



World Scientific News

WSN 57 (2016) 324-331

EISSN 2392-2192

A few words on ethics of scientific research

Marzena Jankowska, Małgorzata Martynoga

Wrocław University of Economics,
Faculty of Management Economy and Tourism in Jelenia Góra, Poland

E-mail address: jankowska.martynoga@gmail.com

ABSTRACT

Dynamics of economic life has grown significantly during past several decades. All transformations taking place in the world are also associated with ethics. It is important to carry out scientific research with preservation of the highest reliability and credibility. The scientific ethos must be a primary value for each researcher, because reliable scientific studies should be justified first of all by significant lack of knowledge. The advancing liberalization and globalization contributes to spread of immoral behaviors, however violation of ethical norms can be leveled, if correct and cohesive principles of ethical conducts within academic circles are employed.

Keywords: ethics; science; research; non-ethical behaviors

1. INTRODUCTION

Dynamics of economic life has grown significantly during past several decades. All transformations taking place in the world are also associated with ethics. Globalization and global reach of the Internet provide an opportunity to access results of works carried out by scientists in every field around the world, what supports the shift of boundaries between what is ethical and that is immoral. In the era of advancing globalization, it is important to carry out scientific research with preservation of the highest reliability and credibility. It must be kept in mind that results of those studies will influence the contemporary world even if it seems that individual impact will go unnoticed at the global scale.

Purpose of the article is to present the role of ethics in scientific research. The deliberations have been based on literature studies and conclusions from analyses. The presented conclusions address the need to improve awareness of application of common ethical conduct rules in academic circles.

2. ETHICS IN SCIENTIFIC RESEARCH

Each man adopts a certain system of values and moral norms within a socialization process. However, it cannot be presumed that each scientist will follow the moral principles instilled in young years of their lives. There are also other factors: origin, cultural differences or personal characteristics. But still, standards of good research practice should apply to all scientists, regardless the scientific discipline that they practice. The dictionary definition of ethics is: a collection of principles, standards of conducts applicable in a given community, morality. While the research ethics can be understood as protection of right and personal good of individuals that take part in the realized research procedure. It is a section of ethics that considers ethical aspects of research activities. Principles that apply to the researchers during performance of research are: recognition of autonomy of the researched subjects, striving for maximization of advantages and minimization of costs, which are to be incurred by participants, and for just distribution of benefits. By analyzing the system of moral obligations applicable in various cultures and eras, certain regularities can be noticed such as respect to others, restraining from harming or objectifying them - these are guidelines that make foundation of a universal collection of moral rules. All studies that break those principles can be assumed unethical [17]. The research practice was governed by traditional values functioning within the tradition of academic ethos for numerous year. Currently, it is complemented by various internal regulations. These are among others:

- in the world: *ORI* (Office of Research Integrity), *ESF* (European Science Foundation), *EGE* (European Group on Ethics In Science and New Technologies);
- in Poland: *Dobre obyczaje w nauce. Zbiór zasad i wytycznych* (*Good customs in science*, 2001), *Dobra praktyka badań naukowych- rekomendacje* (*Good practice of scientific research, recommendations*, 2004).

It is crucial to develop principles and good practices in managing a university, going being the requirements of general law. The power of a university lays in creative, original and high-quality scientific research, so pathologies within the whole academic environment must be opposed. Therefore, standards enclosed in ethical codes addressed to the whole academic society, also in Poland, are widely distributed, because universities are institutions, whose social prestige and effectiveness of work depend extensively on their ethos, reflecting multi-annual tradition of the academic life.

3. ECONOMIC SCIENTIFIC RESEARCH. ECONOMY IN THE WORLD OF VALUES

Science is understood as knowledge achieved thanks to scientific methodology, and its purpose is presented as a description and explanation, so special attention should be paid to

the normative aspect of the methodology as a paradigm of reliable scientific inquiry. While the economic scientific research is comprehended as widely understood analyses of economic phenomena, presented in a form of reports or expertises, developed with research workshops, employing economic theories and recognized scientific methods for processing and analyzing empirical information and statistical data. A significant feature is to use the results from economic scientific research in practice. [24]

Economy belongs to social sciences, which from a core of empirical sciences together with the science of nature. [9] However, social facts are not equal to natural facts. Their predictability is also different, because social facts are much more irrational. It is much easier to understand social phenomena after they occur than to predict them. Hence, to a great extent, social sciences are a description, explanation of social events after certain facts occur. Assumption of full predictability of social changes equals anticipation of any cultural innovations and transformations, what is rather an impossible undertaking. F. Znaniecki introduces a notion of “humanistic coefficient”, believing that a researcher in the field of social sciences researches not cognition in itself but historic data, such as it is historically presented to the living people. [26]

Economy is not perceived as science where deep methodological strictness emerges. It can certainly be partially explained by the already stressed specificity of the social sciences, including economy, in relation to other empirical sciences. [15] However, it must be borne in mind that specificity of the research area is a different thing than lack of in-depth methodological reflexion. A proof of methodological maturity is posed by various elements: selection of empirical material, quality of assumed research hypotheses and their verifications, reference to previous scientific works from a given field of analyses.

There are various concepts co-existing in the economy, often referring to various paradigms. It is important that acceptance of the methodological diversity in the economy is not interpreted as a lack of need for in-depth methodological reflexion, as it endangers the economy to allegations of remaining on a “pre-scientific stage”. [15] And what about connections to ethics? Here we give ground to well-known economists. Most of them believe that differentiation into positive and normative lets the economists avoid any reflexions about ethics. [13]

J.N. Keynes used the “positive economy” term to differ the approach consisting in seeking knowledge about facts, from striving for criteria allowing to find out what should be there (normative economy), and from specific kind of applied economy, i.e. from presentation of particular methods for achieving specified objectives. [11]

Myrdal, in light of impossibility to achieve scientific objectivism, drew a conclusion that striving to positive economy is doomed to failure. [14] Marshall emphasized that maximum neutrality is necessary in order to maintain the status of economy as science. [12] M. Weber made great contribution to shaping the model of science that would be neutral in relation to competing normative systems. [23]

In his deliberations he stressed that a researcher will never be able to get completely free from cultural, ideological or political influences, and at the same time pointed that the conclusions related to facts are highly different from those related to values, so during scientific research it is impossible to decide reality of the latter. However, researchers of the social sciences should get involved in discussion on the values, because it gives a possibility to evaluate their internal cohesion and impact on objectives that we want to achieve - on particular stages of social relationships development.

4. NON-ETHICAL BEHAVIORS

Ethics in economy is currently understood as a field of interest of the general ethics. The problems of scientific research ethics have been discussed in the scientific world for years. Therefore, the ethical issues concern everyone, who takes part in the process. It is doubtless that the ethical notion in the research works are both inevitable and generating numerous controversial situations.

Despite increasingly stricter rigor and control, science still suffers enormous loss because of immoral behaviors within a research procedure. Why are there so many unethical behaviors around? An example of a good answer for this question are words by J. Jackson - the reason is the omni-present "hypermoralism that gives birth to hypocrisy and cynicism", according to the author it is "the bold shield that protects the moral helplessness and void". [10] Standards function in every community, regulating moral and unethical behaviors. Standards point the duty.

While the moral duty is justified axiologically. In its explanation, it refers to a certain value of the moral nature. There are two manners of justifying validity of moral standards in contemporary ethics - teleological and deontological. This division was introduced by the English ethicist - C. Broad. [2] According to the author, the deontological ones are those that assess actions as good or evil, regardless the caused effects, while the teleological ones are those that assess actions only by referring to predictable results. Deontology does not negate the fact that the final effect of an action is significant, but states that the basis for validity of actions is their subject, and if this subject is naturally evil, the action is recognized as immoral, regardless of its effectiveness. [3]

Unethical behaviors are becoming increasingly more popular in scientific research, and it is hard to recognize them as incidental. Reasons are various: ambitions, the urge for fame, rivalry, convenience, laziness, the willingness to achieve the final goal as soon as possible and with the smallest effort and financial outlays, lack of self-discipline, time pressure, pressure of others, the willingness for the work effects to look more spectacular, and the desire for quick enrichment. D.Resnik introduces the notion of "Bad Apple" to describe scientists with immoral actions. He believes that being ethical defines us as human beings, but there are still people within scientific circles, that follow unethical behavior as a result of institutional pressures, excessive ambition or economic reasons. [16]

Anglo-Saxon literature on the scientific research ethics presents three types of violations in terms of unfair behaviors in science - in their popularized narrow comprehension: [18,22] data fabrication, forgery of results and plagiarism. G.Eysenbach in its report [7] conducted reflections on the detection and prevention of offenses in the academic environment using the Internet, calling them "cyber-plagiarism".

The most common phenomenon is plagiarism taking various forms, publication of results developed by other researchers, "false" co-authorship, tolerating cases of unethical behavior because of anxiety of negative consequences from the side of the environment, taking achievements of others by unauthorized utilization of effects of their work, rejection of results of other research being afraid that they can exert negative influence on evaluation of own work, omission of some works in the bibliography on purpose, using quotations from works without providing a source of the borrowing in the works cited list, manipulations of information, publication of false results. [1]

There is also negligence in research actions, in superficial analysis of the collected empirical material, careless editing of scientific publications and weak protection of the research documentation, as well as wastefulness, neglecting environmental protection requirements and failure to conform to safety requirements related to performance of research.

Results of research analysis [8] of 2009 suggest that 2% of the interviewed scientists admitted unreliability and abuses in their research work at least once, and in case of behaviors observed in other scientists, the results are 14% to even 72%.

The market of empirical economic research is developing rapidly in Poland. The research area is very wide, and they are burdened with risk of varied ethical dilemma. A reason for such a state of affairs are objectives of the research and expertises results. Ethical conflicts do not emerge in case of cognitive research or recommendation expertises. But they are frequent while ordering research with a purpose to support protection of the threatened interests of the ordering party, e.g. lobbying in various matter or improvement of the ordering party's image.

The ordered project can be also used as a tool of competitive fight. The researchers can also give in to intermediate pressure, as they do not want to come afoul of governing authorities, mitigating the expression of the expertises on purpose. Another example is manipulation of statistical data with the research center's intention to satisfy the ordering party, hoping to receive orders in the future. [24]

Unique specificity is ascribed to research in the Internet environment. The globalization of research activities is associated with ethical issues such as, the reliability of the procedure, and the role of research scientists in the context of loss of identity. [21] The possibility to use the Internet as a research tool are perceived by an increasing number of representatives from various fields of science. There are also various ethical problems related to the research in the network [17]:

- consent to take part in the research (Internet communication is characterized with its anonymous nature - however it does not justify the lack of necessity to get a consent for participation in the research - and superficial character - despite the fact that the researcher got the consent, they cannot be sure if the subject understood the provided information);
- explanation of the investigation character (the subject should be informed about who organizes and carried out the research, what is their purpose and how the collected data will be used, what is the research procedure and what might be the research costs);
- disturbance of privacy and violation of the research results confidentiality (the first case is mentioned when the subject loose control over the type of personal information that they reveal; the second emerges when the confidentiality breach takes place where the research participants information is made available to someone and the interested parties do not know about it);
- awarding the research participants (it is important that each participants can use what they got, and the researcher should always make sure whether the gift reached every participant of the research);
- participation of children in the research (a researcher is not always capable of identifying their participation);

- necessity to develop instruction related to situation when disturbing information come into light (e.g. suicide thoughts);
- theft of research ideas.

Is it possible that ethics and research can go hand in hand? G.del Re [5] believes that moral problems are associated with human nature, traditions and socio-political system, they do not specifically relate only to the science, and practice of science without ethical issues is not possible.

5. CONCLUSIONS

A researcher's obligation is to carry out the research in a manner compliant with the principles of the research art, with respects for the co-workers and participants of the research, and for the natural environment. The scientific ethos must be a primary value for each researcher, because reliable scientific studies should be justified first of all by significant lack of knowledge. Moral particularism - nowadays especially defended by J. Dancy [4] - strictly denies that creation of precise moral norms is possible at all. According to the above, there are not universal ethical principles, and evaluation of actions in moral terms always depends on the situation, which given actions were undertaken in. Will this so-called "dual morality" be increasingly more popular in scientific research? There is certainly a breakthrough in methodological reflexions on the ethics of scientific research in all fields. Scientists and students should learn to differentiate and make often dramatic choice between the methodological strictness, imperative of pursuing the truth by the most objective path, and on the other hand - the possibility that the research can make harm. This happened in case of research over conformism (famous experiments by S. Ash). Under what conditions, social experiments are justified, from an ethical point of view? Does experimentation has only got a pejorative connotation? Many researchers speak about the moral acceptability of the experiments [6,25], but they agree as to comply with the following ethical principles: no evil, charity, respect for autonomy, justice. (However, this is a topic for a separate discussion). The advancing liberalization - in a local, regional, state and global perspective - contributes to popularization of immoral behaviors, but violation of ethical norms can be leveled is cohesive rules of ethical conduct are applied. Honesty, reliability, critical usage of bureaucratic tools is a foundation of healthy academic relations based on trust.

References

- [1] P. Blukacz, Dylematy etyczne w badaniach naukowych w dobie globalizacji, *Zeszyty Naukowe Uniwersytetu Szczecińskiego, Współczesne problemy ekonomiczne*, 1 (2014).
- [2] C. Broad, *Ethics and the History of Philosophy*, London: Routledge, 1952; Reprint 2000.
- [3] B. Chyrowicz, Argumentacja we współczesnych debatach bioetycznych, *Etyczne i prawne granice badań naukowych*, ed. W. Galewicz, Kraków 2009.

- [4] J. Dancy, *Ethics Without Principles*, Oxford University Press, 2004.
- [5] G. Del Re, *Ethics and Science*, *HYLE - International Journal for Philosophy of Chemistry* 7(2) (2001) 86-102
- [6] N. Doorn, S. Spruit, Z. Robaey, Editors' Overview: Experiments, Ethics and New Technologies, *Science and Engineering Ethics*, 22 (2016) 607-611.
- [7] G. Eysenbach, Report of a case of cyberplagiarism - and reflections on detecting and preventing academic misconduct using the Internet, *Journal of Medical Internet Research* 2(1) (2000) 28-38.
- [8] D. Fanelli, How many scientists fabricate and falsify research? A systematic review and meta-analysis of survey data. *PLoS One* 4(5) (2009) e5738.
- [9] Z. Hajduk, *Ogólna metodologia nauk*, Wydawnictwo KUL, Lublin 2005.
- [10] J. Jackson, *An Introduction to Business Ethics*, Blackwell Publishers, Ltd., Oxford 1996.
- [11] J.N. Keynes, *The Scope and Method of Political Economy*, Macmillan & Co., London 1891 (2001).
- [12] A. Marshall, *Industry and Trade*, Macmillan & Co., London 1932.
- [13] D. McCloskey, *The Secret Sins of Economics*, Prickly Paradigm Press, Chicago 2002.
- [14] G. Myrdal, *Value in Social Theory*, Routledge & Kegan Paul, London 1958.
- [15] M. Ratajczak, Dylematy współczesnej ekonomii, *Zeszyty Naukowe Polskiego Towarzystwa Ekonomicznego*, 6 (2008).
- [16] D. Resnik, What is Ethics in Research and why is it important? *Monthly Newsletter University of Arizona*, 8 (2008).
- [17] P. Siuda, Prowadzenie badań w Internecie - podstawowe problemy etyczne, *Ruch Prawniczy, Ekonomiczny i Socjologiczny*, 4/2010.
- [18] H.K. Schachman, What is misconduct in Science? D. Elliot, J.E. Stern (ed.), *Research Ethics. A Reader*, University Press of New England, 1997.
- [19] J.A. Schumpeter, *History of Economic Analysis*, Routledge, London 2006.
- [20] N.H. Steneck, M.D. Scheetz, editors. *Investigating Research Integrity Proceedings of the First ORI Research Conference on Research Integrity*, 2002.
- [21] A.M. Taranu et al., How Does the Internet-based Media Restructure Communications and Subjectivity? *Economics Management and Financial Markets*, 6(2) (2011) 353-362.
- [22] C. Whitbeck, *Research Ethics*, *Encyclopedia of Applied Ethics*, vol.3, ed. R. Chadwick, Academic Press, San Diego 1998.
- [23] M. Weber, The 'Objectivity' of Knowledge in Social Science and Social Policy, Max Weber. *Collected Methodological Writings*, ed. H.H. Bruun, S. Whimster, Routledge, Kindle Edition 2012.
- [24] B. Wyżnikiewicz, Statystyka a etyka, *Annales. Etyka w życiu gospodarczym*, 18(2) (2015) 105-113.

- [25] Ibo van de Poel, An Ethical Framework for Evaluating Experimental Technology, *Science and Engineering Ethics* 22(3) (2016) 667-686.
- [26] F. Znaniecki, *Spółeczne role uczonych*, Warszawa 1984.

(Received 20 September 2016; accepted 08 October 2016)