



Fr. Antonius Alex Lesomar

The John Paul II Catholic University of Lublin (Poland)

ORCID: 0000-0002-5294-333X

Ethics: A Guide for Science

Etyka: Przewodnik dla nauki

Abstract

Ethics is crucial for science. This article aims to outline the relationship between ethics and science. Science as a profession cannot be separated from ethics. Scientists require not only rigorous methods and procedures in their work but also ethics to guide them. They are demanded as experts in their fields and as good persons. Ordinary people (non-scientific society) trust reliable scientists who have good competence, skill and personality. Hence, integration of science and ethics brings up epistemic trust, on the one hand among scientists and on the other hand among scientists and non-scientific society. There are various kinds of ethics that can be a guide for the scientific work of scientists. However, in this article I offer Karol Wojtyła's personalist ethics based on the philosophy of being as a guide for science.

Key words: *Ethics, Personalist Ethics, Science, Scientists, Karol Wojtyła.*

Abstrakt

Etyka to ważna dziedzina dla nauki. Celem poniższego artykułu jest nakreślenie relacji pomiędzy etyką i nauką. Nauka jako dziedzina wiedzy nie może być oddzielona od etyki. Naukowcy potrzebują nie tylko ścisłych metod i procedur w swojej pracy, ale także etyki, która by służyła im za przewodnika. Oczekuje się, że będą fachowcami w swoich dziedzinach, ale także dobrymi ludźmi. Zwykli ludźmi (spoza społeczności naukowej) ufają naukowcom, na których można polegać, którzy są kompetentni, posiadają umiejętności i dojrzałą osobowość. Stąd integracja nauki oraz etyki pozwala zbudować poznawcze zaufanie; z jednej strony wśród naukowców, a z drugiej pomiędzy naukowcami oraz nienaukowcami. Istnieją różne rodzaje etyki, które mogą być przewodnikami w pracy naukowej. W tym artykule przedstawiam personalistyczną etykę Karola Wojtyły opartą na filozofii bytu jako przewodnika dla nauki.

Słowa kluczowe: *Ethics, Personalist Ethics, Science, Scientists, Karol Wojtyła.*

Introduction

Science, either natural science, social science, or the humanities, is developing so rapidly nowadays. Many scientific inventions are obtained from research activities. These researches are carried out for the benefit of science and also to fulfill the needs and demands of society. The question is, whether researchers conducting scientific research need guidance in addition to their research procedures. Or in other words, does science need ethics in scientific activities?

Science as an Institution

Science is not only understood as knowledge but also as an institution. It means that science is a profession that is distinguished from so many avocations in society. (Bernal, 1954) In other words, science is what scientists do. Scientists who carry out scientific activities are always connected to these three groups: their patrons, partners, and the public. The function of patrons – companies, and departments of government or also corporations – is to provide money for scientists' works because scientists need money to support their scientific activities, so they remain in contact with these groups. Of course, these groups continue to help scientists not be separated from their goals, whether for economic (commercial), political or security benefits, and so on. Giving money keeps scientists attached to the patron's

goals which might be – although not necessarily – different from the goals of scientists; after all, they, however, might give money to benefit science as such. In addition, scientists also need collaboration with fellow scientists and someone else or a team to conduct scientific research activities. These groups are called partners. The third group, the public or society who is the main judge, determines the meaning of the value of knowledge. (Bernal, 1954) Meanwhile, the scientists that I mean here are those who do scientific work at universities.

Function of Science

In general, science has two functions called the instrumental and non-instrumental functions. The instrumental function means that science becomes a tool to serve economic, security, political interests, and so on. Scientists carry out scientific activities or research based on the interests of those who pay for their research projects, such as universities, companies, and governments. By this function, the scientists will still depend on the party that sponsors their scientific projects. It will be a serious debate if we question the independence and autonomy of scientists in conducting their scientific researches. Are they truly independent in aiming to discover the truth? Do they work only to reach the interests of certain parties who sponsor their researches? It will be discussed further in the third part of this paper. Furthermore, the non-intellectual function of science in universities is better understood as an “idea generator”. (Ziman, 2003, p. 18) In an open and pluralistic society, science has several social functions that are very valuable, including first, science functions to shape the world picture. It means that science enlightens people and what is found in scientific research becomes the “daily knowledge” of everyone. For instance, in the context of the Lublin Philosophical School, as it is claimed that we start from “everyday experience” but that experience is shaped by “daily knowledge” which is shaped by science. Second, science gives rise to scientific rationality. That means science forms a critical scientific attitude towards issues and problems in society. The public is open to debate these issues. Third, science enlightens practitioners and independent experts. Scientists at universities educate and produce educated people who have knowledge and skills. These practitioners then have a social role in society’s lives. They are like doctors, engineers and lawyers. In addition, universities produce individual scientific experts who form communities by providing advice or consulting services to the community, especially in the economic and political fields. (Ziman, 2003)

These two functions can also be distinguished in several other characteristics, including transparency, generality, critical validity, and entanglement of interests. In the aspect of transparency, these two functions are not different in their aims, but their social practices. Non-instrumental functions are very open to the community so that science can provide information and allow for discourse and debate in society. Meanwhile, instrumental functions only produce intellectual property and maintain its confidentiality (Ziman, 2003), in other words instrumental functions can be privatized. In the aspect of generality, non-instrumental science is more imaginative and exploratory and integrates a pluralistic society. Meanwhile, the instrumental function aims to solve problems to fulfill the special needs of society. (Ziman, 2003) The critical validity aspect of the non-instrumental science function shows a more lack of practical side but emphasizes the public process that includes critical experimentation and debate. While the function of instrumental science shows a more practical side of science. The entanglement aspect shows that non-instrumental functions must be “value-free” and “disinterested,” or at least “non-partisan” and “neutral”. (Ziman, 2003, p. 22) Meanwhile, instrumental science functions are more concerned about achieving certain goals. Therefore, scientific activities are greatly influenced by who sponsored them. (Ziman, 2003)

Science Requires Ethics

Does science require ethics? Of course, science here is intended as an institution or as a profession that carries out scientific research. Ethics are needed to regulate and direct the behavior of scientists so that unethical behavior can be avoided. Unethical behavior is the behavior that shows basic absence and ethical motivation. (Pruzan, 2016) Unethical behavior is in the form of

1. Harm to sentient beings and the environment;
2. Lack of informed consent and the invasion of privacy;
3. Deception and coercion. (Pruzan, 2016)

In addition to this unethical behavior, there are also ethical problems faced by scientists in carrying out scientific activities, including:

- Failing to retain significant research data for a reasonable period of time.
- Maintaining inadequate records, especially for results that are published or relied on by others.
- Not allowing peers to have reasonable access to unique research materials or data.
- Inadequately supervising research subordinates or exploiting them.

- Referring or requesting authorship based on of services/contributions not significantly related to the project reported on and omitting someone from the list of authors who did make a significant contribution.
- Using inappropriate methods to enhance the significance of the findings.
- Misrepresenting speculations as fact or releasing preliminary results, particularly in the public media. (Pruzan, 2016)

These are numbers of problems in the scientific activity of scientists besides the problems in relations with non-scientific societies, such as the problem of independence, finance, and so forth. Scientists are demanded to have good personalities and behaviors. We can imagine Nazi doctors who obtained important scientific results. Are they great scientists who became morally bad people? Are they “being morally good” – included into doing science? Therefore, such demand is natural and inevitable because the work of scientists is in touch with society’s interest. Thus, there must be ethical integration or involvement in the work of scientists. Scientists should not only perform their role responsibly when conducting their works but also consider their basic moral responsibility. (Douglas, 2009)

Ethics and Scientific Research Procedures: Good Person and Good Scientist

From the problems mentioned above, two main things can be distinguished, called ethics and scientific research activities including procedures and methods. In scientific studies there are some procedures that must be conducted by researchers. The procedure itself becomes a guideline for researchers. Thus, if the researchers carry out scientific activities with established procedures, their activities will achieve the expected results since the start of the research project. Working according to strict procedures is enough for a scientist or researcher. This is possible because there is value in the process so there is no need for special ethics to be a guide for scientists, as Stefan Amsterdamski stated “moja etyka to moja metodologia,” my ethics is my methodology. (Amsterdamski, 1984, p. 314)

But keep in mind that scientists work in teams and not work for themselves. And, the results of their research will be used by ordinary people (non-scientific society) who do not know their work processes. Therefore, scientists have a responsibility for the integrity of the research. Things that are demanded from scientists are not only a good procedure of research but also a good person. It means, they not only act according to procedures but their actions are also based on the principles of good ethics. In other words,

a scientist is not only a professional scientist but also a good person. Emphasis on the procedure of scientific activities and ethics has a relationship with responsibility. This emphasis is intended so that scientists or researchers realize that they have professional and moral responsibility for the process and results of their research. They are also responsible for the impact of their research activities on people's lives, or follow what is said by Carl Mitcham – that in addition to having individual and collective responsibilities among scientists, they also have co-responsibility in relation to society. (Mitcham, 2003) Scientists are responsible for professional development, science education and public policy. (Mitcham, 2003)

Specifically, for the issue of the independence or autonomy of science as a profession, science and scientists cannot be separated in relation to non-scientific society. The interests of the non-scientific society often enter the realm of scientific activities of scientists. There are at least two ways to help scientists maintain their autonomy, called indirect collaboration with non-scientific societies, for example in carrying out research; they are not directly related to the government or certain companies. The second way is the role of ethics in the scientific activities of scientists.

Epistemic Trust as a Result of the Integration of Ethics in Science

Epistemic trust is a special type of trust. The trust is related to one's capacity in transmitting knowledge or as a provider of information. (Wilholt, 2013; Carrier, 2013) Epistemic trust can be understood as limited to the trust between scientists as peers of researchers and it can also be understood as trust from non-scientific societies (Policy-makers, legislators, investors, and activists, as well as ordinary people) to scientists and their institutions. This trust is important because it relates to decisions that will be taken by non-scientific society. (Carrier, 2013)

Scientists struggle also to gain the trust of non-scientific society. To get that trust, scientists show that cooperation in science requires "trust in the moral sense", so that they can control and evaluate each other's scientific behavior. The trust of non-scientific societies arises, at first, not because of the output of a scientist's research but because of the good attitude of the scientists shown in carrying out their scientific activities. The scientists coordinate the procedure of scientific activity with good ethical values. Thus, the non-scientific community sees scientists as worthy information providers because they display good moral attitudes. The non-scientific trust in scientists is not only about the output of their scientific research but more about their integrity and attitude towards personal humanity and the nature of creation.

Personalist Ethics as Guide for Science

We face also clashes when the question arises: what kind of ethics should be used as a guide for science? Because there are various types of ethics such as virtue ethics, deontological ethics, consequentialist ethics, or Scheler's value ethics, and many other types of ethics. In this paper, I refer to the personalist ethics of Karol Wojtyła. It is underlined in this paper since it is centered on Man as a person. Person, here, refers to the unity and wholeness of actual and real I. All activities, either unconscious (what happens in men) or conscious act (action), derive from the person as the subject and actor. It can be said that the conscious person or I is the subject and actor of a conscious action or *actus humanus* in the terminology of scholastic philosophy. Therefore, the person is responsible for the action and its effects (all foreseeable effects). Scientific activities carried out by scientists are a kind of conscious action. Thus, in carrying out scientific research projects, scientists should be held accountable for their conscious actions and for the foreseeable effects of their scientific actions.

Scientific activities carried out by scientists engage the issue of transcendence of the person in action. Wojtyła mentions two kinds of transcendence of the person in action, called horizontal and vertical. (Wojtyła, 1979) Horizontal transcendence means the actions of the person are directed to objects outside himself, including others. There is a relation of the person as subject and other objects outside of himself. Regarding transcendence of action in the context of scientific activities, scientists objectivize and change objects outside of themselves through their scientific activities. But there is a vertical transcendence that highlights the person as both the subject and the object of his actions and it is the transcendence of the person that Wojtyła more focuses on. According to him, through action, the person determines himself into a good or a bad person. A Person will achieve self-fulfillment if he governs himself to conduct good and avoids evil. On the other hand, the person fails to achieve self-fulfillment if he conducts evil. Accordingly, moral value presupposes performance of action in the moment of efficacy. Hence, the person is not only as subject of morality (moral good and evil) "but also of the efficient cause of that good and evil." (Wojtyła, 1993, p. 97) He becomes the subject or efficient cause because of the rational nature. (Wojtyła, 1993) In the moment of efficacy the person governs himself through will and link to reason and conscience. Will determines the action based on information on the truth from reason and conscience. Morality appears because the person knows what is good or evil from the reason. However,

here, the role of will and reason just express the person due to he is the subject or actor of action. As much as scientific activities are concerned, so to speak, scientists could constitute themselves as good or bad persons. Through scientific actions, they perform the personalistic value of actions that express their personalities; due to performing personalistic value of action, the value of the person. (Wojtyła, 1979)

By this explanation, it can be said that scientists who do their scientific work (science) do not only objectify anything outside of themselves but also objectify themselves. The scientific work of scientists not only affects the others and objects outside but also themselves. It, thus, means with the help of Personalist Ethics, scientists carry out their scientific work by considering human dignity as a person who must be respected. Their work is to change objects and other's life and also constitute their selves. (Wojtyła, 1979) As such, Personalist Ethics could help and guide scientists to avoid unethical action and go toward self-fulfillment through their good action based on the truth.

Conclusion

Science exists to develop and shape society. The researches carried out by scientists have a contribution to society that is to fulfill human needs and solve human problems through instrumental and non-instrumental functions. However, science must bind itself to ethics. For if so, science that ignores ethics becomes "less scientific" in a sense, as "must" indicates a necessary connection, and if it is a necessary connection, it belongs to the nature of science because through ethics and philosophical reflections, scientists are reminded of the inevitable moral responsibility, that is, the responsibility for human dignity as a person. Ethics also helps scientists to their integrity and helps to solve various problems in scientific research, and one of the crucial problems is the independence of scientists. Through ethics and philosophical reflection, scientists and non-scientific societies are reminded that science is not to destroy the nature of Man and other creatures. Conversely, it functions to serve human life to be more human and to make the world a more human place. As such, the integration of ethics in scientific activities ultimately get to increase the trust between scientists and the trust between scientists and non-scientific societies.

Bibliography

- Amsterdamski, S. (1984). Kryzys Scjentyzmu. In: S. Novak (ed.). *Wizje Człowieka i Społeczeństwa w Teoriach i Badaniach Naukowych*. Warszawa: PWN.

- Bernal, J. D. (1954). *Science in History*. Harmondsworth: Pequin Book, Ltd.
- Carrier, M. (2013). "Values and Objectivity in Science: Value-Ladenness, Pluralism and the Epistemic Attitude". In: *Science & Education*, vol. 22, issue 10.
- Douglas, H. E. (2009). *Science, Policy, and the Value-Free Ideal*. Pittsburgh: University of Pittsburgh.
- Mitcham, C. (2003). "Co-Responsibility for Research Integrity". In: *Science and Engineering Ethics*, vol. 9, issue 2.
- Pruzan, P. (2016). *Research Methodology: The Aims, Practices and Ethics of Science*. Switzerland: Springer International Publishing.
- Wilholt, T. (2013). "Epistemic Trust in Science". In: *The British Journal for the Philosophy of Science*, vol. 64, no 2.
- Wojtyła, K. (1979). *Acting Person*. Dordrecht: D. Reidel Publishing Company.
- Wojtyła, K. (1993). Human Nature as the Basis of Ethical Formation. In: K. Wojtyła (ed.). *Person and Community Selected Essays*. New York: Peter Lang.
- Ziman, J. (2003). "Non-Instrumental Role of Science". In: *Science and Engineering Ethics*, vol. 9, issue 1.

Correspondence concerning this paper should be addressed to Fr. Antonius Alex Lesomar, M.A. – Diocesan priest of Amboina Dioces, Indonesia. At present – PhD Student at the Department of Metaphysics and Philosophical Anthropology – Faculty of Philosophy, The John Paul II Catholic University of Lublin, Poland.

E-mail: alex_lesomar@yahoo.com