EPISTEMIC COMMUNITIES OF PANCASILAIST SCIENCE: MAPPING THE SCIENTIFIC COMMUNITY IN THE PERSPECTIVE OF PHILOSOPHY OF SCIENCE

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ABSTRACT

Scientific community is an association of scientists who act in a particular scientific profession, resulting in the exchange of ideas to sharpen and broaden their scientific insights. Pancasilaist science as one of Universities subjects in character development deals with quite complicated problem when it is attempted to be incorporated in a scientific forum. Those problems involve: Firstly, lack of human resources who would seriously explore Pancasilaist science. Secondly; resistance among other scientists towards Pancasilaist science which is considered more as a doctrine rather than a science. Thirdly; professional forum to consolidate Pancasilaist scientists that is generally preceded by seminars or congresses that are perceived as a scientific project represented by Directorate General of Higher Education as government bodies.

Research method took form of literature study covers these methodical elements: A description by exposing related issues to national cases; Interpretation by construing thoughts of the founding founders containing scientific-philosophical values. Heuristics by discovering the novum–new thing or scientific innovation– which is associated with leading to formation of Pancasilaist science’s epistemic communities.

Analysis upon a wide range of literature and author’s personal experience during teaching the subject pinpoint to the following things: First; Forum for epistemic community of Pancasilaist science is needed to accommodate countless lecturers’ aspirations and experience of Pancasila Education during their lectures in the universities. Second; epistemic community could be a means to cultivate and develop new ideas and curiosity, thus Pancasila education always evolve in accordance with current transformation. Third; epistemic communities of Pancasilaist science could serve as moral values catalyst supporting nation's development towards a more prosperous country, both materially and spiritually. Fourth; youth morality and mentality require a strong foundation in order to control the influence of globalization embedded in all aspects of society.

Keywords: epistemic community, curiousity, morality, mentality
A. INTRODUCTION

Every human activity, either individually or in groups, always requires accountability, including in scientific activities where its processes and outcomes, both directly or indirectly, involve the wider community. Scientific activities actually cannot be separated from social life in general, therefore academic atmosphere would never remain silent in a higher education sphere. Scientific situations should also consider common will (volonte generale) selectively. The sphere of knowledge (episteme) involves a wide range of fields such as daily life, pattern of social life that is formed in a society, culture, to religious activities. Each field possesses and develops a peculiar base of knowledge, making impossible for its existence to be simply neglected.

As each individual perceives the same problem differently, different perspectives also influence different points of view. In this case, autonomy is confronted with correlation. Autonomy over certain knowledge is needed to set the focus on the observed or analysed subject matter. Correlation is intended to complement the individual confinement, as well as a tool for socialization and exchange of ideas in order to enrich insights/horizons.

When exchange of ideas occurs, enrichment process takes place, but simplification also happens at the same time to rearrange and consolidate the ideas in order to get them to be more intense. Conflict of ideas is needed in a community to establish and improve the idea in order to mobilize it regularly. Motion or dynamics towards perfection or such improvement could be proposed by correcting, selecting, or even cut down previous ideas that are considered to be out of the main idea. However, such processes do not necessarily diminish the importance of keeping the idea well-integrated in a community, even increasingly forming a platform that characterizes the group instead of individual traits.

Nevertheless, the role of certain actors in a community cannot be denied and it shall put the spirit of corps (l’esprit de corps) forward. Epistemic communities are instrument for a group of people who develop curiosity on a subject that they consider important, not only for themselves, but also for the wider community and society in general. Members of the epistemic communities shall possess curiosity, focus, sense of belonging/togetherness, and sharing. When the curiosity is embodied in a form of scientific activity, it develops a sense of understanding towards certain object, enabling the emergence of new problems and challenges that require
settlement or solution. It requires sincerity and unity of the scientists, the greater the concern towards scientific problems existed in scientific public space, the bigger the chance to find the best answer towards specific problem. At the very least, the joint solution will create a sense of shared responsibility. This is where the role of academic community becomes very urgent to be considered.

B. DISCUSSION

1. Mapping of the Philosophy of Science

*Maps of Philosophy* as suggested by Ted Honderich in the Oxford Companion to Philosophy (1995: 927) classify the branches of philosophy into the *inner and outer circles of philosophy* as follows:

“Philosophy can be thought of as concerning what in the most general sense there is, what we can know and how, and the most general conditions that must be satisfied by any coherent thought. This give us the three items in the central circle. The items in the outer circle are less general and concern limited areas. They also tend to depend on the central items in ways that those do not depend on them in return.”

Epistemology, metaphysics, and logics belong to the main field and are central to the philosophical thought. However, in a philosophical classification epistemology falls under Group I along with the Philosophy of Science; metaphysics falls under Group II along with Philosophy of Religion; Aesthetics, Moral Philosophy and Political Philosophy falls under Group III; Logic, Philosophical logic, Philosophy of language, and Philosophy of mathematics falls under Group IV; Philosophy of education, Philosophy of history, Philosophy of law, and social philosophy falls under Group V (Honderich, 1995: 928). Therefore, it could be argued that epistemology and Philosophy of Science are field of studies that correlates to the method of knowing or understanding and conditioning particular thing, as well as determining certain method that is deemed to be appropriate to discover or investigate desired knowledge. In this knowledge-seeking process, cooperation among enthusiasts is needed, which leads to the birth of what-so-called epistemic communities.
Stathis Philos & Martin Curd in the Routledge Companion to Philosophy of Science, 2008: ixx emphasized that the Philosophy of Science correlates to the philosophical and fundamental matters appear inside the science itself. They pointed several problems in the Philosophy of Science as follows:

1. What is the aim of science and what is its method?
2. What is scientific theory and how do scientific theories relate to the world?
3. What is the structure and content of concepts such as causation, explanation, confirmation, theory, experiment, model, reduction, and probability?
4. What rules, if any, govern theory-change in science?
5. What is the function of experiment?
6. What role do values play in scientific decisions and how are they related to social, cultural, and gender factors? (Stathis Philos & Martin Curd, 2008: ixx).

Among those six problems of philosophy of science as mentioned above, problems 1 to 5 belong to the internal problem of science as they are related to the purpose/objective of science and methods, relations between scientific theory and reality, structure and scientific concept, the rule of the game in science, as well as experimental function. Whereas the sixth problem correlates more to the community, culture, and gender factor, and therefore the epistemic communities were established based on the 6th problem, particularly regarding the role of value of the scientists in scientific decisions.

2. Definition of the Epistemic Community

Curiosity (Thauma) towards natural phenomena and its surroundings, including on the subject of itself creates various types of knowledge, such as: ordinary knowledge, scientific knowledge, philosophical knowledge, and religious knowledge. Each of them possesses its own characteristics, leading to the birth of various epistemic communities in accordance with the ramification of science which continuously evolves and advances. Ordinary knowledge is based on the common sense that belongs to all structures of the society, causing its epistemic community to be more general in nature, even though it is possible to bring out a group of people who are concerned about a particular problem, which is essentially driven by the same hobbies,
preferences or tastes. For example: a group of certain type of car or motorcycle lovers who joins in an organization whose members have a strong attachment in figuring out more details about the vehicles they owned.

Scientific knowledge is built upon the rules of the game that are established based on objectivity, systematic basis, methodical basis, and universally applicable base, enabling the members of the epistemic community to focus on their area of expertise. Scientific activities among such epistemic communities are described by Resnik as follows.

“We can divide these aims into two categories, epistemic goals and practical goals. Science’s epistemic goals, i.e. those activities that advance human knowledge, include giving an accurate description of nature, developing explanatory theories and hypotheses, making reliable prediction, eliminating errors and biases, teaching science to the next generation of scientists, and informing the public about scientific ideas and facts. Science’s practical goals include solving problems in engineering, medicine, economics, agriculture, and other areas of applied research” (Resnik, 1998: 35).

Based on Resnik’s description, the epistemic community among scientists is a group of people that puts their concern to the theoretical and practical goals of science towards society through information and disclosure of scientific ideas and facts in various scientific fields. This type of epistemic community acts as an actor as well as a goalkeeper for the sustainability of scientific activities and processes.

Philosophical knowledge is a type of knowledge that tends to be more radical, because it directs the attention in depth to find a substance of the object that is being observed or analysed. This type of knowledge is also said to be comprehensive, because it covers the various problems of human life in all aspects such as: human, nature, and God. It is also said to be reflective, because it reflects back the universal values embodied in life into the flow of thought and intuition individually. Every philosopher has a responsibility to express his/her ideas in accordance to his/her radical, comprehensive, and reflective attitude. In fact, every philosopher puts his/her concern to the question of the value of truth, goodness, justice, and beauty as perennial problems. When the ideas are expressed in the society and tit-for-tat happens,
epistemic community is established, becoming a mainstream, adherents, and defenders of the philosopher's point of view.

Religious knowledge is a type of knowledge coming from the revelation that is believed to be true, correlates to the orientation of the balance between life and the hereafter. Scientists exploring this field of knowledge are required to have decent knowledge, understanding, and implementation of religious values in daily life. Therefore, preachers, observers, and even active listeners of various religious studies or forum could be classified as epistemic communities. Nevertheless, there is always an opportunity for different understanding of the religious matters to continuously evolve with the time. Therefore, the epistemic community in religious knowledge could develop into groups separated from each other, in accordance with the school of thought they adopted. But its purpose remains essentially the same, namely to develop curiosity and as an effort to enrich their insights about religious knowledge.

Hence, academic or epistemic community could be identified as a group of people with the same interest on particular subject matter as a concerned object (gegenstand), and an organisation to express curiosity; with multiple programs that are arranged and agreed upon together.

3. Characteristics of the Epistemic Community

Some characteristics of academic or epistemic community, particularly in scientific field possess distinct point of view that set them apart from common people’s point of views. First; the epistemic community in scientific world has the spirit of objectivity in viewing and putting research findings, enabling themselves to be emotionally unattached to the research object. Second; epistemic communities possess a spirit of open-mindedness as they realize that truth in scientific world always evolve with the passage of time. The results of scientific research obtained are open to any opportunities to be revised, improved, and developed, making the scientific truth not to stop at certain point. Third; they compete for professionalism as a scientific achievement in order to get their scientific results or products being recognized by the scientific community as findings. Fourth; they have certain rule of the game as a guidance called code of ethics of science or profession. Fifth; they produce several works that could be disseminated to
the public, drawing in recognition from others as well as useful responses as a stimulus triggering its members to continuously develop their findings. Sixth; they have a regular agenda–either monthly or annually to discuss multiple issues related to the field of science that becomes their focus of interest, so that the actuality is well preserved.

The fourth point pertaining scientific code of conduct or professional code of ethics is closely related to the standard of value that needs to be established for the members of the epistemic community. Katsoff (2006: 324) denotes value in three meanings, which are useful, good (or true or beautiful), and desireable (respond to something as desired or describing certain value).

On the other hand, Lacey suggested some definitions associated with values as follows

a. Something fundamental that people sought all their lives.

b. A quality or a valuable action, goodness, meaningful or fulfillment of one’s character for his/her life.

c. A quality or a partial action that defines personal identity as a form of evaluation, interpretation, and self formation.

d. A fundamental criterion to choose what is good among the various possible actions.

e. A fundamental standard held by a person when behaving for himself and others.

f. A “value object”, a precise relation to something that simultaneously forms a precious life that correlates to the identity of one’s personality. Value object includes the works of art, scientific theory, technology, sacred objects, culture, traditions, institutions, other people, and nature itself (Lacey, 1999: 23).

Based on the notion of the value as stated by Lacey, all these definitions should be able to live up the epistemic community, because the more professional a person is, the higher the judgment or assessment is attached to him/her, so that a clear standard value is necessarily needed.

Notonagoro breaks down the division of values into 3 categories:
1). Material value

2). Vital value


   The value of truth and goodness are the main basis for the epistemic community because truth is sought and coveted in every scientific activity, whereas goodness serves as fundamental morality for the scientific activity itself, especially regarding to its impact on people's life.

4. **Constraint of the Epistemic Communities**

   Every human activity, both individually or in groups, deals with obstacles, either external or internal constraints. External barriers could arise from other groups, perhaps the competitors or other scientific epistemic communities concerned with the subject matter involved. Some responses might be extreme, assuming that the discourse in certain epistemic community brings no benefit to the society. External barriers may also come from certain figures outside the epistemic community giving negative labelling throughout statements or writings, thus affecting and degrading the vital elements of the epistemic community.

   Internal barriers are more closely linked to the mental attitude of the members of the epistemic community itself. Some of the most common internal barriers include: psychological barriers among members (questioning their own work and thought, feeling overwhelmed by the work they do, feeling inferior in the field they are working in). Other internal obstacles can be generated by one or few members of the epistemic community, damaging the spirit of togetherness with other members. The protrusion of egocentric attitudes often occurs in a community because of the desire to exhibit greatness and ignore the opinions and views of other members.

   Another internal barrier is the lack of human resources (teachers or lecturers of Pancasila and Citizenship education), as most of them are not specifically educated in this field. Even there are several Pancasila lecturers who come from the field of science who were assigned to teach
this subject because of the lack of lecturers mastering the realm of Pancasilaist science itself. The recent phenomenon is quite alarming considering that students do not get sufficient materials and unsuitable learning methods, making the results are difficult to be accounted for.

It tends to be easier to handle the external barriers, but internal barriers require more serious control. Participation of the Ministry of Research, Technology and Higher Education is highly expected to provide academic recognition to the lecturers of Pancasila and Citizenship Education. In addition to that, regular trainings for the lecturers of the subjects are also required so that they could obtain an ability to update their lecture materials, as well as their teaching methods in accordance with contemporary issues evolving in the society.

5. Epistemic Communities of Pancasilaist Science

Common questions regarding Pancasila or its science that most people might want to figure out cover these questions: does the epistemic community of Pancasilaist science really exist? If any, what are the members of the epistemic community do? To address this questions, epistemic community of Pancasilaist science refers to four (4) activities as follows. First; activities performed by those under the professional organisation dealing with Pancasila ideology such as: the Association of Pancasila Lecturers (Himpunan Dosen MKWU). Directorate General of Higher Education of the Republic of Indonesia had conducted several meetings through Pancasila Congress held by the Center of Pancasila Studies, University of Gajah Mada to support them. The realisation of this professional organisation indeed has not yet Appear to be too visible, nevertheless the spirit of unity/togetherness as fellow educators of this science had already visible in several occasions such as throughout the Pancasila Congress and meetings with the Directorate General of Higher Education. Lately, the Directorate held some sort of training for Pancasila and Citizenship lecturers titled Technical Assistance to Strengthen Competence for the Pancasila and Citizenship Lecturers (Bimbingan Teknis Penguatan Kompetensi Dosen Pancasila Dan Kewarganegaraan) conducted on 15th – 16th of September 2016 in Jakarta. The main objectives are to improve lecturer's competence upon the subject of Pancasila and Civic studies in mastering core teaching materials that supports the processes of mental revolution and the realisation of “Pancasila citizens” having faith in the ideology, to reinforce a sense of
nationalism, and to strengthen the attachment to the homeland. In addition to that, the objective of this training is to improve the competence of lecturers in mastering the effective learning methods for the realisation of Pancasila and Citizenship course objectives.

Second; activities undertaken by groups of Pancasila activists in order to anticipate activities carried out by parties who are considered to be against it (anti-ideology of Pancasila). They are usually conducted in the form of seminars, workshops, and discussions to strengthen the spirit of nationalism so as not to be easily provoked by anti-Pancasila movements. Such activities are usually carried out in order to commemorate the Pancasila Sanctity Day (October 1), the birth of Pancasila/Pancasila Day (June 1), or the National Awakening Day (May 20). Although the anniversary is conducted annually, participants, observers, and the activists of Pancasila have been developing certain mindset that some kind of academic community establishment is very essential to maintain ideological spirit.

Activities in the form of discourse and discussion usually criticise various violation phenomena against the ideology of Pancasila with particular expectation to put Pancasila as a normative sign in the life of society, nation, and state.

Third; activities among lecturers, students, and researchers/observers of Pancasila ideology in the field of education and in various social media discussing about Pancasila values in social life, as well as national and state levels. Activities in the form of discourse and discussion usually criticize various phenomenon of violation of the ideology of Pancasila with the aim of placing Pancasila as a normative sign in the life of society, nation, and state.

Fourth; forging and instilling ideological doctrine among governments, civil servants, and military to foster the spirit of nationalism and awareness towards Pancasila values. Such thing is usually doctrinal, one-way, and uplifts militancy spirit upon ideological values of Pancasila on one hand, but invites criticism that ideology is hard to develop into science, as one of the characteristics of science is open minded, open to criticisms.
6. Designing Epistemic Communities of Pancasila

Professional organisation seemed to be one of the most feasible options to accommodate various challenges that arise in the process of national character education when professional needs toward Pancasila lecturers are considerably increasing. National character education cannot be carried out casually because the process of instilling mentality and morality of the nation requires appropriate thoughts and methods. Cicero, a Roman philosopher once said: “Magna est vis consuetudinis”, the influence of habit or custom is firmly attached (Marwoto, et al, 2004: 142). Therefore, a community that does not merely act to think, but also act what they have been thinking of is substantially needed, and thus a good living attitude shall also be instilled throughout a good intention (bona fide). Several things to consider in order to design the epistemic communities of Pancasila include the following matters.

Firstly; Pancasila education essentially serves as an effort to cultivate values, so that education would not solely come into contact with the cognitive domain (related to factual knowledge), but also the affective aspect (feelings, emotions, such as a sense of belonging to the homeland), as well as psychomotoric aspect (physical activity associated with mental processes). Thus, a more comprehensive educational method is necessary for students. In this case, none of the educational methods dominates the learning process, because each method is essentially unique with its own advantages and disadvantages. Nevertheless, in Pancasila education, it is necessary to have an exemplary aspect, an ideal figure who could be referred to (for example: anti corruption activist, environmental conservation activist, and so on).

Secondly; Pancasila lecturers as academic individuals shall equip themselves with various ideological knowledge, life experience (lebenswelt), life philosophy (weltanschauung), and decent understanding on the constitution. It is also important to demonstrate itself as an actor of Pancasila itself because consistency is very substantial in conveying value to other people. In order to do so, he/she should have a commitment to implement the values he/she taught to himself/herself at the first place.

Thirdly; professional organisations of the Pancasila education were developed between two tensions, nationality and globality, meaning that both interests could be accommodated proportionally. A great nation is that who can mingle in an international sphere, therefore an ability to read and interpret ideological values of the nation in the midst of world civilization is very important.
C. CONCLUSION

Based on the aforementioned explanations, the existence of the academic or epistemic community of Pancasilaist science in general has been going on, both routinely and incidentally. Thus its academic atmosphere could be developed through formal, informal, and non-formal education by presenting awareness aspect towards Indonesian national identity whilst maintaining a sense of belonging among members of the community.

Scientific struggle in the Pancasilaist science encounters several constraints such as the lack of human resources focusing on the development of this science, causing the value of professionalism to be further maintained and improved. Additionally, an epistemic community is required in this field of science in order to be able to devote and put better attention to the issues that develop around the ideology, so that teachers or lecturers could be able to develop and to update the learning materials from time to time.

Scientific professionalism requires an organisation, association— or whatever it is— in order to be able to accommodate and list down the challenges that are currently being dealt with in the particular field, so that it would lead to the emergence of attentive attitude and responsibility as well as scientific autonomy as a form of professionalism.

Pancasilaist science itself lies in the space of reality (das Sein) in the form of public life, nation, and state on one side; but also in the normative space (das Sollen) in the form of values that become guidance in the life of society, nation and state on the other side.
REFERENCES


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