

Refleksi

JURNAL KAJIAN AGAMA DAN FILSAFAT

“Memahami Teks dari Realitas Sosial”

WACANA

Muhammad Zain

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TULISAN LEPAS

Ridha Ahida

The Paradigm of Knowledge in Search of Alternative Science

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MEMAHAMI TEKS DARI REALITAS SOSIAL

Melanjutkan tema edisi yang lalu tentang pergulatan antara teks dan konteks, **Refleksi** kali ini mencoba menurunkan tulisan-tulisan yang lebih mengerucut yang mengangkat pembahasan tentang keduanya dengan mengusung tema “Memahami Teks Melalui Realitas Sosial.” Edisi kali ini di samping menampilkan tulisan-tulisan dengan tema tersebut, juga menghadirkan dua artikel lepas yang ditulis oleh Ridha Ahida dan Muslih.

Wacana dalam jurnal Refleksi kali ini diawali oleh sebuah tulisan Muhammad Zain yang mencoba mengelaborasi keragaman paradigma pemikiran tentang teks-teks keagamaan (baca: wahyu) pada masa awal Islam melalui pendekatan sosio-antropologis. Menurut Zain, keragaman pemahaman terhadap teks-teks keagamaan telah dimulai sejak zaman Rasulullah. Para sahabat sebagai generasi awal Islam yang menyaksikan langsung turunnya wahyu dan juga berinteraksi langsung dengan Rasulullah, ternyata memiliki keragaman dan tentunya beberapa perbedaan pemahaman yang menurut Zain lebih disebabkan karena faktor kompleksitas situasi dan kondisi yang mereka hadapi pada saat itu. Penyebaran sahabat ke berbagai wilayah yang kemudian bertemu dengan realitas sosial setempat, turut andil dalam membentuk keragaman pemahaman para sahabat. Karena itu, di zaman yang lebih memiliki tingkat dan kadar kompleksitas situasi dan kondisi yang dihadapi oleh umat Islam sekarang, pluralitas makna (pemahaman keagamaan) adalah sebuah keniscayaan.

Tulisan selanjutnya yang diangkat oleh Abustani Ilyas juga melihat fenomena pluralitas makna -seperti yang ada pada masa Sahabat dengan memperhatikan situasi dan kondisi belakangan diusung oleh Rasyid Ridha. Menurutnya, Rasyid Ridha tidak hanya mengharuskan para pembaca teks untuk tetap memberikan perhatian yang serius kepada realitas sosial pada masanya (pembaca), ia juga melakukan penafsiran teks-teks keagamaan (al-Qur'an dan Hadis) secara intertekstual. Dalam salah satu bahasannya Abustani mengangkat pandangan Rasyid Ridha yang

menolak hadis hukum bunuh bagi orang yang keluar dari Islam (murtad) yang menurutnya bertentangan dengan hak kebebasan beragama sebagaimana ditetapkan dalam al-Qur'an. Penolakan ini selain didasari oleh kontradiksinya dengan al-Qur'an, juga lebih didorong oleh semangat membaca perbedaan antara realitas sosial pada saat hadis itu disabdakan dengan sekarang.

Senada dengan Rasyid Ridha, R.A. Kartini juga ternyata memiliki gagasan tentang pluralitas agama yang merupakan salah bentuk realitas sosial, dan belakangan banyak menjadi tema-tema diskusi di berbagai kalangan dan tempat. Kartini menolak upaya kristenisasi yang dilakukan oleh Zending. Tulisan Ida Rosyidah mencoba memotret persoalan tersebut melalui perspektif R.A. Kartini. Menurut Ida, studi tentang pemikiran Kartini banyak membicarakan tentang peranannya dalam memperjuangkan kesetaraan gender dalam bidang pendidikan. Padahal, selain itu, Kartini juga di dalam surat-suratnya menulis pandangan personalnya tentang sosialisme, kapitalisme, dan Islam. Karena itu, tulisan Ida mencoba mengkaji gagasan Kartini di bidang lain yang jarang diungkap, yakni gagasannya tentang agama dan pluralisme yang mencakup pandangan dan kritiknya terhadap Islam.

Salah satu bentuk fenomena sosial yang marak belakangan ini adalah fundamentalisme. Tulisan Rosmaria Syafariyah Widjayanti mengungkap bentuk lain dari fundamentalisme yang melahirkan radikalisme, bahkan terorisme, yang selama ini dianggap berasal dari agama, sehingga disebut fundamentalisme agama. Dalam Islam, fundamentalisme bukan merupakan fenomena keagamaan tetapi lebih merupakan fenomena sosial yang mengambil bentuk keagamaan. Fundamentalisme menunjuk pada gerakan keagamaan yang bertindak secara radikal dalam mewujudkan tujuan dengan bertolak pada klaim keaslian ajaran agama. Tudingan terhadap kaum fundamentalis sebagai biang dari kekerasan tidak adil kalau hanya mendakwa fundamentalisme agama saja, modernitas juga ikut andil dalam kekerasan di dunia selama ini. Fundamentalisme agama dan modernitas ikut berperan dalam menyuburkan tindak kekerasan. Sebab utama yang menimbulkan fundamentalisme, menurut Rosmaria, adalah perubahan sosial.

Keragaman dan perbedaan yang ada dalam realitas sosial tentunya dapat melahirkan pemahaman, konsep, atau teori yang berbeda. Sirojuddin Aly mencoba untuk mengungkap titik temu dari dua realitas

sosial yang berbeda, yaitu mengungkap titik temu Barat dan Islam dalam satu konsep yang dimiliki masing-masing, yaitu demokrasi dan syura. Keduanya, jelas Sirojuddin, adalah konsep kenegaraan yang berbeda, karena demokrasi berasal dari tradisi Barat yang sudah menjadi ideologi yang nilai-nilai kebenarannya bersifat relatif karena tidak didasarkan pada wahyu, maka ciri terbesar dari demokrasi adalah keputusan yang didukung suara terbanyak, sedangkan syura bersumber dari wahyu (al-Qur'an dan Hadis), maka nilai-nilai kebenarannya pun mutlak (sepanjang menyangkut hal-hal yang prinsip). Menurutnya, titik temu antara keduanya adalah sama-sama menekankan pada musyawarah dalam menyelesaikan hal-hal yang melibatkan orang banyak.

Menghadapi berat dan rumitnya kompleksitas situasi dan kondisi yang merupakan realitas sosial pada saat sekarang, Gunawan Adnan mencoba mencarikan solusi melalui tulisannya tentang tauhid. Menurutnya, tauhid merupakan unsur penting dalam bangunan keislaman seorang Muslim. Tauhid adalah Alpha sekaligus Omeganya Islam. Segala sesuatu yang terlahir atas nama dan dikaitkan dengan Islam haruslah merefleksikan *iradah* Tuhan. Konsekuensinya, doktrin dan praktik (ibadah) dalam Islam harus dapat mempresentasikan sekaligus merepresentasikan makna fundamental ini. Syariah sejatinya merupakan aspek operasional dari konsep tauhid, sehingga tidak boleh dipertentangkan antara tauhid dengan syariah. Tulisan ini mengkaji beberapa bentuk dan level pemahaman konsep tauhid yang dikaitkan dengan persoalan umat Islam sebagai upaya mencari solusi yang tepat guna menjawab persoalan umat di tengah persaingan global.

Sebagai tulisan lepas, Refleksi edisi kali ini menurunkan tulisan Muslih tentang berbagai kekacauan dan ketimpangan akibat tangan-tangan zionis Yahudi sepanjang sejarahnya melalui analisa terhadap karakteristik kaum Yahudi dalam Surat al-Baqarah, dan tulisan Ridha Ahida dengan bahasan tentang perlunya paradigma pengetahuan yang akan mengarahkan pengembangan ilmu pengetahuan yang tetap konstruktif dalam kehidupan manusia. Di satu sisi, ilmu pengetahuan memiliki peranan yang penting dalam setiap aspek kehidupan manusia, eksplorasi ilmu pengetahuan dan teknologi telah memberikan serangkaian kemudahan dalam aktivitas manusia. Namun, di sisi lain perkembangan ilmu pengetahuan dan peranan yang dimainkannya ternyata menghancurkan

eksistensi manusia sendiri. Hasilnya, ilmu pengetahuan telah mengancam eksistensi manusia. Selamat membaca!

Redaksi

THE PARADIGM OF KNOWLEDGE IN SEARCH OF ALTERNATIVE SCIENCE

Ridha Ahida

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Abstract: *Many things need to be considered when developing knowledge in human life. On one hand, knowledge plays a crucial role in every aspect of human life; the exploration of knowledge has provided a series of conveniences in human activities, and technological advancements resulting from scientific knowledge have accelerated human mobility. However, on the other hand, the development of scientific knowledge and its role has seemingly undermined human existence. Scientific knowledge is no longer just explored but exploited to the fullest. As a result, scientific knowledge has threatened and even destroyed human existence. This article discusses the need for a paradigm that will guide the development of scientific knowledge to remain constructive in human life.*

Keywords: *Science, Philosophy, Paradigm, Epistemology*

Abstrak: *Banyak hal yang harus diperhatikan ketika hendak mengembangkan ilmu pengetahuan dalam kehidupan manusia. Di satu sisi, ilmu pengetahuan memiliki peranan yang penting dalam setiap aspek kehidupan manusia; eksplorasi ilmu pengetahuan telah memberikan serangkaian kemudahan dalam aktivitas manusia dan teknologi yang merupakan hasil dari ilmu pengetahuan semakin mempercepat mobilitas manusia. Namun, di sisi lain terlihat perkembangan ilmu pengetahuan dan peranan yang dimainkannya ternyata telah menghancurkan eksistensi manusia sendiri. Ilmu pengetahuan tidak lagi sekedar dieksplorasi tapi dieksploitasi habis-habisan. Hasilnya, ilmu pengetahuan telah mengancam bahkan menghancurkan eksistensi manusia. Tulisan ini menjelaskan tentang kebutuhan akan adanya sebuah paradigma yang akan mengarahkan pengembangan ilmu pengetahuan yang tetap konstruktif dalam kehidupan manusia.*

Kata Kunci: *Ilmu Pengetahuan, Filsafat, Paradigma, Epistemologi*

Introduction

The history record of science activities throughout the centuries has clearly shown the impact of problems in science. The emergence of serious problems as a result of modern science has triggered the social scientists as well as its practitioners to question about the epistemology which is the foundation of the modern science. Where should the question about that epistemology start? Alright, first, and this is what the scientists often sounded, that the development of science and technology which at first, is assumed and expected to be able to overcome the challenges faced by human, on the other side is in fact bringing new kinds of problems, such as the low aspects of human life. Second, the revealing of the fact that human is actually have been protected by the science and technology of research and development for destruction purposes. In that condition, the destructive purpose is still wrapped in terms of “military exercise”, which later on will be covered by the reason, “for the sake of human life”.

Seen from the biochemistry science, there are many actions of human that are aimed at destroying the balance of the ecosystem. The most threatening thing is the thinning of the ozone layer, which functions to protect human and all living things from the direct ultra violet of the sun. That is the environmental crisis that it causes. How about the psychological impact? The increase of depress victim graphic, anxiety, psychosis, and others, especially in developed countries. All of them are the reasons of suicide action. It seems like the essence of human which

becomes the subject of science is getting further from the object that is the science itself.

The reality is no longer objective now. However, it is the result of researcher's construction that makes science no longer exact. Science should have considered about uncertainty, because the causality is no more linear, and the reality cannot be fractioned into small pieces.¹ Positivist science is not a certainty and objectivity anymore. Science as the people now has torn the human essence. Problems about science often appear when science as a product is against the reality of the community. Science is often considered as against and not relevant to the norms exist in society.

The appearing problems are no longer as simple as when people are still busy looking for and resulting new inventions through science. The problems have shifted to whether the science is free or norm-related. Whether it is in the process or in the product itself. In fact, the answer is not only "yes" or "no". This paper will discuss about science condition, as a "free-norms" or as a "norm-related" in its process or product. If it is a "norm-related, what is the standard norm?".

Modern Science Root of Thought

Science exploration enables human to find out and execute many kinds of things. The classical period has shown that science activity is more focused on giving a possibility for human in discovering many things, in this case science is for science. It is a pride if science is able to give knowledge to human based on their condition and their environment. At that time, science had not had the ambition to control human life activity.

In the Middle Ages, Europe only got a little progress in science. However, by the Middle Ages, that is the era of cultural development, Aristotle was accepted as the highest authority.² Philosophers gave their contribution in terms of ideas, that this world is rational. This concept was then becoming the core of modern science, up to 15th and 16th century which was then accepted by a movement known as renaissance. This era was entering the more staple stage, when there was a long dialog and debate between rationalism and empirics.³

These two opposite ways of thinking became a good material for science development. Knowledge rationalization occurred when Rene Descartes with his skeptical method hesitate everything except his hesitated self (*cogito ergo sum*). This attitude continues to the period of

Aufklärung, that is the era of human efforts to reach rational comprehension about himself and nature.

So, from the very beginning modern science has stood up on the base which absolutely gave no place to spiritual substances, Due to the elimination of one of important aspects in the science itself, then the secular movement got a warm welcome. Therefore, modern science moved further from the human spirit, as if no one Or nothing is eligible to control its development. The objectivity of modern science has decreased human experience from his own natural attitude, and loosen the mystery and the sacred value of his life.⁴ The solution for this problem is the most important thing to find. The role of knowledge paradigm is expected to be able to give new alternative of solution.

Science: Free or Norm Referenced

Human empower nature through the researches done in terms of science. This discovery is then followed up by applying its production in the form of technology. The Liang Gie stated that science isa kind of research with an output in the form of science which is then will be tested whereas technology is a kind of production activity with certain products as its output.⁵ In its journey, science started to devoted its life to technical thing. The daily dimensions of human life have changed in an unexpected way. Science begins to influence most of human life sectors deeply. Although this development is not wanted by the science itself at first. Yet, it cannot be avoided or even denied that science has changed, from an empiric rationalism to experimental rationalism.

Ever since its growth, science is the human effort to get the truth. Science is the human activity to get knowledge and understand many kinds of things and events happened in their surroundings. The main purpose that a scientist wants to reach is to get scientific truth, that is the truth that can be granted rationally. Science is never finished or stop in a certain point. It always developed and open for any critics and revision for the sake of its own progress. Science is the result of cycle which consists of induction, deduction, and verification.⁶ It has several purposes: to obtain the truth, knowledge, understanding, explanation, prediction, control and application.⁷

Human purpose in developing science is to reach the truth and to get knowledge, which is expected to be able give understanding to human

about nature and universe, society and himself. The explanation obtained can be the foundation for prediction. Furthermore, the prediction can help in controlling something. Finally, science is aimed at application purpose.

According to Van Peursen, a change in purpose is seen in a historical context, from science as theories that is science for science, to science as practice that is for its use in human life. The change of historical science from theoretical to practical concerns with something special, that is science becomes useful in the whole aspects of human life.⁸ Now, the world is getting influenced by scientific disciplines such as logics, mathematics, physics, life sciences, social sciences and humanity sciences. The influence of knowledge is clearly seen in many kinds of development being done. Especially, in the pattern of human way of thinking and the community that covers him.⁹

We are educated and trained to have logical way of thinking and to capture the fact as it is. Psychological concepts have influenced the way we judge, including the way we understand our self and also others. Reality becomes a word related to fact. Everything that is not a factual and logical explanation are being removed to the imaginary thing or to a subjective judgment. Science explosion signs up the characteristics of society and human structure of mind.

Science which is developed now is different from the science developed in the era before. At that time, practical science had neither influence nor bind the daily life since at that time, the meaning of science is completely different.¹⁰ Scientific activity was not done to ease business or to increase the physical quality of life for human has had everything from nature. Science is “useless” in a sense it doesn’t try to reach something else. It is invented and practiced in the science itself.

Now, despite its original function that is science for science, science is also expected to serve and fulfill the need of daily human life. Scientific activity is now based on one purpose, that is to process and control the nature for the sake of human needs and ease its activity in the daily life.¹¹ In fact, this purpose is achieved successfully through science. Nevertheless, anxiety starts to come up when science has changed the role and controlled human. It has moved so fast and tends to be uncontrolled. This time, the development of science is no longer for the science itself. However, the development and the process have been shadowed by merit from the purpose hidden beyond it.

It cannot be denied then, that science has given a very big donation in human life. Science is able to give simplicities for human in controlling the power of nature. By studying atom, human can use it as the source of energy for their life. Yet, this in fact also causes catastrophe for human. The atomic bomb will increase the quality of machinery gun in wars so that the weapon can be used to threaten human safety.

The real problem is the essence of science itself. Science is actually neutral; it does not recognize good or bad. It is human that determines everything. Science neutralization exists in the epistemology foundation. Value consideration is really influencing the determination of science purpose especially and scientific activity generally. There are several attitudes related to science and value, they are:

1. Positivism

According to this view, science is able to develop fast without any reference to any value except scientific value. Science can be said valuable or priceless if it can offer trusted result, has certain foundation, objective and can be tested critically. Science can reach its peak and hold the power since it has been supported by its objectivity which can be granted. Therefore, we don't have to mind about it and relate the value from and to science.

2. Ideological criticism

From this point of view, science has to be devoted to a purpose that is human ideology. Science without value will be dangerous for the process and the product of the science itself. Therefore, science must always be related to a certain value.

3. Relational Autonomy

According to this view, science still has the right to grow and develop quickly. But the process has to always be related to certain purpose and value which guarantee its responsibility because science is only a tool for fulfilling the needs of human life. Science has to guarantee everything so that it is not misused. There has to be a kind of watch each other over between science and the purpose of science as a tool.¹²

Ethical consideration is not only based on practice which applies the definition of theories. Science will have to be symbolize as the combination

of theory and practice. What goes for practice also goes for theory. Theory will not be developed without practice. Scientific practice will never be free from values. In a sense that the practice may not express ethical value considerations which are evaluating. As a practice, science has to give clues, either for individual life or the society life. The problem is whether science grows fast when it is free from values or when it is norm / value reference. Norm/ value - free means so that the demand of every scientific activity be based on the essence of the knowledge itself. Knowledge refuses the interference of external factors which essentially do not determine the knowledge. There are three factors which indicate that knowledge is norm/value-free,¹³ they are:

- 1) Knowledge has to be free from any kinds of “if”, that is free from external influence, such as politic, ideology, religion, culture, and other society’s substance;
- 2) There has to be a freedom of scientific effort so that knowledge autonomy can be guaranteed. The freedom concerns with the possibility available and self-determination.
- 3) Scientific research is not very far away from ethical consideration which is often considered to prevent the progress of knowledge because the ethical value itself is universal.

Max Weber thinks that social science has to be free from norms yet becomes the relevant values. Weber is not confidence when the social scientists execute their activities like teaching or writing about social science. They are not influenced by certain importance. Those norms have to be implied by practical parts of social science if the practice contains of purpose or rational. Without the intention to serve the importance of some people and the culture that they follow, the scientists will not have reasons to teach or to write all of those. That kind of morale attitude does not have any scientific objectivity relationship.¹⁴ Weber’s carefulness in deciding whether knowledge is norm-free or norm-referenced can be understood concerning in one side objectivity is the absolute trait of knowledge, while on the other side subject that develops knowledge is faced with norms which are also determining the selection over problems and the conclusion it made.¹⁵

Similar to Max Weber, Habermas thinks that theory as scientific product is never norm-free.¹⁶ This establishment is inherited by Habermas from Husserl who sees that facts or natural objects are needed by

knowledge as the reality. Those facts or objects have actually been arranged spontaneously and primordial in daily life, in *Lebenswelt* or the world as we understand now. Every knowledge takes from *Lebenswelt* sum amount of facts which are then being scientified based on practical importance. Habermas stated further that knowledge is formed based on technical importance. Knowledge is not neutral for its contents cannot be separated from practical importance. History and hermeneutics are also determined by practical importance although in different way. The importance is to preserve and widen the field of understanding among human and develop communication. Every theoretical activity which involves subjects' pattern always contain of certain importance. That importance works in three fields that are works, language and authority. Works are natural knowledge, language is the importance of history and hermeneutics, whereas authority is the importance of social science.

Ethical Approach

Science tries to reveal reality as it is, whereas ethics basically is the signs about what should be done by human.¹⁷ The results of scientific activities give alternatives to make political decision with reference to morale consideration. Scientists have professional responsibilities, especially in the world of knowledge and in the world of scientific community about methodology used. On the other side, scientists also carry social and morale responsibilities to the public community who uses knowledge service in their life.

The application of knowledge and technology needs ethical dimension as the consideration and sometimes influences the process of further development of knowledge and technology. Ethical responsibility is something that is related to activities and knowledge and technological usage. In this case, it means that scientist in developing knowledge and technology should pay attention to the essence of human, preserve the balance of ecosystem, responsible to the public importance, the next generation importance and universal because basically knowledge and technology are aimed to develop and strengthen human existence and not destroying it.¹⁸

Knowledge and technology responsibility also concerns with things that are going to and has been caused by knowledge and technology in the past. Now, whatever the consequences for the future are, are based on human free decision in their activities. The new inventions in knowledge and technology

are proved to be able to change some rules either in nature or human. This certainly demand responsibility to always preserve what results in that change so it will bring the best alteration for knowledge and technology development and also to the development of real human existence.¹⁹

Ethical responsibility is not only related to the effort of applying knowledge and technology appropriately in human life. However, they also should realize what should and should not do to strengthen the existence of human, whether it is in their relationship as personal, with the environment or as a creature that has a responsibility to his God.

Based on the opinion of Van Melsen (1985) that the development of knowledge and technology whether it is going to prevent or increase the human existence depends on the human itself, because knowledge and technology are done by human and for the importance of human and their culture. The progress in technology field needs human maturity in its real sense, that is the maturity to understand which one is proper and which one is improper, which one is good and which one is bad. The most important job of knowledge and technology is providing help so that human can really achieve the definition of his integrity.²⁰ Knowledge and technology is not only the media to bring back human essence but also the result of development and the human creativity itself.

The weakness of science is not by itself killing the role of science in human life. Yet, this weakness is reminding us about the importance of life values, either in ethical dimension or in religious thing. Knowledge, which is supposed to be the realization of values, in one side can be developed into prejudice or ideology for the role of subjectivity substance in culture is strong, and in the end will make the statement that said knowledge is norm-free cannot be followed anymore. On the other hand, knowledge makes human tends to pay attention to the physical condition of knowledge rather than its mental condition, that is in the form of attention to the way knowledge plays its function in the community, human expectance of knowledge application and the force from society to develop knowledge.²¹

Question commonly appear is what is the relevance between science and norms, whether both of them inherent or free from each other. There is an opinion that says that the relationship between them both is so tight if the science mentioned has become a statement of attitude.²² In this case, David Hume (1711-1776) stated that scientists work in a framework of

trust and the paradigm that he believes. Here is when the value system followed by the scientist also influences his work. Don't be surprised to see why people believe that the spirit of science and technology is actually not norm-free. Since it is proven that that norm is not only determined by the consumer but also by the spirit of the science itself and the Scientist is also there to deliver his messages.

So actually, the relationship of technology, as one of science result, with ethics is a mutual relationship.²³ In a sense that to be able to play the role, technology, either its development or application need ethics as the guidance. Technology needs ethics because of it's the technology role shift. The problem then occurs, whether the validity is determined by its suitability with science development. There are two offers here, first, static ethic, that is as a control that cannot be influenced by the development of technology. Second, adaptive dynamic ethics which follow the changes of era.

Axiology Foundation

Ontologically, knowledge limits its scope only to the fields that can be reached by human experience. The object of its analysis which is in the limit of pre-experience and post-experience is given by one knowledge to others. Knowledge is only one part of the whole knowledge that try to analyze life in a certain limit of ontology.²⁴

The determination of the scope of analysis of the empiric knowledge is consistent with the epistemology knowledge which requires empiric verification in the process of discovery and the arrangements of truly scientific statements. In the relationship with moral norms, then in determining the object of analysis, scientific activities may not do any effort that tries to change the human essence, lowering humane and interfere with life problems. Besides, ontologically, knowledge is neutral over dogmatic norms in interpreting the reality because knowledge is human effort to study the nature as it is.

On the other hand, epistemology foundation of knowledge is reflected operationally in scientific method. Basically, scientific method is a way a knowledge gets and arrange its body of knowledge based on: 1) The framework of logically way of thinking with consistent arguments with the previous knowledge that has been arranged, 2) Explaining the hypothesis which is the deduction of that thinking framework, 3) Verify the hypothesis to test the truth factually.²⁵

Logical thinking framework is a rational argument in developing explanation about natural phenomena. Empirical verification means objective evaluation from a hypothesis over factual reality. This verification means that knowledge is open to other truth that is not in its hypothesis. Factual verification also opens itself to the Critics over thinking framework which bases hypothesis proposal. Scientific truth with the openness over the new truth has a pragmatic trait of which process is repeated (cycle) based on the critical way of thinking.²⁶ In its relationship with morale, then in its scientific activity process, every scientific effort must be aimed at finding the truth, which is done honestly, without having any certain direct importance and the right of living which is based on individual argumentation strength. So, knowledge is a kind of attitude of life to love truth and hate lies.

Axiology foundation of knowledge discusses about the advantage that human can get from the knowledge he gets. The development of knowledge needs two considerations, static and dynamic knowledge. According to Soejono Soemargono, static knowledge is the characteristics of system that reflects in scientific method, whereas the dynamic side is a kind of guidance and principles that need to be paid attention to by scientists in their scientific activities.²⁷

System in scientific method is the static foundation which becomes the main framework or the basic pattern of knowledge. Whereas the considerations of values which are the background of scientific activities are the metaphysic sides of consideration. Considerations from this side cover the truth values and mental esthetic values. Truth values are the measure of ethic and social considerations whereas mental esthetic values are the measure of usage and application considerations.

The development of knowledge does not completely off of three kinds of discussions, theory, technique and ethic which influence each other. The ethic value consideration is not aimed at Changing the characteristics of scientific method. Yet, it is aimed as the background of problem determination wisdom and the application of science results.

There has to be a distance between knowledge and ideology, so that the ethic consideration for knowledge makes it possible to be executed for the sake of society. In a constellation of certain social politic, knowledge consideration may change, but not in the system of the knowledge itself. There has to be a limitation, at the time when the norm-free knowledge

and at the time when knowledge is norm-referenced. It is interesting to see Daoed Joesoef who divides knowledge into three field, knowledge in a sense of product, knowledge in a sense of process and knowledge in a sense of community. Knowledge in a sense of community is the one that touches the ideology problems and values considerations. That is why knowledge should be a system of norm-referenced.²⁸

Knowledge should have morality foundation and that foundation is the human dignity. Ontologically and axiologically the scientists have to be able to judge between good or bad, which essentially forces him to take an attitude, A scientist must have a Strong morale so he will not be the enemy for humanity. The process into intellectual and morale maturity has to be planted in scientists from the very beginning. The creation of knowledge is individual, in its application or communicating knowledge with its environment, it will change into a non-scientific or pre-scientific or vice versa. The role and function of ethic in knowledge is as the controller of knowledge, as a filter, as a driver, as an enforcement and also as a brake.

Basically, science must be used for the goodness of human being. In this case, science can be used as a media to increase human life's degree by paying attention to the essence of human, human dignity and the preservation or nature balance. For that human importance, knowledge is then arranged to be used communally and universally, Communal means that science is the knowledge own together, everyone has a right to make use of the knowledge according to his need. Universal means that knowledge does not have race connotation, ideology or religion.

Reflection

Science is not a knowledge that comes all of a sudden as something that is already like what is known now. However, science is a way of thinking in such a way about a specific thing with a specific approach and results a conclusion in the form of scientific knowledge. Scientific in a sense that the system and the knowledge structure can be taken for granted openly. Therefore, science is open to be tested by anyone. Scientific knowledge is a knowledge which in itself has a critical characteristic, rational, logic, objective and open. This is a must for a scientist to do it. yet, another problem faced by the scientist after he built a very strong building is the use of that scientific knowledge in human life. It is not to be denied that science has brought human to a quite huge change. However, can that

strong, basic knowledge be the savior of human and not vice versa. This is where the responsibility of a scientist found. Therefore, it is important for a scientist to be scientific.

Knowledge is the realization of the most spectacular human existence in the cycle of culture and civilization. It is a kind of human strategy to find out about his condition and environment, whether to adjust himself with the environment, or to adjust the environment with himself. On one side, this human strategy is very strong. It must be admitted that there are so many advantages can be taken from its development, in terms of simplicity in life. Nevertheless, we may not close our eyes to the sequence of destruction and chaos happened to human caused by the exploitation of knowledge.

Science activities nowadays have lifted its position up to somewhere unreachable. Science is like standing in the tower that stands as the measurement for any other values. Science has become a close system with absolute autonomy which may not be or even should not be interrupted. Science has run by itself without any competitor. Therefore, science by itself has to be able to responsible for every hostility, in purpose or not, in process or even in positioned toward the human life.

Theoretically and practically, knowledge is responsible for changes occurred from time to time. Knowledge is responsible for impacts it caused and what will happen next. The responsibility of knowledge concerns with the past, present and future. What has happened was not absolutely to happen again and what will happen also depends on the free decision of human.

Knowledge and its development must be based on truth values, logic, ethic and esthetic. Logical truth value of knowledge is neutral and can be achieved by paying attention to the scientific methods that is knowledge for knowledge. This happens to knowledge as process (theoretical science). Knowledge neutrality starts to change when it is communicated to its environment. Ethical and esthetical values of knowledge sometimes are manipulated by ideology and power. Then comes the merit and hidden purposes in the world of knowledge.

It is time for science to open itself. It is no longer the direction for the whole system of human life. There are still other measurements that have to be included to manage the rule of human life. Here is when heuristics play its role to motivate science creativity. It serves to bridge science to the

world and to make science realize its relationship with environment values. Science activities must always touch the contextual problems and must always be related to other attributes.

On one side, although science is dare to proclaim itself as the direction to all truth measurements in human life system, but on the other side, science must also accept the “non-scientific norms” which according to science are about to be scientified or understood with scientific science. Science must care about the norms around it heuristically. And so that heuristic signs do not turn out to jeopardize science and isolate is from the human existence, science then will need a “judge” that is ethics. Then, what kind of ethical value and form should be able to give one perspective for the creation of alternative science or let us say ethical dimension?

In fact, the answer is not as simple as turning over the palm. There is a dilemma that should be faced, allowing other measurements to come into science autonomy in one side means opening the possibility of the non-scientific science. While on the other side, it can make science as a tool to legitimate one importance. That is why, an intense dialogue might be needed to make a knowledge paradigm in looking for alternative science which is really strong and at the same time can deal with human life activities. Although knowledge is individual and its use is social, human creativity which is supported by an open social communication system will cause the effective process of knowledge development. Therefore, science will become more human, when it wants to communicate with the environment values heuristically, by still leaning on the existence ethical values.

Scientist as a professional person in the field of science must also need to have morale vision that is a special vision for scientist. In philosophy, this morale is called scientific attitude. Scientific attitude must be owned by every scientist because scientific attitude is an attitude aimed at achieving objective scientific knowledge, Scientific attitude will not discuss about the purpose of science but how to achieve a knowledge which is free from personal prejudice and can be taken for granted socially to preserve and keep the balance of the universe.

Finally, knowledge objectivity must still be working on by scientists and other human as the user of knowledge. Pure objectivity is impossible to realize, but by paying attention to axiology foundation in developing knowledge that is human dignity, the destruction characteristic of

knowledge which occur during its application can be overcome. Human must handle knowledge, not vice versa. With this power, in its journey, knowledge will still be a gift for human without losing its scientific attitude.

Endnotes

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