Un-ethical Behaviors in Science or Scientific Misconduct

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Abstract—Ethics is a branch of philosophy which develops concepts about right and wrong behavior, advocates these concepts and proposes their use, and is directly related to morality. Business ethics and ethics are a separate research topic for all professions. The most important of these are the attitudes and problems related to ethics in the scientific world. Progress in scientific research, which is necessary for the advancement of humanity, can only take place in an environment based on trust. For this reason, scientists need to do research to protect the trust. In this study, the ethical problems in the world of science and the reasons of ethical problems are mentioned and then the basic principles in the scientific study are given and ethical violations and unethical concepts are mentioned.

Index Terms — Ethics, Science, Study, Morality

1 INTRODUCTION

IT basically means that the term of ethics is derived from the word et ethos-ethikos which means Greek character and the meaning of the moral system. Morality for the human being with a poet of values; tradition, custom, habits, character and temperament. Because the most basic aspect or feature of human is to be directly related to value, to create value, to be the bearer or incarnation of value, ethics is a fundamental and important discipline. Ethics is a branch of philosophy that develops concepts about right and wrong behavior, advocates these concepts and proposes their use.

Although studies on ethics in the world literature are mostly discussed in the last century, the ethics statement, which began in the 13th century of the Ottoman Empire and which is considered as the Ahi, which is the basis of the organization of tradesmen, sits on the concepts of truth, sincerity, reason, knowledge, justice and chastity.

The word of "Ahi" is explained as "generous and charitable" in the first encyclopaedia and dictionary of Turkish language. The term Ahilik, could be described as an organisation that devoted artisans who like each other's company and respect each other [1-3].

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Ancient Greek and Latin culture of ancient artifacts made his fame with the publication of a Polish Count Edward Raczynski (1786-1845) 'travelled to Turkey in 1814. In his book [4] titled "Traveling to Istanbul and Çanakkale in 1814" by Polish diplomat Edward Raczynski, "I was fascinated by the honest and honest exchanges of the Turks in Istanbul. I was going to Bedesten almost every day (According to the Wikipedia; A bedestan (variants: bezistan, bezisten, bedesten) is a covered market usually for haberdashery and craftsmanship. Bezistans were built in Ottoman Empire and their design is based on the design of the mosques). We have never seen the attempts of buyers and sellers to deceive each other" is an indication that Ottoman tradesmen did not compromise on ethics despite centuries".

In addition, written rules are related to ethical behavior during the Hammurabi period (1795 BC), which especially embraces ethical interests. For instance in Hammurabi rules;

- Hammurabi Rules 229. If a builder builds a building for any person and does not do this properly, and the building he has built is destroyed and killed the owner, he will be killed.
- Hammurabi Rules 230. If the building kills the landlord's son, the son of the building is killed.
- Hammurabi Rules 231. If the building kills the owner's slave, the slave pays a slave to the owner of the house.

In ancient times, Socrates, Plato and Aristotle had very different views about ethics. In addition to these, the principles of engineering ethics were first developed in 1912 by the American Institute of Electrical Engineers (AIEE). In the paper of

Hering [5] were described and discussed the ethics of the electrical engineer.

Business ethics and ethics are a separate research topic for all professions. The most important of these are the attitudes and problems related to ethics in the scientific world. Progress in scientific research, which is necessary for the advancement of humanity, can only take place in an environment based on trust. For this reason, scientists need to do research to protect the trust.

Science ethics is also related to what is right and good in science, what is wrong and bad. A scientist dealing with science must have open-mindedness, being skeptic, being independent in his observations, having contempt for contempt, and modest.

2.1. Research Significance

In this study, ethical problems and the causes of ethical problems will be discussed. For this purpose, basic principles will be given in the scientific study and ethical violations and unethical concepts will be mentioned.

2 BASIC PRINCIPLES IN SCIENTIFIC RESEARCH

It is very important that a research is carried out in accordance with the stages required by the scientific method in order to gain scientific qualifications. At the same time, research must be integrated with the basic principles of the scientific method. In scientific studies, there are principles to be provided for the scientific value of the study. These principles can be grouped as follows;

- Principle of objectivity: A scientific study should be free from all sorts of aspects and free from subjective judgments. The basic principle in scientific studies is to investigate what is not expected.
- Concreteness principle: A scientific study should not be abstract. Events, experiments and observations should be compiled in a way not to be abstract, but to be perceived as concrete.
- The principle of certainty: A skeptical and critical view is essential to reach the subject under investigation in a scientific research. The selection of research topics, the research process is carried out with this skeptical and critical perspective.
- The principle of causality and integrity: There is a causal link between events. Each result has a reason.
- The principle of assuming that it does not know: It is always necessary to look at the accuracy of the results obtained during the examination of the studies (this may be called a short literature review).
- The principle of limiting the subjects: One of the most important points in a scientific study is the determination of the limits of the subject. The boundaries of the subject to be researched should be well drawn. The researcher must determine precisely what to investigate.
- The principle of the changeability of events: It is obvious that the results obtained in the scientific study can change when the data is changed.

3 UNETHICAL BEVAIORS IN SCIENTIFIC RESEARCH

Ethics refers to the sub-branch of philosophy which is related to moral value. For this reason, ethics and morality are two different concepts which are often confused. However, it can be expressed as the philosophy of being ethical.

Morality varies according to the society in which we live, and is often the sum of the values and ideas that are deemed correct by the majority without any justification. Those who feel "true" are considered morally appropriate. And this situation varies from society to society. On the other hand, ethics tries to interpret the rules logically. It is also possible to define ethics as rethinking of morality. The ethics of science can be expressed as the field of value problems that arise during the conduct of scientific activities, and the areas of solution proposals presented to them [6].

Today, scientific ethical violations or unethical behaviors are quite common. Of course, the most important productivity measure of a person dealing with science is publication. Gerard Piel says that “Science without publication is dead” that means an unpublished study; he did not want to be considered scientific circles. However, it is very important to pay attention to the ethical rules during the production of a publication. Among the unethical behaviors [7-12] in science are those that are frequently done.

Fabrication: Fabrication is the construction and / or addition of data, observations or characterizations that have never occurred in the collection of data or conducting experiments. This is especially observed in experimental studies. It is difficult to determine if the data produced here is correct.

Falsification: It is the process of changing the data obtained from the experimental, observational or analytical study according to the author's hypothesis.

Plagiarism: The methods, data or texts frequently encountered in scientific studies can be presented as original. What is important here is to use others' methods, data, writings and figures without referring to their owners. According to the Lance Cooper and Celia Elliott [13] plagiarism can be des cribed as “a) Submitting another’s published or unpublished work, in whole, in part, or in paraphrase, as one’s own without properly crediting the author by footnotes, citations, or bibliographical reference; b) Submitting material obtained from an individual or agency as one’s own original work

without reference to the person or agency as the source of the material; c) Submitting material that has been produced through unacknowledged collaboration with others as one's own original work without written release from collaborators"

Duplication: Here is the error of young researchers. Especially in order to achieve rapid results, they send a publication to several journals at the same time. If there is no overlap in the referees of the journals, the journal referee may proceed independently. In any case, this is unethical for submitting or publishing the same research results for publication in multiple journals. It is unethical for an author to publish manuscripts describing essentially the same research in more than one journal of primary publication.

Slicing (Least Publishable Units): It is called slicing to make a large number of publications by separating the results of a research in a way that improperly detects the integrity of the research. Findings obtained in experimental or analytical studies should be as appropriate as possible to reflect the whole.

Not notification of the support: It is an unethical behavior not to indicate the support of the institution or organization which supports the presentations and publications that contain the results of the research conducted by supporting. Especially the financial support from public and private sector and the supports made by other researchers but not deserving of writing as a partner should be stated at the end of the article.

Making changes in the names of the authors: It is a significant ethical violation in the research and article, without the written consensus of the co-investigators and authors, to remove the names of those who have actively contributed to the research or to add new authors or to change the ranking of authors because of the contribution that is incompatible with the authorship. With the submission of the article or the research to the journal, it is necessary not to make any changes on the names.

According to the Lance Cooper and Celia Elliott [13] all collaborators share some degree of responsibility for any paper they coauthor. The author who submits the paper for publication should ensure that all coauthors have seen the final version of the paper and have agreed to its submission for publication.

It is necessary to distinguish between the above mentioned unethical behaviors and irregular / undisciplined research (sloppy research). Irregular / undisciplined research is mostly due to the lack of information about the researcher's research process.

One of the unethical behaviors that are frequently preferred in less developed countries is called labor laziness. This situation is also called the science of copy and scientist in the world of science.

6 CONLUSION AND FINAL REMARKS

The ethics of scientific research is the technical and moral values that must be taken into consideration in the period between the determination of the concepts of a study, planning, analysis and reporting and publication. Unethical behavior arises as a result of the researchers failing to comply with these rules for any reason. In today's world, there are serious problems in scientific publication ethics. In this study, the ethical problems in the world of science and the reasons of ethical problems are mentioned.

The main reason for the spread of ethical problems in the world is the increase in the number of non-infrastructural universities, the search for qualifications and not quantifications in publications, and the lack of a comprehensive ethics course for young researchers. According to research and observations, the most important reason for violations of scientific ethics is that ethical rules and scientific research techniques are not only known by some young researchers, but also by some scientists at professors level.

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