

Philosophical Thinking System: As Means of Science Development

Dwi Murdiati
Department of Law, Faculty of Law,
Universitas Jakarta, Indonesia

Fathurahman
Department of Technology and Business,
Institute of Technology and Business Arung Palakka,
Indonesia

M. Adilla Rosa
Department of Management, Faculty of Economics,
Muhammadiyah University Jakarta, Indonesia

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Corresponding Authors:
dwimurdiati59@gmail.com

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Abstract: *In the scientific world, we can be trapped in a Vicious Circle. Only with a radical attitude, in the sense of uprooting and exploding the circle, can we get out of the circle. Otherwise, we will still be trapped in it because it is possible that there is a labyrinth inside the circle. More importantly, the risk of exploding with the destruction of the circle is a challenge that scientists must bravely face. In this case, activity and not passivity will give birth to changes. The first step to giving birth to goodness and improvement is the courage to do self-introspection and realize weaknesses and shortcomings to improve themselves. Inability to thrive, deadlock and stagnation will flourish when a sense of concern does not move humans who should have competence in their fields. Therefore, concern that is supported by scientific competence is always still needed in spurring the development of science. The scientific world, in general, and philosophy, in particular, will progress and develop when the people involved are concerned and committed to the field they are involved in. A meaningful work of thought cannot be born from a casual effort.*

Keywords: *philosophical thinking systems, philosophy of science, vicious circle, humankind, scientific world*

Introduction

Today the development of science has experienced extraordinary acceleration in all possible directions. Science continues to develop with ramifications that give rise to specialization, even sub-specialization, in various disciplines. Nevertheless, science as a cultural institution is created by the human mind about itself and its natural surroundings. Human curiosity is one of the essential components of the emergence of science. This curiosity is then actualized into thinking to answer the problems surrounding oneself and the natural surroundings. At first, humans allowed themselves to be shackled by myths about nature.

Philosophy in pre-Socratic Greece was marked by several great philosophers, such as Thales, Anaximenes, and Anaximandros, who critically began to question the universe's origin. They want to know the leading cause of this universe. Even though the answers they put forward (water, fire, Apeiron) for today's human standards are too shallow, even considered naive by some modern society, when placed on the situation and conditions at that time, which were dominated by the myths of change, the attitude they showed was already including extraordinary. Philosophers who emerged later, such as Socrates, Plato, and Aristotle, developed more attention to the problems around humans (anthropocentric). Mysteries about humans and issues of truth (epistemology) began to be discussed, and science at that time was identical to philosophy. The philosophers then mastered all existing science, which was still simple. In the Middle Ages, science was directed to the interests of religion. This is because the religious experts at that time were synonymous with scientists.

The separation of science from its parent, namely, philosophy, began to occur in the Renaissance era, and the tendency was seen in the Aufklärung era (18th century), where humans wanted to seek and find truth or reality without being influenced by religious dogma. On that basis, according to van Peursen, science, which has an increasingly independent position, no more extended questions of "what" from a philosophical point of view but "how" science is based on its methodological aspects (Wibisono, 1984). The problem is that now, after branches of science have abandoned philosophy with their various specializations, what is the position of philosophy itself? Where is the relationship between philosophy and science today? What is the contribution of philosophy to the development of science? These questions require complex answers, and these fall within the scope of the discussion of the philosophy of science. This is where there are philosophical-reflective problems in the specific field of science that can shape the philosophy of science and problems regarding the initial principles and standards that are generally applicable to all sciences and life activities in general (Gie, 1986).

2. Methodology

This research is more focused on the second group of problems because the philosophical thinking system is a means of developing science, and it also talks about the generally accepted standards for all sciences and life activities. In general, and literature on the development of science. Philosophy or philosophical thinking is not the monopoly of philosophers alone. Philosophical thinking becomes everyone's behavior. Consciously or not, each of us will philosophize when faced with a fundamental problem, and it requires us to give concrete answers, both in our position as individuals and as citizens of society.

Going through the literature search or literature study makes it possible to know the theories related to scientific research. These theories are considered and discussed in this philosophical literature research to be studied from a philosophical point of view in ways usually done in philosophy. Furthermore, the research material is analyzed to obtain the main details or the core of the research and conclusion. Steps in understanding, interpreting, and assessing are also carried out, especially toward developing existing knowledge. This is intended to produce a descriptive-analytical formulation of research results that can be philosophically justified.

3. Results and Discussion

3.1. What and How is Philosophical Thinking System?

It has been mentioned earlier that the philosophical thinking system is not the monopoly of philosophers alone. The philosophical thinking system can be the behavior of everyone. Consciously or not, each of us will philosophize when faced with a fundamental problem, and it requires us to give concrete answers, both in our position as individuals and as citizens of society—contemporary philosophers of science such as Thomas Kuhn, a physicist, Imre Lakatos, a mathematician. Furthermore, many other contemporary philosophers started their careers in the special sciences.

Humanity's involvement with the world of philosophy to grapple with fundamental problems has existed since humans began to "question and admire" the meaning of something and its ultimate origin. Since then, in various ways and efforts, humans have wanted to get answers that they feel are most suitable to their souls, even though the answers are often speculative and non-empirical. This fundamental problem which has been answered speculatively has led humanity to a boundary line beyond which reason and experience as human weapons for philosophical thinking are no longer able to play a role, beyond which our respective beliefs must be taken into account. Come on stage. This is where humans choose based on their beliefs to determine which speculative answer they feel is the most appropriate and in line with their conscience.



Everyone, every philosopher, understands what and how philosophy is. In the realm of science, as we find it in various libraries, we will find various limitations or definitions of this philosophy, as stated by Titus, Smith, and Nolan in their work *The Living Issues in Philosophy*. How we understand and live it, we hope to get accurate information when each of us is practically involved in it, and theoretically, we trace the history of its birth and development from the beginning to the present. Through practical appreciation and theoretical tracking, we will only be able to understand more deeply the philosophy's meaning, meaning, and content for each era and period. More than that, we will understand why various similarities, differences, and contradictions arise from the perspective of dealing with a problem. Suppose Van Peursen (1980) says that philosophy is fickle. Sometimes it refers to things in humans themselves or outside humans related to ethical decisions, religious attitudes, the basis and direction of knowledge, and attitudes about life and life. Philosophy will continually develop because humans in their lives and their lives will also continue to develop.

Thus, it is clear that, on the one hand, an a priori explanation of the possibility of obtaining an understanding of a philosophical system of thought that departs from human nature must be avoided because we know human nature based on behavior and actions. Not the other way around. On the other hand, an a posteriori inductive determination that departs from a specific existing philosophical system or school will confront us with difficulty because we will be dealing with many different schools or positions (Willeman, 1972). For this reason, an understanding that will "make it very easy" without requiring someone to be a "philosopher" is an approach through history. Because through this historical approach, we will be introduced to thinkers/philosophers regarding their teachings and schools that have developed from time to time, which will broaden our scientific insights.

3.2. What is Philosophy?

There are various interpretations of what is meant by philosophy and what its task

- a. is. Some interpret philosophy as "wisdom," as "the art of living" - according to the Greek sense: Sophia, Pythagoras (582-496 BC) called himself "friend of wisdom." Humans are tasked with seeking wisdom, namely "the art of how people can develop their lives more perfectly." According to Plato (427-347 BC), philosophy is wisdom (Sophia) as distinct from science (episteme). Plato's teacher, Socrates (469-399 BC), also considered philosophy "wisdom." Greek culture emphasized that people "know themselves" (Gnocchi Seauton: "know thyself"). Actual knowledge is a virtue as philosophical wisdom found in the Eastern world. For the Indians, philosophy is not merely knowledge but a 'way' to attain salvation. Wisdom is learned through and with the help of a teacher.
- b. Some see philosophy as systematic, methodical, and coherent knowledge of all reality (extensive) from its most profound (intensive) side. We called methodical because it uses confident reasoning and is systematic. After all, the knowledge obtained is an integrated

whole and coherent. After all, each part is the most compatible sequence. The object (material) is the whole reality. At the same time, the perspective (formal) is the most profound aspect.

- c. Western philosophy often explains the most profound aspect as "per ultimas causas" (the last causes). Philosophy is in charge of investigating the ultimate causes of reality. Such knowledge is often called "metaphysics." Aristotle defines metaphysics as "The science of being as being" (Being qua Being). He distinguishes it from the science of existence studied in certain respects. This approach tries to place reality in the most general categories, with the most comprehensive coverage, for example, the categories "to be" (to be), "being" (being), "esse," "Essentia," "moderate," "forma," "materials" and so on. This style of philosophy is often called metaphysics.
- d. Some think that philosophy is an analysis of language (linguistic analysis). Many of these schools in language analysis are reactions to traditional philosophy. The philosophy of language wants to refrain from directly fighting the arguments put forward in traditional philosophy. The school chose a new path, namely criticism of language. The meaning is; reveals that problems in traditional philosophy are meaningless because they cannot be tested empirically and do not fall into the category of analytical propositions.
- e. Some argue that philosophy is tasked with finding common ground or converging various sciences. Some argue that philosophy is tasked with investigating problems that arose after other sciences carried out the discussion. Here the emphasis is placed on the relationship between philosophy and science's other knowledge.
- f. Finally, some see philosophy as an attempt to uncover the assumptions behind and behind particular views or statements. More than that, philosophy tries to see the implications of a view, action, or event, especially concerning human problems.

3.3. Fundamental Problems in Philosophical Thinking Systems

It is undeniable that philosophical thinking is a science pioneered by the Ancient Greeks in the VI century BC, and at the same time, they also laid the foundations for the Western tradition of intellectual thought. Diogenes Laertius asserted in 200 that the birth of Ancient Greek philosophy was not pioneered by the East, which was later confirmed by research by Eduard Zeller in his work *Grundriss der Geschichte der Griechischen Philosophie*. What comes from the East is practical knowledge such as astronomy, mathematics, medicine, and others. (Driyarkara & Busch, 1957).

Through the academic pulpit, the birth and development of Western philosophy are described in stages (Storig, 1970), namely the Ancient Greek stage (VI century BC – VI AD), through the Renaissance (XV century) and *Aufklaerung* (XVIII century), to modern times

including contemporary philosophy (nineteenth-century – present). Each stage has its characteristics and characteristics, and in the development that has taken place over the past 26 centuries, philosophy is faced with an "eternal" problem, which is never solved in the sense that each party will answer based on his own choice of beliefs, which here and there are not the same, different, even contradictory, which appear in every stage or period. The "eternal" problems in question include:

1. The Ontology field in question:
 - a. What is the nature (which) "is" (Being, Sein).
 - b. Whether (that) "is" is something that remains or is constantly changing.
 - c. Is "there" something abstract-universal or concrete-individual?
2. The areas of epistemology in question are:
 - a. What are the means and how to use them to achieve knowledge, truth, or reality?
 - b. What is the benchmark for something that is stated to be accurate and honest and is constantly being sought by science?
3. The field of anthropology in question:
 - a. What and who is that human?
 - b. How is the relationship between body and soul?

In the history of philosophy, it has been proven that humans have reached a point where reason and experience are no longer able to show which answers are the most correct in dealing with these fundamental problems, so each one makes a choice that is felt to be most by his conscience, whose manifestations are: emerged as schools of philosophy that were different or contradictory to each other.

The schools in question can be called, among others: idealism/spiritualism, materialism, rationalism, dualism, pluralism (in the field of ontology), rationalism, empiricism, criticism, agnosticism, phenomenology (in the field of epistemology), monism, dualism, existentialism, determinism or indeterminism (in anthropology). In line with human thought's development, the birth of new schools and branches of philosophy will continue. History has indeed proven that every era, every time has its philosophical point of view. On that basis, it can also be understood why the science of philosophy is given different boundaries or definitions where each philosopher gives his definition (Beekman, 1973).

By putting aside the different elements in giving definitions, philosophy is a science that shows how human efforts never give up on critically, fundamentally, and integrally determining truth or reality. Therefore, the processes passed in philosophy are reflection, contemplation, abstraction, dialogue, and evaluation, leading to synthesis. Philosophy is no longer only at the abstract-universal and textual level. Today's philosophy must also descend

to the contextual and emancipatory level. Philosophy is referred to as critical science (Magnis Suseno, 1992).

3.3. Philosophical Thinking Systems, Philosophy, and Science

To avoid confusion in our understanding of what and how to think philosophically, we must first distinguish between philosophical thinking and science. Our understanding of philosophical thinking in everyday conversation is interpreted as a principle or a stance that contains principles whose truth we have believed and accepted in such a way that we use the principle or stance as the basis and direction of life. We or society to answer fundamental problems that cannot simply be solved technically. Thus, thinking philosophy gets its connotation as a view of life, so what we often hear is what we hear in the words of a scientist's philosophy, an artist's philosophy. In the meantime, philosophy as a science, or the science of philosophy, is not different from (the branches) of other sciences. As with other sciences, philosophy has the following elements (a). *Gegenstand* is a target object to be researched and known towards a knowledge, reality, or truth. (b). *Gegenstand* has been questioned over and over without knowing a stopping point. There are specific reasons or motives, and in a certain way, why *Gegenstand* was constantly being questioned. (c). The series of answers put forward are then rearranged into a system unity.

In addition to the similarities, philosophy, of course, has its differences or characteristics, especially in its formal object. Philosophy questions the nature (substance) or "what" of the target object it faces by placing the object in its position as a whole or its totality, while the branch sciences only look at one side or dimension. In philosophy, in dealing with human material objects, we want to find what human nature is, the meaning of its presence, and the purpose of life both in the immanent and transcendent sense. By looking at human material objects, the sciences (branches) only look at one side or dimension, which grows into sociology, anthropology, law, economics, politics, and psychology.

Likewise, by placing the material object of the universe, philosophy questions the universe from what angle (ontology), and for the branch sciences to see it from the angle of specific dimensions by giving birth to climatology, geodesy, physics, chemistry, astronomy, mechanics, and others. What is clear, reality has shown that every branch of science, when in its development has come to speculations or even the most fundamental theories, inevitably this branch of science must re-enter the area of philosophy, as happened in the science of law with its philosophy of law, education, biology, mathematics, history, and others. Even in recent developments among various universities or study programs, there has been a need to develop a philosophy of science (philosophy of science), which some experts call the science of science, as a result of the implications, both positive and negative, of the development of science for human life itself.

3.4. Definition of Science

It is not easy to explain the meaning of science through definitions because science includes the activities of the human mind to obtain the truth. However, the truth of science is absolute. Therefore, James B. Conant put forward two views of science, namely the static and dynamic views. The Static view of science places a series of interrelated principles, propositions, and theories together with much-organized information. In other words, science is one way to explain the universe in which we live. At the same time, the dynamic view of science considers science as an activity.

Based on these two views on science, James B Conant concluded that science is a series of interrelated concepts and conceptual frameworks that have developed as a result of experiments and observations and are helpful for further experiments and observations (Conant, 1988). The definition of science, as stated above, tends to emphasize science that uses experimental methods. In reality, scientific activities often occur that are not carried out through experimental methods, for example: only through reasoning. Soejono Soemargono saw that the notion of science includes three kinds of categories, namely:

- a) Philosophical science is a systematic collection of organized knowledge using philosophical and general scientific and research methods.
- b) Theoretical-empirical science (science) is a systematic collection of knowledge using the scientific method.
- c) Applied science is a collection of knowledge whose purpose is precisely to solve concrete problems (Soejono, 1983).

Thus, the notion of science, as proposed by Soemargono, covers a broader range than just science that uses the experimental method of James B. Conant. Soejono further stated that the three types of knowledge could be ranked as follows:

- a) The science of philosophy provides the basics of psychology/spirituality to other sciences.
- b) Theoretical-empirical science, providing objective theoretical foundations to applied science.
- c) Applied science is to solve concrete problems.

When viewed from the tiers stated above, these three kind of knowledge is still in a system framework. In other words, these three kinds of knowledge are interrelated and need each other to achieve the ultimate goal of knowledge, namely, the welfare and happiness of humanity.

3.5. Characteristics of Science

Science is certainly not just a thought activity but a thought activity that has distinctive characteristics. Wilardjo, in his book *Reality and Desiderata*, mentions the characteristics or characteristics of scientific knowledge based on ontological,

epistemological, and axiological foundations. The ontological basis of knowledge refers to what is done in the study. The epistemological foundation determines the methods used to acquire and validate (validate) knowledge. The axiological basis is determining development, selecting and prioritizing research fields, and utilizing and applying knowledge (Wilardjo, 1990). The three foundations that mark the characteristics of science, as proposed by Wilardjo, are placed within the framework of the philosophy of science because science itself does not question the three foundations. Only the philosophy of science is concerned with them.

Van Melsen put forward the characteristics that characterize all the sciences also in the perspective of the philosophy of science, as follows:

- a) First, that science must methodically achieve a logically coherent whole. That means there is a system in research (methods) and results (logical arrangement).
- b) Second, science must be selfless, science should be without presuppositions, but that does not mean that the scientific method should not rely on assumptions.
- c) Third, the universality of science means that it applies in general.
- d) Fourth, every science should be objective, meaning it is guided by the object and not based on subjective prejudices.
- e) Fifth, to ensure the best possible objectivity, science must be verifiable by all concerned scientific researchers. Therefore, there is communication among scientific researchers; in other words, science meets the demands of intersubjectivity.
- f) Sixth, there is the progressivity of science. A new scientific answer is genuinely scientific if it contains new questions and raises new problems again.
- g) Seventh, science must be usable, meaning there is a link between theory and praxis (Van Melsen, 1985).

The seven characteristics that characterize science, as mentioned above, show that the activity of science contains at least four essential aspects: Universalism, Communalism, Disinterestedness (selfless), and Organized Scepticism (Sastrapratedja, 1991). The first and fourth aspects were developed more for the benefit of science itself, while the second and third aspects were developed for the benefit of humanity. Thus, there is a balance between the development of science with the development of human values.

3.6. Definition of Philosophy

Formulating the notion of science is more accessible than formulating the notion of philosophy because the scope of philosophy is much broader than the scope of the field of science. Proposing definitions to understand philosophical meanings is often inadequate. However, as a starting point for an in-depth understanding to avoid the impression that philosophy is a mysterious field, the suggestion of several definitions is quite helpful. In this case, Beekman collects several definitions of philosophy put forward by philosophers.

- a) Beerling: Philosophy is free thoughts, inspired by reason, about everything that arises from experiences
- b) Corn Verhoven: "Philosophy is to radicalize wonder in all directions."
- c) Walter Kaufmann: "Philosophy is the search for truth with the help of facts and arguments, without the need for violence, and without knowing the results beforehand (Conny, 1991).

The first definition emphasizes the freedom of human thought about everything related to life experience, both outward experience and inner experience. The second definition emphasizes a radical attitude (to the roots) about all issues that attract human attention (astonishment). In contrast, the third definition emphasizes the epistemological attitude, namely the search for truth. The Liang Gie, who links the notion of philosophy with science, views philosophy as a series of activities of the reflective human mind, namely thoughts that are always reflective in the sense of looking at oneself to understand the workings of the human mind (The Liang Gie, 1986).

The reflective nature of the philosophical activity reflects the human curiosity about himself after seeing something (experience) outside himself. Humans are creatures who question themselves. Bertens more critically relates the notion of philosophy to the inevitable human tendency to think, ask, and ask questions. Bertens' philosophy is critical to dynamizing culture (Bertens, 1992). Here the notion of philosophy is associated with its role in culture. A genuinely living culture, says Bertens, is impossible without philosophy.

3.7. Position of Philosophy of Knowledge

The philosophy of knowledge is a part of philosophy or a branch of philosophy that explicitly questions the problem of knowledge. Knowledge is the result of human understanding of or towards certain things. Thus, the philosophy of knowledge refers to two aspects of reality: a). Refers to thoughts about certain things and, b). It also refers to the existence of something attempting to be understood. Thus, it means that the philosophy of knowledge is always concerned with or involves two main things, namely, matters that are subjective and objective things. That is, a thought means pointing to something subjective, but as a result of understanding or thinking, it refers to something objective. So, the philosophy of knowledge always has a subjective and objective aspect.

In connection with this, it can be said in a specific relationship that the philosophy of knowledge has an intermediate or central position. This position also refers to another situation: human knowledge is always the basis or foundation for human actions in daily life. Even if it is related to the problem of science in general, it would be more precise still its centralized position. Everyday human actions are always based on specific knowledge, even more so in science. So, the existence of knowledge itself depends entirely on the existence of knowledge.

In addition, regarding the issue of whether science has an enormous power or influence or a small influence, it depends on whether the underlying knowledge is the result of logical thinking or the result of thinking that is not so strong in terms of justification in terms of logic, both in terms of formal logic and in terms of material logic. So, when people say that the position of the philosophy of knowledge is central, the term central here refers to several characteristics or characteristics possessed by the branch or part of the philosophy, namely a). That human knowledge points to a position in the middle between subjective things and objective things, b) because it is the basis for all human actions in life every day, and c). Whether or not the existing sciences are influential depends on the knowledge underlying them or which are the parts that compose them. The knowledge philosophy can be used as a bridge between two realms or worlds, namely a). The realm of necessity / the realm of necessity (*de Welt der Solleden* ") and, b). Empirical reality (*"die Welt der Seienden"*).

Something called "nature should" / "nature of necessity" is a mental or spiritual atmosphere that, in particular relationships always, especially about scientific knowledge, is an atmosphere filled with (logical) thoughts. So, in this case, the "nature of necessity" / "nature of necessity" is the same as the rational nature. Meanwhile, "empirical reality" refers to a sensory atmosphere and, at the same time, objective nature. This kind of world is not determined by the laws of thinking in logic but by metaphysical principles.

The existence of a position between these two kinds of nature means that, on the one hand, the object of knowledge is expected or something that can be understood by other humans (besides those who directly acquire knowledge). On the other hand, it is expected or in reality. It can also, in the last round, be sensed. Regarding the problem of this central position, thinking without an object is an effort like a mere dream, while sensory capture without further processing by reason is an irresponsible effort. In other words (as Immanuel Kant put it),

This means that Immanuel Kant's teachings are generally accepted in one sense, but on the other hand, the theory is difficult to apply in general. It is generally accepted that scientific knowledge, according to such a conception, must be knowledge of empirical objects. However, if we say that his teaching from another perspective is challenging to apply in general, this is considering that in reality, what can be used is scientific objects, not only empirical things but also natural things. Things that are psychological-intuitive or psychological-logic. In this regard, if the teachings of Immanuel Kant can still be seen as valid or practiced in the sense of being generally accepted, then an additional note must be made that these teachings are acceptable in principle. However, in practice, they must also include the concept of that concerning thing that are spiritual-intuitive or psychological-logic, people can acquire scientific knowledge. Thus, if it is said that the philosophy of knowledge has a central position, it also means that proper knowledge includes both empirical and intuitive things – the soul or logic-psychic

3.8. —philosophical Thinking System as a means of Science Development.

Viewed from the point of view of one aspect related to the situation as a system, then, on the one hand, philosophical thinking is a part, even a part that has a central position in the entire existing philosophical system, and on the other hand (should be) a separate system. When it is said that the philosophy of knowledge is systematically reviewed, it is one part, even a central part, of the entire existing philosophical system, it means that:

- a) The philosophy of knowledge has its material object in addition to its existence of other material objects, each of which belongs to the branches or other parts of philosophy.
- b) To a certain extent, it has a formal object or aspect of view that, separately, in addition to the formal object or aspect of its review, which each branch or section of existing philosophy jointly owns general nature.
- c) Thus, it means that the philosophy of knowledge can be viewed from the perspective of a specific aspect of vision is or ought to be a separate system. What is called a system is something or something a specific condition whose parts are mutually related and functional in order to achieve a certain goal. Especially those concerned with the philosophy of knowledge, the so-called parts that are functionally interconnected, including both the formal object and material objects. While the goal to be achieved by using both types of objects is a type of knowledge that is both in terms of formal and in terms of material and meets expectations. This means that knowledge produced by the philosophy of knowledge should be accounted for and answered both from the point of truth of the contents and from the point of validity use of the review.

If it is said that the knowledge to be achieved by philosophy knowledge must be accountable in terms of the truth of its contents, then this means that the knowledge concerned must be able to reflect the actual situation or actually from the object in question (which in this case the object is knowledge too). Whereas if it is said that the knowledge concerned must be accountably viewed from the point of view of the formal object, then what you want to achieve must be knowledgeable concerning the nature of the material object. Furthermore, even if possible, based on the acquired knowledge about the nature of the material object, efforts are also made to formulate something of life wisdom certain. So, in terms of the philosophy of knowledge, the knowledge to be achieved must always be a knowledge of the nature of knowledge for later use as the basis for formulating certain life wisdom. Formulating a life wisdom based on knowledge regarding the nature of knowledge shows a critical or reflexive aspect of the philosophy of knowledge. It is said to show a critical aspect of the investigation carried out by the philosophy of knowledge because it concerns the most profound things. Most essential.

Furthermore, it is said to describe reflexive aspects because it results from specific thoughts in philosophy. Knowledge is the result of thinking about the results that are thought back, especially regarding the legality of the formal fact. Thus, if the philosophy of

knowledge is to be a broad field of philosophical inquiry and is for a particular system, it must have specific characteristics, namely:

- a) It can reflect the implementation of its duties within the framework of a philosophical system in general.
- b) We are conducting critical and reflexive investigations (related to terms of the formal object).
- c) It is a field of inquiry that involves two existing materials: what is in the mind and what is in the mind's empirical reality (in terms of the material object).
- d) Thus, it is always an intermediary or liaison between the subject and the object.
- e) It is an attempt to properly base in the true sense every human action, including action in scientific knowledge.

3.9. Thinking of Philosophy as a System of Science

After seeing the notion of philosophy, the notion of knowledge, and the philosophy of knowledge, as stated above, the question arises of whether philosophy can be categorized as a science. Koento Wibisono answered (when he gave a speech at the inauguration of a professorship at the philosophy faculty of Gadjah Mada University, that philosophy, as a philosophy of science, is not different from other sciences. As with other sciences, philosophy is based on reason and experience, with the attitude that a). Placing something to be the target object or Gegenstand that he wanted to research, b). Gegenstand will continue to be questioned without knowing a stopping point, and c). There is a specific reason why the Gegenstand is constantly being questioned.

Understanding philosophy or thinking about philosophy as a science by looking at the difference between philosophy and science, as stated above, has yet to clearly show the role of philosophy as a system of science. Van Peursen, in his description of science as an open system, implicitly explains the role of philosophy as a system of science in its position as a philosophy of science. He sees that there is indeed autonomy in science, but autonomy that functions about political, social, and ethical contexts and views of life (Van Peursen, 1985).

This means that as an open system, it is always related to other fields of science. The role of science is related to the political context in the state's life, where the government is always interested in scientists because the smooth running of the government also depends on the willingness and ability of the government to establish relationships with scientists. This can be seen clearly in Indonesia, where most politicians are scientists. These scientists take an active role in decision-making; therefore, they are also called technocrats because their expertise or knowledge is related to political power or legitimacy. The role of science related to the social context is seen in social life to improve physical and spiritual well-being. Likewise, scientists need public recognition of their presence and scientific activities. The

role of science related to the ethical context is one of the main topics of discussion in the philosophy of science, especially the issue of whether science is value-free. The answer to this question shows the close relationship between scientific activity and ethical or moral problems.

A clear answer to this question shows that science is not value-free. Van Melsen emphasizes the relationship between ethics and the human sciences by stating that the human sciences must not avoid ethical considerations that evaluate precisely for the sake of objectivity, that is, out of respect for the object, namely humans (Van Melsen, 1985). Knowledge cannot be value-free because science is intended for the welfare and happiness of humanity. The welfare and happiness of humanity must not be achieved by sacrificing the dignity of humanity because the meaning of welfare and happiness covers all dimensions of human life, including the ethical dimension. The last relationship that shows the role of science related to the context of a worldview reveals a broader aspect than described above. Because that view of life is a crystallization of values believed to be accurate by the community and creates a determination for people to implement them in everyday life, the development of science that is contrary to the values that develop in society will make science foreign to the community concerned.

On the other hand, the values which constitute a view of life are a source of inspiration for the development of science itself. Thus, it is clear that science as an open system must always be related to other fields, especially philosophy. Because thinking philosophy can provide essential principles for the development of science, that science can develop in a more positive direction for humanity, not the other way around.

Even Polanyi, one of the philosophers of science in the twentieth century, emphasized the importance of the role of philosophical reflection in the development of science so that scientists can realize the meaning of science itself as a wholly personal experience (Cantore, 1977). Science cannot simply be separated from the interests of humanity, and it will lead to dehumanization and a tendency toward personalization. One of the philosophers of science in the twentieth century emphasized the importance of the role of philosophical reflection in the development of science so that scientists can realize the meaning of science itself as a wholly personal experience (Cantore, 1977). Science cannot simply be separated from the interests of humanity, and it will lead to dehumanization and a tendency toward personalization. One of the philosophers of science in the twentieth century emphasized the importance of the role of philosophical reflection in the development of science so that scientists can realize the meaning of science itself as a wholly personal experience (Cantore, 1977). Science cannot simply be separated from the interests of humanity; it will lead to dehumanization and a tendency toward personalization.

The assertion of the term open system, as meant by Van Peursen, covers all human cultures, including agriculture, urbanization, morals, arts, and religion which are part of a human open system. Science is part of human culture and even part of human wisdom.

Science as a pyramid is a whole thing that is dynamic and responds to the world around it. Thus, science can be self-sufficient (autonomous) but highly flexible through continuous adaptation to information from context and creative renewal (Van Peursen).

On the one hand, philosophy plays a role in the system of science to provide a direction for human wisdom for science. On the other hand, science provides information and inspiration for philosophy, thus demanding creativity. Therefore, philosophy as a system of knowledge, especially in an open system, is intended as a source of inspiration for the development of science that leads to the happiness of humanity. In this case, Van Peursen sees the importance of heuristics in the context of discovery to contribute to the knowledge system. Heuristics cover a wider area than strictly methodical systems, understanding the paths that lead to system validity.

5. Conclusion

At the end of the description of Philosophical Thinking Systems as a Means of Science Development, this system of science can be drawn several points of conclusions as follows: First, the problem discussed in philosophical thinking is a problem of science and knowledge in general. It mainly concerns the truth of science and knowledge itself. Second, science plays a vital role in human life, especially emphasizing the primary goal of science, namely, for the welfare and happiness of humanity. Third, structurally, philosophy and science are the results of mere elaboration of metaphysics, which, if necessary, can also be further elaborated into a more practical philosophy. Fourth, there is a strong relationship between philosophical thinking and science. Some views show that philosophical thinking is a science, although the two have differences and similarities. Fifth, benchmarks that can be used regarding content or material are objectivism and subjectivism regarding the problem of knowledge. Sixth, Philosophical Thinking Systems, as a means of developing science, lead to the philosophy of science, a branch of philosophy that discusses problems in the development of science, such as the relationship between science and ethics, the principles of science, and others. Seventh, if a unified understanding is desired, it means that regarding empirical things, we should take an objectivistic attitude, whereas when we face things that are psychological/spiritual, then we should take a subjective attitude.

Declaration of Competing Interest

The author declares that it has no competing interests.

Compliance with Ethical Standards

The researcher obtained Ethical Approval from the University before this research (Jakarta University).

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