


CONCEPT OF REASONING, LOGIC, SOURCES OF KNOWLEDGE, AND TRUTH CRITERIA OF MODERN SCIENCE

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Abstract

The purpose of writing this work is to reveal an analysis of a number of concepts about the foundations of philosophy in terms of reasoning, logic, sources of knowledge and criteria for the truth of modern science in the tradition of Greek philosophical studies. This scientific activity uses literature studies by carrying out a series of library data collection activities, reading and taking notes, and managing study materials that are directed to answer research problems. The results of the study in this work resulted in the conclusion that knowledge will be obtained through a thought process by reasoning that can produce the latest knowledge. Knowledge can be acquired with or without the scientific method. However, not every knowledge is stated in accordance with the principle of truth based on logical procedures (rational and correct), be it naturalist logic (natural logic), or artificial logic (scientific logic). Every truth at the time of proving must be on the ontological status of the object, the epistemological attitude (with the way and attitude of how knowledge occurs), and finally with what axiological attitude.

Keywords: *Reasoning and Logic Concepts; Source of Knowledge; Greek philosophy.*

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INTRODUCTION

Humans are given by Allah SWT. has advantages over other creatures so that humans are given the ability to think, feel, hear, see, behave and act properly. Attitudes and actions are obtained or sourced from knowledge obtained through activities and processes of thinking, feeling, seeing, and hearing. Humans are always trying to find the truth. Many ways have been taken to obtain the truth, among others, by using ratios like the rationalists and through experience or empiricism. The experiences gained by humans produce principles that sometimes go beyond rational reasoning, the events that occur in nature can be understood.

Reasoning the results of knowledge associated with thought processes and actions associated with feelings, in this case, a physicist, Pascal, stated that it turns out that the heart also has its own logic. In this case, it is also necessary to know the logic, we realize that not all thinking activities are based on reasoning. This means that reasoning is a thinking activity that has certain characteristics in finding the truth. Thus, humans in carrying out thinking activities are not always based on reasoning, but there are also thinking activities based on feelings and intuition (Fuad Ihsan, 2010). The reasoning is a process of drawing conclusions from one or more propositions (Surajiyo, 2010).

Scientific truth emerges from the results of scientific research. This means that truth cannot emerge without a standard procedure that must be passed. The standard procedures that must be followed are the steps to acquire scientific knowledge – which is essentially a theory – through standardized scientific methodologies in accordance with the nature of science. The point is that every science strictly stipulates the type of object strictly whether the object is a concrete thing or an abstract thing. Truth in science is the truth that is objective, meaning that the truth of a theory – or even higher axioms or paradigms – must be supported by facts in the form of reality in a state of objectivity. A truth that is completely independent of the subject's will. The reality in question is a reality in the form of something that can be used as a reference or a reality that was originally an object in the formation of scientific knowledge.

Referring to the ontological status of objects, basic truth in science can be classified into two types of theory, namely the theory of correspondence truth or the theory of coherence truth. The natural sciences generally demand the truth of correspondence, because objective facts are highly demanded in proving every proposition or statement. However, it is different from the human sciences, social sciences, logic, and metaphysics. The sciences demand consistency and coherence among propositions so that the justification for the sciences follows the coherence theory of truth.

The thing that is quite important and needs attention in this matter is that the truth in science must always be the result of the agreement or convention of scientists in their field. Therefore, the nature of the truth of science has a universal nature as far as the truth of science can be maintained. This statement is because the truth of science must always be the truth that is agreed upon in the convention, then the universality of the nature of science is still limited by new discoveries or other discoveries whose results reject previous discoveries or are completely contradictory. If there is something like this then an in-depth re-study is needed. And if the results are indeed different, then the old truth must be replaced by a new discovery, or both work together with the power of their respective truths. A case in point is Euclid Cevsky's geometric theory of the large sum of the angles of a triangle. Or another example is the shift in theory about the center of the universe from the earth to the sun or even a new theory showing that the center of the universe is at the center of the milky way galaxy.

The reasoning is a thought process in drawing conclusions in the form of knowledge. According to Adib, reasoning is a way of thinking to combine two or more thoughts with a view to gaining new knowledge by paying attention to the principles of thought, namely the principle of identity, the principle of contradiction, the principle of exclusion, and the principle of compromise. So the reasoning is one or a process in thinking that combines two or more thoughts to draw a conclusion to gain new knowledge. Logic is a formal provision for obtaining correct knowledge (Susanto, 2013).

The structure of human knowledge shows the levels in terms of grasping the truth. Each level of knowledge in the structure indicates a different level of truth. Sensual knowledge is the lowest structure. The higher level of knowledge is rational and intuitive knowledge. The lower levels perceive truth as incomplete, unstructured, and generally vague, especially in sense knowledge and instincts. Therefore, this knowledge must be complemented by higher knowledge. At the level of rational-scientific knowledge, humans organize their knowledge so that it is clearly structured. The purpose of this paper is to raise a number of philosophical issues by exploring a number of concepts, such as the concept of reasoning, logic, sources of knowledge, and the criteria of science based on the Greek philosophical tradition.

DISCUSSION

Reasoning Concept

There are 3 (three) principles of reasoning according to Aristotle, namely; the principle of identity, namely that a thing is the same as itself, and the principle of contradiction, namely that something cannot be both that and not that thing at the same time, and the principle of orderly exclusion, namely the principle of eliminating the middle ground or the principle of the absence of a third possibility (Susanto, 2013). There are two kinds of reasoning (Jujun S. Suriassumantri, 2009), namely:

Direct reasoning is reasoning whose premise is only a proposition and is immediately followed by another proposition as a conclusion. Direct reasoning is drawn from only one premise. Drawing conclusions directly can provide complete information about the given proposition, namely by stating explicitly what has been stated implicitly in the premise. For example, all football stars use Rejoice shampoo (S=P), Some Rejoice shampoo users are movie stars. The term direct reasoning comes from Aristotle to denote reasoning, whose premise consists of only one proposition. The conclusion is drawn directly from that one proposition by comparing the subject and the predicate.

Indirect reasoning, drawing conclusions on more of one proposition. The conclusion is drawn from two premises. Example: All students are diligent children. Budi is a student. Budi is a diligent boy. The reasoning is the most common concept referring to one of the thought processes to arrive at a conclusion as a new statement from several other known statements. The statement consists of notions as elements of which there are certain limits between the meanings of one another to avoid ambiguity of meaning.

The reasoning is a special type of thinking, in which conclusions occur, or in which conclusions are drawn from existing premises or reasoning is a thought process that departs from sensory observations (empirical observations or according to facts in the field) which produces a number of concepts and understandings. Based on similar observations, similar propositions will also be formed, based on a number of propositions that are known or considered true, people conclude a new proposition that was previously unknown. This process is called reasoning.

In reasoning, the proposition that is used as the basis for the conclusion is called the premise (antecedent) and the conclusion is called the conclusion (consequence). The relation between premise and conclusion is called consequence. The reasoning is a process of thinking by connecting evidence, facts, clues or evidence, or anything that is considered evidence material, towards a conclusion.

In the general Indonesian dictionary, reasoning comes from the word “nalar” which means consideration of good and bad, character and reason. From this understanding, there is the word mind which is a means for thinking. The ability to reason is only possessed by humans. With the ability to reason, humans can develop other knowledge that is growing day by day.

From the knowledge of reasoning results, humans can determine moral, ethical, and aesthetic values. The human goal of developing knowledge is to overcome and meet the challenges of life. Knowledge gained from the results of reasoning will continue to grow. The factor that causes knowledge to develop rapidly is that language is a very effective and important means of communication in human life which serves to convey information and the way of thinking behind the information to others, both orally and in writing.

The framework of thinking in question is to start by observing facts and data, and analyzing causal relationships to draw a conclusion. The reasoning is a thinking activity that has certain characteristics in finding the truth. These characteristics are characterized by a coherent pattern of thinking using standard rules.

Logic Concept

According to K. Prent C.M.T Adisubrata in Mundiri said that logic is derived from the Latin 'logos' which means words or words. Then according to him, another term is often also called mantic, derived from the Arabic word taken from the word nataqa which means to say or say (Mundiri, 2008).

Then George F. Kneller in the book *Logic of Language Education*, in Susanto defines logic as an investigation of the basics and correct reasoning methods (Susanto, 2011). Meanwhile, according to Irving M. Copi in Mundiri interpreting the word logic is the science that studies the methods and laws used to distinguish right reasoning and wrong reasoning (Mundiri, 2008). Furthermore, it is almost in line with what was stated by Irving, W. Poespoprodjo in Susanto providing a definition of logic, namely "Logic shows, lays, describes and proves the laws and regulations that will keep us from falling into errors (misguidance) (Susanto, 2011).".

So based on the notions that have been put forward by the experts above about logic, it can be understood that the understanding of logic is a branch of philosophy that discusses the rules, principles, laws, and methods or procedures in achieving knowledge rationally and rationally. Correct.

We have thought so many times, it feels so easy to think. We have been doing this since we were little. Every day we dialogue with ourselves, dialogue with others, talk, write, read a description, study an article, listen to explanations and try to draw conclusions from what we see and hear.

Constantly often almost unnoticed. However, when investigated further, and especially if it must be practiced seriously, it turns out that thinking carefully and precisely is a fairly difficult activity as well. When we examine carefully and systematically various reasons, it will soon be seen that many reasons are not connected. In thinking activities, strong and careful observation is really required; required the ability to see relationships, irregularities, hidden mistakes, and so on.

People usually think it's true what they like, what they want. Feelings and prejudices can often even deceive or cloud our eyes, so that inconsequential conclusions occur. In addition, habits and public opinion affect our way of thinking.

In practice, it is often difficult to come up with good reasons or to show why an opinion is unacceptable to us. Realization of the existence of these difficulties encourages people to think about the way he thinks and to examine the legal principles that must regulate human thought in order to reach the truth. Thus arose a science called logic, which was pioneered by Aristotle (348 – 322 BC) with his famous work *To Organon*. Logic trains us to be able to distinguish right, righteous, and right thoughts from confused and wrong thoughts, namely slender thoughts.

According to Andre Ata, et al in Mukhtar, we have often heard and used the concept of logic or logic. In everyday language, the words of logic or logic show a certain way of thinking or way of life or attitude of life, namely that which is reasonable, reasonable, reasoned, or argued, which has a ratio or rational relations that can be understood even though it is not necessarily agreed upon whether it is true or not. his fault. It can be said that logic is a study in the reasoning process that starts from the application of the principle of thinking inappropriate reasoning used in distinguishing good and right from bad and wrong reasoning (Mukhtar Latif, 2011).

History of the Development of Logic

Based on existing sources, the origin of logic cannot be determined with certainty. However, Bertrand Russell in his book "History of Western Philosophy" explains that the word logic was first used by Zeno of Citium. Russell also explained that Socrates, Plato, and Aristotle were the pioneers of the birth of the science of logic. Then, in contrast to K. Bertens, he stated that logic first appeared in Cicero's time (1st century BC) which was interpreted as the art of

debating, then after that in Aristotle, it was only known as the word 'analytic' which was tasked with investigating arguments that departed from decisions. - the right decision (Susanto, 2013).

Aristotle (384-322 BC), interprets logic as a science of the laws of thought in order to maintain the way of thinking from every error. Logic as a new science at that time was called by the names "analytics" and "dialectics". Aristotle's collection of writings on logic is called the *Organon*.

Theophrastus (371-287 BC), the greatest contribution to logic is his interpretation of possible meanings and also of the fundamental nature of each conclusion.

Then, Porphyrius (233-306 AD), a thinker in Alexandria added a new section in the study of logic. This new section is called *Eisagoge*, which is an introduction to the *Categorie*. In this new section, we discuss the spheres of matter and the spheres of nature in nature, which are commonly referred to as classifications.

Aristotle's work on logic in the book *Organon* became known in the Western world in its entirety after the extensive copying of various Islamic thinkers into Latin. These extensive copies opened up the Western world again to Old Grik's realm of thought.

Petrus Hispanus (1277 AD) compiled the lessons of logic in the form of rhymes, like *All-Akhdari* in the Islamic world, and his book became the basis for the study of logic until the 17th century. Petrus Hispanus was the first to use various names for the valid inference system in relating the categorical syllogistic forms in a poem. And the collection of poems by Peter Hispanus on this logic is called *Summulae*.

Francis Bacon (1561-1626 AD) launched a disputed attack on logic and advocated the wider use of the induction system. Bacon's attack on this logic received rave reviews from various circles in the West, then more attention was paid to the use of the induction system.

The renewal of logic in the West was followed by other writers including Gottfried Wilhem von Leibniz. He advocated replacing statements with symbols to make them more general in nature and easier to analyze. Likewise, Leonard Euler, a Swiss mathematician, and logician conducted a discussion of terms by using circles to describe the relationship between terms, known as Euler's circles.

John Stuart Mill 1843 reconciled the system of induction with the system of deduction. Every major idea in deduction requires induction and vice versa induction requires deduction for the formation of thoughts about the results of experiments and investigations. So, the two are not separate parts but actually help each other.

Mill himself formulated methods for the induction system, known as the Four Methods. Formal Logic After Mill's time, many new books and new commentaries on logic were born. And since the middle of the 19th century, a new branch was born, called Symbolic-Logic. The pioneer of symbolic logic was basically started by Leibniz.

The first symbolic logic was developed by George Boole and Augustus de Morgan. Boole systematically uses symbols that are quite extensive and analytical methods according to mathematics, and Augustus De Morgan (1806-1871) was an English mathematician who made a major contribution to symbolic logic with his thoughts on relations and negations.

Another figure of symbolic logic is John Venn (1834-1923), he tried to perfect the logical analysis of Boole by designing circle-circle diagrams which are now known as Venn diagrams (Venn's diagrams) to illustrate relationships and check the validity of the conclusions of the syllogism. To describe the summarizing or exclusionary relationship between the subject and the predicate, each of which is considered a set.

The development of symbolic logic reached its peak in the early 20th century with the publication of 3 volumes of writings by the two great British philosophers Alfred North Whitehead and Bertrand Arthur William Russell entitled *Principia Mathematica* (1910-1913) with a total of 1992 pages. Russell-Whitehead's *Principia Mathematica* provided a great impetus for the growth of symbolic logic.

In the Islamic world, logically developed, namely in the heyday of Islam. Islam at that time had spread to Spain in the west and to the east to reach the Chinese border. That era was the era

of the development of science and the translation of ancient Greek, Persian, and Sanskrit books into Arabic at the time of Caliph Al-Ma'un from the Abbasid sovereign in Babbad and Caliph

In Indonesia, at first, logic was never a subject in public universities. Logic lessons are only found in Islamic boarding schools and Islamic colleges using Arabic-language books. At the present time, logic in Indonesia has begun to develop according to the development of logic in general, which is based on the development of science.

Logic and Reasoning

Logic comes from the ancient Greek word (logos) which means the result of reasoning expressed through words and expressed in language. According to Cecep Sumarna in Susanto, logic is a way of drawing conclusions or studies to think authentically (Susanto, 2013). Jan Hendrik Rapar explains that the term logic is taken from the Greek logos, which means about something that is said, consideration of reason (thoughts), regarding words, regarding the conversation, or relating to language. According to Poedjawijatna, logic is a philosophical study that examines humans, which is usually known as the philosophy of mind, where the notion of mind here is the reason as a tool of investigation in taking an action or decision (Susanto, 2013).

According to Poespoprojo logic is the science of reasoning skills or thinking correctly (The Science and Art of correct thinking). The above understanding indicates that thinking or reasoning is an activity of the human mind to process the knowledge we receive through the five senses and is aimed at achieving truth. Thinking shows a specific and directed form of intellectual activity. In this category, the results of daydreams and fantasies do not include thinking activities. Thought is said to be precise and accurate if it is carried out by analyzing, proving with certain reasons, and the existence of links between one another. Such thinking is called logical.

The way of thinking that overrides the things mentioned above is categorized as illogical thinking. Logic is a fundamental science that systematically investigates, formulates, and explains the principles that must be adhered to so that people can think correctly, straightly, and regularly. The purpose and objective of logic is the ability to apply the right rules of thought to the concrete problems we face, as well as the habituation of scientific, critical, and objective attitudes.

According to Proverbs Bakhtiar, logic is a means to think in a systematic, orderly, directed, valid and accountable way. Therefore, logical thinking is thinking according to the rules of thinking, such as half can not be more than one (Proverbs Bakhtiar, 2004). From the opinion above, it can be concluded that logic is a way to gain knowledge by using reason, words, and language which is carried out systematically.

Logic can be systematized into several groups depending on which perspective we look at, judging from its quality, logic can be divided into two namely naturalist logic (natural logic) and artificial logic (scientific logic) (Mundiri, 2008), namely:

Naturalist Logic (natural)

Naturalist logic is a logical skill based on human innate reason. Normal human reason can work spontaneously according to the laws of basic logic. The ability of naturalist logic between humans is different from one another. Depends on the level of intelligence and knowledge. Then the performance of the human mind that thinks correctly and naturally straight without being influenced by the desires and subjective tendencies of the thinker or human. Human natural logical abilities exist from birth.

Artificial Logic (Scientific Logic)

Scientific logic refines and sharpens the mind and reason. Scientific logic is a special science that formulates principles that must be adhered to in every thought. Thanks to the help of this scientific logic, the mind can work more precisely, more accurately, more easily, and more safely. Scientific logic is intended to avoid error or at least reduce error. In the West, the first to formulate the rules of artificialist logic was Aristotle, as stated in his book organon, which means an instrument, namely a tool for right thinking. However, if viewed from the point of view of the object, artificialist logic can be divided into two, namely formal logic and material logic. Formal logic is often also called minor logic while material logic is called major logic. Formal logic is

studying the principles of the rules or laws of thinking that must be obeyed so that people can think correctly and achieve the truth. Material logic studies the sources and origins of knowledge, tools of knowledge, the process of occurrence of knowledge, and finally formulates the method of knowledge (Hasbullah Bakri, 1986).

Source of Knowledge

Knowledge is something that is known. Knowledge can be obtained with or without the scientific method, meaning that it can be obtained through everyday experience or in the form of information we receive from someone who has a certain authority or authority. Knowledge is more spontaneous in nature. Knowledge is the totality of ideas, thoughts, ideas, concepts, and understandings that humans have about the world and all its contents, including humans and their lives. Knowledge is much broader than science because knowledge includes everything that is known to humans without the need to be standardized systematically (Darwis A. Soelaiman, 2019).

The intended source of knowledge is what is the starting point or background for the emergence of knowledge itself. Historically, discussions about the sources of Western knowledge will start with Plato and Aristotle. Plato, who was followed by Descartes, Spinoza, and Leibniz, viewed that a reliable source of knowledge was reason or reason. Therefore, they are known as adherents of the flow of rationalism in knowledge. Rationalists believe that rational (abstract) thought processes can produce knowledge and fundamental truths, either about (a) what "is" or about reality and its structure; and (b) about the universe in general (Bagus, 1996). According to them, reality and truth about reality can be obtained without depending on observation or experience. Therefore, this kind of knowledge is known as a priori knowledge, namely, knowledge obtained without going through the empirical experience, but based on deductive, logical, and mathematical reasoning.

On the other hand, Aristotle, who was followed by Francis Bacon, John Locke, Berkeley, David Hume, views that science must be based on empirical experience or through empirical-experimental methods, so that the truth can be proven. Therefore, this school is known as the empiricism school, which in its further development became the positivism school, which is a school that distinguishes between science and non-science through verification and falsification formulas.

Regarding the sources of knowledge, in the epistemology of Western science, these schools of rationalism and empiricism are the two most dominant schools compared to other sources. However, other sources still have a considerable following. Bertrand Russell, for example, distinguishes two kinds of knowledge. First, knowledge through experience, among others, is obtained through (a) sensory data, (b) memory objects, (c) internal states, and (d) ourselves. Second, knowledge through the description, namely knowledge obtained through (a) other people, and (b) physical objects, but not observations but constructions (Lubis, 2014).

According to Jujun Suriasumantri, the sources of knowledge consist of rationalism, empiricism, intuition, and revelation. Supporters of the flow of rationalism argue that true knowledge must be obtained through ratio or reasoning. On the other hand, proponents of empiricism state that knowledge must be acquired through experience (Suriasumantri, 2009). Furthermore, Lubis (2014) citing Honderich and Hospers stated as follows: In Honderich's view, the sources of knowledge are: reason or ratio (reason), perception (sensory experience or observation), memory, introspection, precognition, and others. . Meanwhile, Hospers believes that the sources of knowledge are: sense experience, reason, authority, intuition, revelation, and faith. Criteria for the Truth of Modern Science

The word truth can be used as a noun, either concrete or abstract (Abbas Hamami 1983). If the subject wants to tell the truth, it means that it is a true proposition. Proposition means the meaning contained in a statement or statement. if the subject states the truth that the proposition being tested must-have qualities, traits or characteristics, relationships, and values. This is because the truth cannot simply be separated from the quality, nature, relationship, and value itself.

There are various kinds of categories as mentioned above, so it is not an exaggeration if in time every subject who has knowledge will have very different perceptions and understandings from one another.

Truth is, first of all, concerned with the quality of knowledge. What this means is that every knowledge possessed by someone who knows something is an object judging from the type of knowledge that is built. What it means is that knowledge is in the form of (1) ordinary knowledge or also known as knowledge of the man in the street or ordinary knowledge or also common sense knowledge. Knowledge like this has a subjective truth, meaning that it is very much tied to the subject who knows it. Thus, this first stage of knowledge has the nature of always being true, as long as the means of obtaining knowledge are normal or there are no deviations.

The second type of knowledge (2) is scientific knowledge, namely knowledge that has established a distinctive or specific object by applying a typical methodological approach or approximation, meaning a methodology that has obtained agreement among similar experts. The truth contained in scientific knowledge is relative, meaning that the truth content of this type of scientific knowledge always gets revision, that is, it is always enriched by the most up-to-date discoveries. Thus, the truth in scientific knowledge is always updated according to the results of the most recent research and received approval - an agreement in a conversion - by similar scientists.

The third type of knowledge (3) is philosophical knowledge, which is the type of knowledge whose approach is through the methodology of philosophical thought, which is fundamental and comprehensive in nature with analytical, critical, and speculative thinking models. The nature of truth contained in philosophical knowledge is absolute-intersubjective. The point is that the value of truth contained in this type of philosophical knowledge is always an opinion that is always attached to the philosophical view of a philosophical thinker and always gets justification from later philosophers who use the same methodology of thought. If the philosophical opinion is viewed from the other side, it means that with a philosophical approach it is certain that the results will be different or even contradictory or eliminated altogether. An example of the philosophy of mathematics/geometry from Pythagoras is still the same as when Pythagoras first raised his opinion - in the VI century BC-

The truth of the fourth type of knowledge (4) is the truth of knowledge contained in religious knowledge. Religious knowledge has a dogmatic nature, meaning that statements in religion are always approached by certain beliefs so that statements in religious scriptures have a truth value in accordance with the beliefs used to understand them. The implications of the meaning of the content of the scriptures can develop dynamically according to the development of time, but the content of the meaning of the scriptures cannot be changed and is absolute.

The second truth is related to the nature or characteristics of how or with what means a person constructs his knowledge. Does he build it with sensing or sense experience, or will it be thought or ratio, intuition, or belief? The implications of using tools to acquire knowledge through certain tools will result in the characteristics of the truth contained by that knowledge having a certain way of proving it, meaning that if someone builds it through the senses or sense experience, when he proves the truth of the knowledge it must also go through the senses, as well as in another way. One cannot prove the content of truth which is constructed by intuitive means, which he proves by other means, for example, by sensory means. The type of knowledge according to its characteristic criteria is distinguished into the type of knowledge (1) sensory knowledge; (2) knowledge of reason; (3) intuitive knowledge; (4) belief knowledge or authoritative knowledge; and other knowledge. So the implication of the truth value is also in accordance with the type of knowledge.

The third truth of knowledge is the truth value of knowledge which is related to the dependence of the occurrence of that knowledge. This means how the relationship or relationship between the subject and the object, which one is dominant to build that knowledge, the subject or the object. If the subject plays a role, the type of knowledge contains a subjective truth value, meaning that the truth value of the knowledge it contains is highly dependent on the subject who

has that knowledge. Or if the object is very important, then it is objective, such as knowledge of nature or the natural sciences.

Theories of Truth

In the development of philosophical thought, the conversation about truth has started with Plato which was then continued by Aristotle. Plato through the dialogue method builds a fairly complete theory of knowledge as the earliest theory of knowledge. Since then the theory of knowledge has continued to develop to get refinements until now. As stated by a philosopher of the twentieth century, Jaspers as quoted by Hamersma (1985) suggests that in fact today's thinkers only complete and perfect the philosophy of Plato and Aristotle. The theory of truth is always parallel to the theory of knowledge it builds. The theories of truth that have been reflected include:

- a. Correspondence theory of truth. The earliest and oldest theory of truth that departs from Aristotle's theory of knowledge which states everything according to what we know is something that can be returned to the reality known to the subject (Ackkerman, 1965). Or in other words, in other words, knowledge has a true value if that knowledge has mutual conformity with the known reality.
- b. Coherence theory of truth. The theory of coherence truth says that truth is a process or a result of a process or condition that indicates a coherent, reasonable state that is interconnected between the ideas possessed by a subject regarding a particular object (Budisutrisna, 2016).
- c. Pragmatic theory of truth. The pragmatic theory differs from the two previous theories in determining the basis of truth. If the basic correspondence of truth is objective facts and the coherence theory is logical consistency, then pragmatic theory lays its foundation of truth on practical benefits in solving life's problems. Not only applies to the empirical world, further pragmatism theory can also be applied with regard to metaphysical objects of knowledge. This theory emerged as a critique of positivists who regard metaphysical statements as meaningless statements because they have no factual basis in the empirical world. According to pragmatists, metaphysical statements can be true statements as long as they have benefits in life. Hell exists for humans who behave evilly. Despite the absence of empirical evidence about hell, this statement can be considered a true statement because it has benefits in reducing crime rates (Padli, 2021).
- d. Syntactic truth theory. Adherents of the theory of syntactic truth, start from the syntactic or grammatical regularity used in a statement or an inherent grammar. This truth is related to how thought is expressed in a language statement (oral or written) that needs to be assembled in a syntactic or grammatical order that it uses (Indarti, 2020).
- e. Semantic theory of truth. According to this theory, whether a proposition is true or not is based on the presence or absence of meaning in the related proposition. If the proposition has meaning or meaning and has a clear reference, the proposition is declared true. On the other hand, it can be stated as false. Every statement certainly has a meaning or meaning that is the reference. The proposition has a truth value if the proposition has meaning. Meaning is obtained by showing the real meaning, namely by pointing to a reference or reality. The meaning put forward has a definitive nature, that is, it clearly points to the characteristics of something that exists. The meaning contained in the proposition can be esoteric, arbitrary, or only has meaning insofar as it is related to the practical value of the subject who uses it (Indarti, 2020).
- f. Non-Description theory of truth. Non-Description Theory of Truth. This theory was developed by adherents of functionalism philosophy. So, according to this theory, a statement or statement will have a true value determined (depending on) the role and function of the statement (which has a very practical function in everyday life).
- g. Exaggerated theory of logical truth. This theory was developed or adopted by the positivistic logicians who were initiated by Ayer. Basically, according to this theory of truth is that the problem of truth is only a language disorder, and this as a result is a waste, because basically the statement or proposition to be proven true already has a degree of

logic that can be accounted for, and, the language used contains logical truths that are verified. The inside has covered each other (or without being explained the meaning has been shown by the existence of the object, an object is an object given (which is actually being), thus, actually everyone has provided information whose meaning has been mutually agreed upon. And if, it will be proven again the truth is that an act that is logical in nature is excessive. For example, the statement "snow white" does not need to be proven logically because everyone agrees so. Or, the statement "bald person is hairless" everyone agrees that a bald person must be hairless, so that if it is proven it contains the truth, then it is an excessive logical action. This is so, in fact, because a statement to be proven true refers to an actual fact or data that has evidence, meaning that the object of knowledge itself has shown clarity in itself (Gallagher, 1971).

CONCLUSION

The reasoning is a thought process in drawing conclusions in the form of knowledge. Humans are essentially creatures who think, feel, act, and act. Their attitudes and actions are based on knowledge gained through feeling or thinking activities. Reasoning produces knowledge that is associated with thinking activities. The reasoning is a thought process in drawing conclusions in the form of knowledge. So the reasoning is one or a process in thinking that combines two or more thoughts to draw a conclusion to gain new knowledge.

Logic is a branch of philosophy that discusses the rules, principles, laws, and methods or procedures in achieving knowledge rationally and correctly. systematic. Logic can be systematized into several groups depending on which perspective we look at. From the quality, logic can be divided into two namely naturalist logic (natural logic) and artificial logic (scientific logic).

Knowledge can be obtained with or without the scientific method, meaning that it can be obtained through everyday experience or in the form of information we receive from someone who has a certain authority or authority. Knowledge is more spontaneous in nature. Knowledge is the totality of ideas, thoughts, ideas, concepts, and understandings that humans have about the world and all its contents, including humans and their lives.

The process of knowing will bring up a form of truth as the content of that knowledge. However, every truth at the time of proving must return to the ontological status of the object, the epistemological attitude (with the way and attitude of how knowledge occurs), and finally what axiological attitude. Thus emerged so many theories of truth. However, in scientific theory, to prove the scientific truth of a scientific statement, it must be based on the methodological nature used and is very dependent on convention. That is why the role of the scientific community also determines the characteristics of the scientific truth.

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