive definition.**

- **Intensive Definitions**

Even though definitions by example are useful, this technique for defining terms has its limitations. Suppose we want to define the term "brown" and we point to your brown hair. Now suppose we want to define "hair," how do we point just to your hair, or just to its color? And there are other problems. Suppose that we want to define a term like "unicorn." We can't exactly point to one, since no examples exist. We would not want to conclude from the fact that "unicorn" has no extension that it has no meaning. This tells us that terms can have a meaning even if their extension is empty.

These considerations lead us to think that lexical definitions that focus on intension have advantages that make them more useful than lexical definitions that focus only on extension. Defining terms intensively, however, is not without its own problems and limitations. First, we must notice that what a term connotes can vary from individual to individual. For example, some person may associate the term "river" with danger because of his or her experience of almost drowning in one. For this person, we might say, "river" means (connotes) "danger." Moreover, terms can have many attributes that are not commonly recognized, accepted, or used. It is certainly true that rivers can be classified as geologically new or old. Ordinarily, however, the geological age of a river does not seem like an essential attribute of the term.

When dictionaries formulate a lexical definition, they usually restrict the attributes of the terms it defines to the ones that are commonly accepted as central to that term. Attributes that are central to its ordinary use include things like "body of water" and "flowing." Again, good intensive definitions should avoid **idiosyncratic (subjective) attributes**, that is, attributes that depend on the particular experience of a person; and they should also avoid some

attributes that may objectively apply to a term **(objective attributes)** but are not central to its ordinary meaning as it is commonly used. In contrast to both, dictionaries prefer lexical definitions that define a term in a way that reflects the central attributes that are recognized in its ordinary usage both currently and historically.
We can call these commonly recognized connotations of a term as its **conventional attributes**.

In sum then, dictionaries prefer intensive rather than extensive definitions. Moreover, we must point out that there are three kinds of intensive definitions.

- **Intensive Definitions with Synonyms**

Sometimes it is effective to define terms intensively by providing **synonyms**. We say, for example, that the term "cryptic" means "hidden." Often this is an effective way to clarify the meaning of a term. We call such clarifications synonymous definitions; dictionaries make copious use of this technique. The fact is however, that synonymous definitions are limited. In order for such definitions to work a term must have a synonym whose meaning is known, and this is not always easy to find, if indeed there is one.

- **Intensive Operational Definitions**

A second kind of intensive definition is called an **operational definition**. We often define terms intensively by referring to some observational effect that the term is supposed to produce. I may, for example, define "good" in the phrase "a good tennis shot" as "a shot that wins the point." While these definitions are sometimes helpful, they also suffer from being too restrictive. In normal usage, we think that it is possible to make a bad tennis shot (one with bad form, or a lucky miss-hit) that nevertheless wins the point. Operational definitions do not always reflect normal usage. As such, they are widely used in dictionaries.

- **Intensive Genus Species Definitions**

Fortunately, there is another technique for intensive definitions that avoids these limitations. This is the technique of genus species definitions. Indeed, this is the technique that is preferred by most logicians for it provides the clearest definition, at least of general terms. It is sometimes difficult, however, to apply this technique correctly. Lots can go wrong in our attempts to provide a **genus species definition**. Before we say what some of these ways of going wrong are, we must say something about the technique itself.

To define a term intensively by the genus species technique, we must first find a general category (a genus, or class) of which the referent of the term we are defining is a member. For example, if we are defining the term "human being" we determine that it is a member of a genus or class. We want this class to be general enough but not too general. In this case it is obvious that a good candidate here is the class "animal," rather than, say the class "living thing," since plants would be included in that very broad category. If the class is too general, it becomes more difficult to proceed to the second step in this definition technique. What it is this step? Simply this: now we must go on to say how this member of the class of animals is different from all of its other members. That is, we must look for specific differences, differences that mark the way this term has a use that is narrower than the genus term under which it fall. Such specific differences are what make this kind of animal theparticular species of the class of animal that it is. For example, we might say, as Aristotle once did, that the human being is a "rational animal."

It is easy to see how this technique can be expanded. We may define "triangle" as a member of the class of plane geometrical figures that has an attribute that is its specific difference from all other such figures, namely the attribute of having only three connected sides and three angles. As well, we may define "raincoat" as a member of the class "outer garments" and as being different from all other outer garments in being "designed to provide protection from rain."

The examples in the *Exercise Workbook* will challenge your ability to distinguish among these various kinds of definitions.

3.5 Recognizing Defective Definitions

Even though the genus species technique of formulating intensive definitions gives us the most precise definitions of terms, it also has many ways of going wrong. This fact, makes the effort to formulate such definitions very difficult. However, if we are aware of the various ways that such definitions can go wrong, we will advance our goal of avoiding ambiguities that can mislead us.

I might point out that even though the search for definitions that are as clear as possible is required for the purposes of evaluating formal arguments in logic, we can also appreciate a positive side of this difficulty. The fact is, our language is profoundly complex and rich in its inherent ambiguity. When we are not doing logic, but simply having conversations, or writing poetry or prose, the ambiguity of our words reveals a depth of thought that may be eclipsed by logic's search for definitions that are as univocal as possible.

But our business in this this course is logic. So we must try to eliminate ambiguity as much as we can when it comes to formulating arguments and evaluating them. The following are helpful guides in this process. They are defects in genus species definitions that need to be avoided.

Genus Species definitions are defective if they are:
1. **Too broad**
2. **Too narrow**
3. **Too broad and too narrow**
4. **Circular**
5. **Figurative Emotive**
6. **Accidental**
7. **Negative**
8. **Obscure**

1. **Too Broad:** *"Human beings are featherless bipeds."* The genus here is the class of bipeds (things that walk on two feet.) The specific difference that is claimed to make human beings different from other bipeds is that they are featherless. This definition fails because it is TOO BROAD; it is too broad because it includes too much, for example, it includes plucked chickens as human beings, which they obviously are not.
2. **Too Narrow:** *"Human beings are the only animals that are accountable before the law."* The genus here is animals. The specific difference that is claimed to make human beings different from other animals is that they are accountable before the law. This definition fails because it is TOO NARROW; it is too narrow because it excludes too much, for example, it excludes children from being human beings, for clearly, if young enough, they are not accountable before the law and yet they are surely human beings.
3. **Too Broad and Too Narrow:** *"Human beings are the only animals that can communicate."* The genus here is animals. The specific difference that is claimed to make human beings different from other animals is that they communicate. This definition fails because it is both TOO BROAD AND TOO NARROW; it is too broad because it includes too much, for example, it includes dogs and cats; it is too narrow because it excludes too much, for example human beings who are in deep comas.
4. **Circular:** *"Human beings are the only animals that are essentially human."* The genus here is the class of animals. The specific difference that is claimed to make human beings different from other animals is that they are essentially human. This definition fails because it is CIRCULAR; it is circular because there is no specific difference that is cited to mark the difference between other animals in the genus, and the word being defined is used in the definition itself. While it is sometimes useful to give synonymous definitions, when one is attempting to give a genus species definition, it gets us nowhere to define a term with other terms that are essentially equivalent to the term being defined.
5. **Figurative**: *"Human beings are thinking reeds."* The genus here is the class of "reeds" (no doubt this is a figure for things that are fragile). The specific difference that is claimed to make human beings different from other "reeds" is that they think. This definition fails because it uses figures of speech, images, or metaphors, instead of the essential attributes associated with a term. This definition fails because it is FIGURATIVE; it is figurative because it does not aim to provide a literal definition.
6. **Emotive:** *"Human beings are the only animals that are blights on the environment."* The genus here is the class of animals. The specific difference that is claimed to make human beings different from other animals is that they are

blights on the environment. This definition fails because it is EMOTIVE; it is emotive since it attempts to arouse emotions and feelings rather than provide a literal definition. In this example the intention is to express a negative attitude toward human beings.

7. **Accidental**: *"Human beings are the only animals that are inclined to appreciate beautiful sunsets."* The genus here is the class of animals. The specific difference that is claimed to make human beings different from other animals is that they are inclined to appreciate beautiful sunsets. This definition fails because it is ACCIDENTAL; it is accidental because it makes no attempt to define "human beings" in terms of its conventional attributes. There are many attributes that qualify human beings, but a definition of them should aim to specify the attributes that are commonly accepted as essential to the term.

8. **Negative:** *"Human beings are not gods."* The genus here is the class of beings. The specific difference that is claimed to make human beings different from other beings is that they are not gods. This definition fails because it is NEGATIVE; it is negative because it defines a term by saying what it is not, rather than what it is. Knowing that human beings are not gods does not get us very far in defining what they are.

9. **Obscure:** *"Human beings are enigmas wrapped up in a conundrum."* The genus here is the class of, well, what? It is not clear. It could be the class of things; but this would be much too general. The specific difference claimed here is that human beings are different from other things or animals insofar as they are enigmas wrapped up ina conundrum. This definition fails because it is OBSCURE; it is obscure because it uses language even less well known than that which is being defined. Indeed, we are left more mystified than enlightened after being given this definition. We need to be as clear as possible.

STUDY GUIDE

Chapter 3 – Disputes and Definitions
Disputes I: Attitudes and Beliefs

Attitude: A difference in attitude is one in which the parties do not disagree about matters of fact, but differ in their feelings or attitudes.

Belief: A disagreement in belief in one in which one person takes something to be true and the other denies it.

Both: Some disputes involve both attitudes and beliefs.

Neither: Some apparent disputes are neither actual disagreements nor actual differences.

Disputes II: Genuine and Verbal

Genuine: Dispute remains even when terms are clearly defined.

Verbal: Dispute is a function of terms that are not clearly defined and dissolves when terms are clarified.

Defining Our Terms

Lexical Definitions Lexical definitions are assignments of meanings to terms that are primarily based on etymology and common *conventional* usage as opposed to *subjective* or *abstract objective* assignments.

Non-Lexical Definitions

Emotive: The assignment of meaning to a term that is designed to arouse emotions, pro or con.

Precising: The assignment of meaning to a term designed to clarify its application and to eliminate vagueness.

Stipulative: The assignment of a meaning to a term by mutual agreement. Such definitions are neither true nor false.

Theoretical: The assignment of meaning to a term on the basis of a theoretical framework.

Extension: The extension of a term consists of all of the objects named, or referred to, or denoted by that term. The extension of a term is sometimes called its **denotative meaning** (Definitions by example, perhaps by pointing to an example—ostensive definitions.)

Intension: The intension (with an "s") of a term consists of the **common attributes** of the objects referred to by the term. The intension of a term is sometimes called its **connotative meaning**.

Intensive Lexical Definitions

Definitions with synonyms: The assignment of meaning to a term by transferring to it the meaning of another term presumed to be more readily known and roughly equivalent to it.

Operations definitions: The assignment of meaning to a term on the basis of some observational effect that the term is supposed to produce.

Genus Species: The assignment of meaning to a general term on the basis of its affiliation with a general category and on the basis of its specific difference from other members of that category.

Genus Species Definition Defects

Accidental: A definition is accidental if it fails to state the essential characteristics of the term being defined.

Circular: A definition is circular if the term being defined is used in the definition itself.

Emotive: An emotive definition is one which attempts to arouse emotions rather than clarify the concept.

Figurative: A figurative definition is one which uses a metaphor or image rather than making an attempt to state the essential characteristics of the concept being defined.

Negative: A negative definition is one which says what a term does not mean rather than what it does mean.

Obscure: An obscure definition is one which uses language even less well known than the term being defined.

Too Broad: A definition is too broad if it includes more than actually falls within the domain of the term being defined.

Too Narrow: A definition is too narrow if it excludes some things that are included within the domain of the term being defined.

Too Broad and Too Narrow: A definition can be both too exclusive and too inclusive.