

REASONING AND THE FOUR KINDS OF ARGUMENT

WHAT IS REASONING

No act is more characteristic of reason than reasoning. Hence, it is named from reason. Reasoning is to understanding, as movement is to rest.

We can call this movement of reason a going or a coming by looking at it from its beginning or from its end.

Looking at reasoning from its beginning, we can define it as going from known or accepted statements, and because of them, to knowing or guessing another statement.

The known or accepted statements from which we reason are called premisses. The statement to which we reason is called the conclusion.

The premisses may be known (that is, we are sure or certain that they are true) or they may be merely accepted (because they are probable or likely or seem to be such).

In reasoning, we go not only from the premisses known or accepted, but also because we know or accept them, to knowing or guessing another statement. This means that our knowing or accepting the premisses is the cause, the reason why, we go to knowing or guessing another statement.

More is required to know a statement than to guess it. Knowledge, in the strict sense of the word, is sure or certain, but a guess as such is never sure or certain. The conclusion may not be sure because the premisses were not sure or because the conclusion did not follow necessarily from the premisses (or for both of these reasons). But there is also an enormous difference between a reasonable guess and a wild guess. Reason is more inclined to accept a statement guessed to be true because of probable or likely statements than one that is suggested only by the imagination.

We can also define the movement called reasoning looking at it from its end, as a coming. Reasoning is coming to know or guess a statement from other statements and because of them.

WHAT IS AN ARGUMENT

Argument is a necessary tool for reasoning. Argument is the speech by which we reason. An argument, then, must contain or be composed of the statements from which we reason. An argument, then, is speech bringing together the statements from which we reason.

THE FOUR KINDS OF ARGUMENT

There are four kinds of argument: example, induction, enthymeme, and syllogism. We should first meet these arguments in the order in which some are more known to us than others. This is the order of the natural road in human knowledge, the road from the senses into reason. As the great logician Boethius points out, a thing is singular when sensed and universal when understood. The chair or dog that I sense is an individual or singular chair or dog. But when I understand what a chair or a dog is, I am understanding something universal that is able to be said of many. Hence, those arguments that begin with the singular or singulars are more known to us than those that begin with something universal or general.

EXAMPLE

The word example can mean a singular used to illustrate the universal (like a sample used to know the whole) or an argument that begins and ends with a singular. The logician is here using it to name the argument.

Example is the argument closest to (or that stays closest to) the singular and therefore closest to the senses and hence the argument most known to us (who must follow the road from the senses into reason). Example can be defined as an argument from one singular to another singular of the same kind.

We say of the same kind because the strength of this argument depends upon the likeness of the two singulars.

One reason by this kind of argument most often from a known past event to a future one of the same kind. This enables one to provide for the future and avoid some of the mistakes one might have made in the past. Thus the French king in Shakespeare's play *Henry V* (Act II, Sc. 4) urges his nobility to prepare carefully for the second invasion (in his life-time) of the English:

It fits us then to be as provident
As fear may teach us out of late examples
Left by the fatal and neglected English
Upon our fields.

The young Dauphin, however, in that same scene is over-confident because he has no memory of the last time the English invaded France which was before his time.

INDUCTION

The second kind of argument one meets along the road from the senses into reason also begins with the singular. But it is further along that road, not only in beginning from many singulars, but most of all in going, not to another singular of the same kind, but towards the universal which is found only in reason and not in the senses. This kind of argument is called induction.

The word induction is not a native English word, but comes into English from Latin. There it mean a leading in. The word introduction has the same roots. Just as an introduction to a science leads us into the whole science from some parts of it, so an induction leads us into a statement about the universal whole from many singulars which are like parts (hence, they are called particulars).

Induction may be defined as an argument going forward from many singulars to the universal. The more men I find with two ears, the more I am led into the statement that every man has two ears.

Although one is led into the universal statement from the many singulars one has sensed (if one has never sensed an exception), nevertheless the universal statement does not follow necessarily because one has not sensed all the singulars. Induction in that way is to reason as an inducement is to the will. As an inducement inclines the will but not necessarily, so an induction moves or inclines reason to accept the universal statement, but not necessarily.

Since we come to universal statements by induction, some people jump to the conclusion that we can never be sure or certain of any universal statement. Since we have not sensed all the singulars, they argue that we cannot know or be sure of the universal statement.

It is true that we cannot be completely sure of a universal statement that we have come to by induction alone since the induction does not go through all the singulars. But some universal statements we know, not only by induction, but also by understanding their parts by definition or in some other way. Thus, for example, we know the universal statements that every whole is larger than one of its parts and no odd number is even though we have not seen every whole or considered every odd number. We know by definition enough what a whole is and what a part is and what odd is and what even is to see the truth of these statements. These statements are known, not by induction alone, but also by an understanding of their parts. Induction thus with the help of definition and understanding may lead to universal statements that can be known or certain for us.

ENTHYMEME

Proceeding further along the road from the senses into reason, we come to an argument that usually begins with something almost universal although it is used (usually) to draw conclusions about the singular. This argument is called an enthymeme. The word enthymeme comes from the Greek word meaning in the mind. This argument would seem to be so named because it begins in the mind with something universal or almost universal, rather than with the singular or singulars that can be sensed.

The enthymeme may be defined as an argument from likelihood or signs.

Likelihood is what custom or opinion or human nature would say is apt to happen in one kind of situation or be done by one kind of person. "Boys will be boys". Much likelihood is found in the proverbs that are passed on from one generation to another by word of mouth.

In Shakespeare's *Julius Caesar* (Act III, Sc. 2), Antony answers the charge that Caesar was ambitious (given as an excuse by those who assassinated him) by enthymemes from likelihood in his famous speech at the funeral of Caesar:

But Brutus says he was ambitious;
And Brutus is an honourable man.
He hath brought many captives home to Rome,
Whose ransoms did the general coffers fill:
Did this in Caesar seem ambitious?
When that the poor have cried, Caesar hat wept;
Ambition should be made of sterner stuff.

These two enthymemes are based on the likelihood in the mind that the ambitious are concerned with themselves more than their country and that they are ruthless men who do not hesitate to trample on others to get to the top (“Nice guys finish last”). If Caesar enriched his country rather than himself and was given to pitying the poor, it is unlikely that he was ambitious as Brutus said. Although what an ambitious man is likely to be and do is something more general than singular, it and most likelihood lack true or complete universality due to the variety of customs and circumstances and choices of men. Likelihood is about what is true for the most part, but by no means always.

A sign is that which strikes the senses and brings to mind something other than itself. The smoke coming out of a room or building strikes our senses and makes us think right away that there is fire in the room or building. Smoke is here a sign of fire.

Most signs used in enthymemes are not necessary signs. Fatness is sign that someone is jovial or good-natured, but not a necessary sign. Redness in the eye or staggering can be a sign of drunkenness. but these are not necessary signs because in some cases they can arise from other causes.

SYLLOGISM

The fourth and last kind of argument one meets on the road from the senses into reason is the most powerful and perfect kind of argument. This argument begins from something truly universal. It is called a syllogism.

The word syllogism is not a native English word, but comes from the Greek word meaning originally a reckoning or calculating, as with numbers. This is very significant because the syllogism is like a reckoning or calculating in two very important ways.

First, as in reckoning one goes from known numbers to an originally unknown number in a very rigorous and necessary way, so likewise in the syllogism one goes from known statements to a knowledge of an originally unknown statement in a very rigorous and necessary way.

Second, as it takes two and only two numbers to arrive at a knowledge of an unknown number by reckoning or calculating (adding, subtracting, multiplying

or dividing), so likewise in the syllogism one needs only two known statements to go necessarily to another originally unknown statement. As one can reckon the unknown area of a room from its known length and width, so one can syllogize that no prime number is a perfect number from the statements that every perfect number is a composite number and no prime number is a composite number.

A syllogism is an argument or speech in which some statements laid down, another follows necessarily because of those laid down. The statements laid down are called the premisses and the statement that follows necessarily is called the conclusion.

The premisses of a syllogism are to the conclusion, not as parts to whole, as in induction, nor the reverse, but as parent to their child. As the man and the woman have the ability to produce the child when they come together, so the premisses have the ability to produce the conclusion once they are brought together in a syllogism. We can see here in the art of reasoning and also in the art of reckoning or calculating how art imitates nature. As the offspring of natural things resemble their parents (dogs give rise to a dog, cats to a cat etc.), so in art the offspring resembles the parents. In the art of reckoning, numbers give birth to a number; and in the art of reasoning, statements give birth to another statement. And because we must know two numbers before we can calculate a third and two statements before we can syllogize a third, Shakespeare speaks well of “barren ignorance” in *Richard II*. As ignorance is barren, knowledge is fertile.

A COMPARISON OF THE FOUR KINDS OF ARGUMENT

The four kinds of argument are tools we need to reason. We can compare and divide these four tools by their likeness and difference and (since they are tools) by what they are useful for.

Example is like induction and the enthymeme is like the syllogism. Hence, if we try to understand the kind of argument each is, we naturally put example with induction and divide them against the enthymeme and the syllogism.

Example is like induction in that they both begin from the singular. And although example goes from one singular to another singular of the same kind rather than to the universal, there is implicit in example that the first singular is somehow characteristic of the kind and hence there is implicit an extremely imperfect or defective induction (since it would be based on only one singular).

Induction differs from example, not only because it goes through many singulars, but also because it ends with the universal while example draws a conclusion about another singular. Hence, some say that example goes from part to part while induction goes from the parts to the whole.

Enthymeme is like syllogism in that they both begin from something universal or almost universal. But enthymeme falls short of the syllogism because likelihood and most signs lack the true universality required in the syllogism. Hence, the enthymeme seems to be a defective or imperfect syllogism, as example seems to involve an imperfect induction.

The syllogism also differs from the other three kinds of argument because only in the syllogism does the conclusion follow necessarily from the premisses.

Since the logician does not study example, induction, enthymeme and syllogism for their own sake (just to know what they are), but because they are useful tools for drawing conclusions, he must also consider what these arguments are useful for. And in this comparison, the example and the enthymeme come together and are divided against the syllogism and induction.

Example and enthymeme are both useful for drawing conclusions about the singular in the political assembly (and in general, in things to be done) and in the courtroom.

Induction and syllogism are both useful for drawing conclusions about the universal. Hence these two kinds of argument are studied in dialectic which is ordered to drawing conclusions about the universal. Hence, in the *Dialogues* of Plato, which are philosophical in character and hence ordered to reaching conclusions about the universal, Socrates uses induction and syllogism.