

THESIS

**IBN MISKAWAYH'S CONCEPT OF ETHICS AS THE
FOUNDATION OF TECHNOETHICS**



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**IBN MISKAWAYH'S CONCEPT OF ETHICS AS THE
FOUNDATION OF TECHNOETHICS**

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ABSTRAK

KONSEP ETIKA IBN MISKAWAYH SEBAGAI FONDASI DALAM ETIKA BERTEKNOLOGI

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Kemajuan teknologi memberikan dampak yang ambivalen. Artinya, dalam satu sisi teknologi memberikan manfaat serta kemudahan-kemudahan yang tidak dapat dipungkiri telah banyak membantu kehidupan manusia. Namun pada sisi yang lain teknologi juga datang membawa ancaman-ancaman yang membahayakan masa depan alam dan umat manusia. Hal tersebut dikarenakan perkembangan teknologi berdasarkan klaim bebas nilai yang tidak memperhatikan pertimbangan-pertimbangan moral. Selain itu, adanya berbagai teori etika membuat pergerakan teknologi mengambang dalam relativisme. Berbagai ahli telah berkontribusi dalam merumuskan sebuah sistem etika untuk menghadapi kemajuan teknologi, dan menghasilkan suatu istilah khusus yaitu *technoethics*. Kajian tentang etika telah banyak dilakukan oleh beberapa tokoh, termasuk tokoh-tokoh Islam yang pemikirannya bersumber tidak hanya dari rasio atau akal, tetapi juga wahyu Tuhan. Salah satu dari tokoh tersebut ialah Ibn Miskawayh yang bergelar sebagai Bapak etika Islam. Ia menjelaskan pemikirannya melalui sebuah buku yang sangat terkenal, yaitu *Tahdzib al-Akhlaq*.

Tujuan daripada penelitian ini adalah untuk menganalisa konsep etika Ibn Miskawayh dan menjadikan-nya fondasi dalam etika berteknologi. Penelitian ini termasuk dalam jenis penelitian kepustakaan, dengan menggunakan buku-buku, jurnal, dokumentasi dan tulisan-tulisan sebagai sumber data. Metode yang lazim digunakan dalam penelitian kepustakaan adalah metode deskriptif dan analisa. Demikian pula dengan penelitian ini, menggunakan metode deskriptif dan analisa.

Etika dalam pandangan Ibn Miskawayh disebut juga sebagai *akhlaq*, atau suatu keadaan yang dapat menuntun seseorang untuk berbuat tanpa pertimbangan yang berat. Tujuan hidup manusia di dunia ini adaah untuk memiliki akhlak yang mulia yang dapat menuntunnya kepada kebahagiaan. Etika berteknologi jika dipandang melalui konsep etika Ibn Miskwayh berpusat pada pembentukan karakter yang mulia sehingga seseorang dapat menunjukkan nilai-nilai moral di dalam perbuatannya, bahkan perbuatan di dalam situasi yang sulit. Untuk dapat memiliki akhlak mulia seseorang membutuhkan latihan, pembiasaan, dan pendidikan untuk berbuat dengan perbuatan yang mulia. Teknologi yang dibangun diatas konsep etika Ibn Miskawayh akan menjadi teknologi yang memiliki nilai, teknologi yang mulia. Dan seseorang yang memiliki *akhlaq* mulia hanya akan membuat dan menggunakan teknologi yang tidak menyimpang dari nilai-nilai moral sehingga membahayakan masadepan umat manusia dan alam lingkungan sekitar.

Ibn Miskawayh mempunyai pembahasan etika dalam skala yang luas, termasuk persahabatan, cinta, pengobatan penyakit jiwa, dan keadilan. Sedangkan dalam penelitian ini penulis hanya mengkaji konsep etika secara dasar dan teori tentang kebahagiaan. Untuk itu, untuk penelitian lebih lanjut diharapkan agar melanjutkan pada pembahasan mengenai topik-topik tersebut dikaitkan dengan isu-isu modern seperti etika dalam bisnis dan perdagangan.

Kata Kunci: *Ibn Miskawayh, etika, teknologi, kebajikan, kebahagiaan*

ABSTRACT

IBN MISKAWAYH'S CONCEPT OF ETHICS AS THE FOUNDATION OF TECHNOETHICS

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The technological advancement gives ambivalent impacts. In one side provides benefits and easiness to human life and in the other side, it comes along with serious problematical impacts that harm, threat, and danger the future of humanity and the environment. That was because its development is based on the value-free claim that won't pay attention to moral judgment. Also, the existence of many ethical theories makes its development float in relativism. Many experts have contributed their idea to construct an ethical system which will be suitable to cope with technological advancement covered under the term technoethics. The ethical discussions have been done by many figures, including Islamic figures whose thought aren't based solely on ratio, but also based on God's revelation. One of those Islamic Figures is Ibn Miskawayh, the one whom figured as the father of Islamic ethics. He describes his thought through his famous book, *Tahdzib al-Akhlaq*.

This research aims to analyze the concept of ethics of Ibn Miskawayh and make it as the foundation to build the technoethics. This research is library research, using books, journals, documentations, and any other writing material as the sources of data. The researcher uses the descriptive and analysis method which are common to be used in any kind of library research to analyze the issues and describes the two variables of both ethical concept of Ibn Miskawayh and technology. Ethics according to Ibn Miskawayh is regarded as *akhlaq*, or a state of character that enable man to make actions without any deliberation. Man's goal in this life is to achieve the noble character that will lead him to achieve the happiness. The concept of technoethics build on Ibn Miskawayh's ethics focuses on character development. It is the effort to achieve noble character so that someone will able to establish moral value in his action, even in the hardest situation. To have a noble character, a man must have been trained, habituated, educated with virtuous deeds. Technology that was built on Ibn Miskawayh's concept of ethics will be a valuable and virtuous technology. And someone with a virtuous character will only make a meaningful technology that won't deviate the moral values and hence harm the future of humankind and the environment.

Ibn Miskawayh's concept of ethics has a wide discussion including the theory about love, friendship, justice, and soul disease cure. For a further research, the researcher recommends to develop the research especially to those topics by relating it to modern issues in this era, one example is the issue of ethics in business and commerce.

Keywords : *Ibn Miskawayh, ethics, technology, virtue, happiness.*



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MOTTOES

وَتَزَرَّدُوا فَإِنَّ حَيْرَ الزَّادِ التَّقْوَى وَالتَّقْوَى يُأُولَى الْأَلْبَابِ

(البقرة : ١٩٧)

“The greatest among jihad (struggle/striving) is to battle your own soul”

-Prophet Muhammad SAW-

“There should be no boundaries to human endeavor. We are all different. However bad life may seem, there is always something you can do and succeed at. While there’s a life, there’s a hope”

-Stephen Hawking-

“The unexamined life is not worth living”

-Socrates-

DEDICATION

“To all people who have been a part of my life”

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CHAPTER I

INTRODUCTION

1.1. Background of Study

Ethics is a subject in axiology; a branch of philosophy that talks about good and bad values.¹ In another sense, K Bertens stated in his book that ethics is “*the knowledge of what should be done or the knowledge of customs.*”² The discussion in ethics has recently received incredible attention, because ethics is related to various disciplines of sciences.³ Ethics cannot stand alone and its existence is very fundamental in every aspects of human life. There are factors that caused the discussion on ethics are recently increasing; the foremost reason is the rapid development of science and technology which raises new problems.⁴ Technology has caused not only physical or environmental problem, but also problems related to ethics and humanity values.

Science and technology has developed rapidly, especially in the Western world as the incessant movement of renaissance since the 14th century. Starting from the awareness that human have a unique and important position in the universe, different from all other beings on earth. Rising up an ideology or a new perspective to Western society at the time, called the anthropocentric perspective of life, or man-centered totality.⁵ Since then it raises the extraordinary wave in Western societies to exploit nature, developing science and technology that are intended for human as rulers of the earth.

¹ Bahrum, *Ontologi, Epistimologi, dan Aksiologi*, (Sulesna, vol 8 no 12 : 2013) p.42

² K.Berens, *Etika*, PT Kanisius, Yogyakarta:2013., p.4

³ K.Bertens, *Keprihatinan Moral*, PT Kanisius, Yogyakarta : 2003., p.26

⁴ *Ibid.*, p.43

⁵ Amirullah, *Crisis Ecology: Problems of Modern Science*, (Lantern, vol 18, no 1: 2015) p., 6

In the 17th century, *ethics* was removed from the area of science. Scientists were obliged to get rid of any consideration of the value (value judgment) of his scientific effort. Science must be based on a value-free or scientific objectivity.⁶ It then results an ambivalent technology that having many potential benefits, and causes much more harm. One example is that nuclear technology used as an alternative source of energy as other energy sources begin to shrink. The medical world has also used it not only to diagnose the disease, but also to kill cancer cells. Meanwhile more than 50,000 nuclear weapons existing in the world has millions of times the destructive power than ordinary bombs.⁷ Weapons which have killed millions of people and thousands of lives.

The problematical impacts of technology due to its implementations are based on empiricism view; believes in human's senses capability as a Godly power. An English philosopher John Locke is one of the philosophers who carried this understanding. Locke insisted that what determine human action are not the universal principles, but something that comes from the sensory experience; namely the sense of pleasure and pain.⁸ Delightful experiences are called good, while hurtful ones are called evil. Although such ideas reap a lot of lawsuits and criticism, but lots of people agree to this theory.

Basically, the implementations of technology are based upon some Western theories of ethics. First is the theory of hedonism; this theory focuses on the feelings of pleasure or pain, where delight is considered good and pain is considered bad. The second theory is deontology, which believes that the merit of a person's action depends on its purpose.⁹ The third theory is utilitarianism; a theory of ethics that sets the value of an action from its

⁶ Jalaluddin Rachmat, *Islam Alternative*, Bandung; Mizan, 1991., p. 161

⁷ *Ibid.*, p. 150

⁸ Budi Hardiman, *Pemikiran-pemikiran yang Membentuk Dunia Barat Modern*, Jakarta; Kompas, 2013., p. 64

⁹ *Ibid.*, p.7

benefits.¹⁰ The existence of these theories makes the motion of science and technology float in relativism. Science and technology cannot be allowed to float in relativism. Ethics must be absolute and set in a universal standard.

People should get into more researches and observation before stepping any further to develop more sophisticated technological features. Finally, in this sense, it is necessary to reflect on dialogues and discussions about ethics and morals challenges posed by such technological development. Factually, this discussion has been raised under the name *Techno-ethics* or *NEST-ethics*.¹¹ So that technology is not only something that physically beneficial, but also holds moral values.

In Islam, the word *ethics* is more familiarly called *akhlaq*, which is the Arabic terminology means custom, temperament, behavior, character, manners, and religion.¹² The normative foundation of ethics in Islam comes from the Qur'an, and the Sunnah.¹³ *Ismail Raji Al-Faruqi* explained in his book; *Tauhid*, that *akhlaq* or Islamic ethics determined since the beginning till the purpose of human creation.¹⁴ Whereas in the Qur'an, and in ancient Semitic terminology, Islam states that mankind was created to worship God, and to become God's representative on earth.¹⁵ It comes into mind that human carry out the divine mission of realizing God's spirit on earth. By all means, all human actions must be referred back to these two things, according to the purpose of human creation, and in accordance to human duty as God's representative on earth.

Discourse on ethics has been carried out by many figures and experts, including Muslim philosophers and scholars. Great names such as Ar-Razi, Al-Farabi, Al-Ghazali, Muhammad Iqbal, At-Thusi, and Ibn Miskawayh have contributed their thoughts in this field. Among these

¹⁰ Keraf A Sonny, *Etika Lingkungan Hidup*, Jakarta; Kompa, 2010, p. 29

¹¹ Rafael de Asis Roig, *Ethics and Robotics...*, p. 22

¹² Muhammad Alfian, *Filsafat Etika Islam*, Bandung : Pustaka Setia, 2011., p.17

¹³ Beni Ahmad Saebani, Abdul Hamid, *Ilmu Akhlaq,.....* .p.35

¹⁴ Ismail Raji Al-Faruqi, *Tauhid*, Penerbit Pustaka, Bandung : 1988., .p.66

¹⁵ *Ibid.*, p.67

names there is a name labeled as the father of Islamic Ethics, someone who is also labeled as *Al-Muta'alim At-Tsalis* or the Third Teacher, he is Ibn Miskawayh.¹⁶ Miskawayh has many monumental works, but only a few works have been published. The construction of Ibn Miskawayh's thought is an integration of Greek philosophy, Persian civilization, Islamic law, and personal experience.¹⁷

One of his most controversial books is *Tahdzib Al-Akhlaq*, Ibn Miskawayh begins the concept of *akhlaq* or ethics by dividing the human soul into three faculties.¹⁸ The three faculties of the soul are constructed to three levels, the highest is the soul of *an-natiqah*, in the middle is the soul of *al-syahwatiah*, and the lowest is the soul of *al-bahimiah*.¹⁹ The soul of *an-Natiqah* is a soul that has the power to reason, it is the characteristic of human which discriminates and exceeds it from other creatures.²⁰ Regarding the goodness, Miskawayh sees it as a balance between two things, something excessive, and something lacking. Regarding virtue, Ibn Miskawaih explains that the principle of all virtues is love for fellow human beings.²¹ Ethics or *akhlaq* according to Ibn Miskawayh is based on four principles; first, it stands on the universal and pure theory of ethics. Second, *akhlaq* or ethics is based on justice. Third, ethical actions will result in happiness for its followers. Fourth, ethical actions are rational.²²

The ethical theory of Ibn Miskawayh is rational and in accordance with God revelation. God as the ultimate power beyond this universe is the source of all virtues and also the main goal of human action. Responding to the using of science and technology that is increasingly value-free and

¹⁶ Muhammad Alfian, *Filsafat Islam.....*, p. 204

¹⁷ Nizar, *Pemikiran Etika Ibn Miskawayh*, (Al-Qalam : Journal of Islam and Plurality, vol 1, no 1, 2016), p. 38

¹⁸ *Ibid.*, p. 37

¹⁹ Hariyanto, Fibriana Anjaryati, *Character Building; Telaah Pemikiran Ibn Miskawayh tentang Pembinaan Karakter*, (JPII, vol 1, No 1, 2016), p. 113

²⁰ Nizar, *Pemikiran Etika Ibn.....* p. 39

²¹ *Ibid.*, p. 37

²² *Ibid.*, p. 36

lack of moral, it is good for human to direct all their actions to God; the first creator as well as the ultimate goal of human journey. Because science and technology and related not only to human beings, but to human and nature, human and the future generations, are related to human life that is much longer as well. Thus, this study aims to build a technoethics according to the thought of Muslim figure as a solution to the moral crisis in the using of technology.

1.2. Problem of Study

Based on the background of the problems above, the researcher means to study issues as to follow:

1. What is the concept of ethics according to Ibn Miskawayh?
2. How is the technoethics foundation built upon the concept of ethics of Ibn Miskawayh?

1.3. Purpose of Study

The purpose of this research are the direction that researcher seek. Those are:

1. Knowing the concept of ethics according to Ibn Miskawayh.
2. Identifying the concept of ethics according to Ibn Miskawayh as a foundation to build the technoethics.

1.4. Significance of Study

The researcher hopes that this will be useful for:

1. Practical Uses
 - a. To enrich the scientific study in ethical philosophy, especially the philosophy of Islamic ethics.
 - b. As a condition of obtaining the undergraduate degree, majoring in Islamic Philosophy Studies, Faculty of Theology of Darussalam Gontor University.
2. Academic Use
 - a. To add a broad insight on the philosophy of ethics by the

view of a Muslim figure and its relation to the development of technology.

1.5. Literature Review

1. Accomplished Research

The discussion in the field of both ethics and technology is always interesting. For there are many academic problems to be taken out of solution, and there are many great figures with their incredible thoughts about ethics. Due to that reason, there were many who have done researches in the issues regarding to both ethics and technology, many of them are:

- a. A thesis written by Heru Santosa's in 2007, submitted to Gadjah Mada University, Faculty of Humaniora majoring in the Study of Philosophy with the title, *Etika dan Teknologi*. The thesis discussed the technological development and ethical framework towards it.²³ The writer describes the common terms in ethical study and relates it to the modern development of technology, especially the technology of industry.
- b. A Master thesis submitted to Utrecht University, the Faculty of Humanities under the title, *Responsibility in the Technological Age*. Written by Annemarie Dorothee Bijloos in 2012. The thesis noted about the ethics of responsibility towards technological age, it is a philosophical study concerning the thought of modern Philosopher of Technology.²⁴ It aims to provide the solution of technological issues using the concept of ethical responsibility.
- c. A thesis written in 2014 by Muthoharoh entitled, *Konsep dan Strategi Pendidikan Akhlaq Menurut Ibn Miskawayh dalam Kitab Tahdzib Al-Akhlaq*. This thesis is submitted to Institut Agama Islam Negri Walisongo, Faculty of Education which deals with

²³ Heru Santoso, *Etika dan Teknologi*, (Yogyakarta: Tiara Wacana 2013), p. ix

²⁴ Annemarie Dorothee Bijloos, *Responsibility in the Technological Age*, (Utrecht University: Faculty of Humanities, Graduate School of Humanities, 2012), p. 3

the concept of morality or ethics based on Ibn Miskawayh's book *Tahdzib Al-Akhlaq*.²⁵

From all the researches that have been done in the matter of both ethics and technology, this writing is a completion of the previous researches. The discussions of ethics and its significance to technology are always continuing and haven't been finished. So that it's necessary to continue it in a different framework of ethics, especially the Islamic framework through the thought of Islamic figure. That we finally may set the right and universal standard of ethics in technology.

2. Theoretical Framework

This research is a study of ethics which is one of philosophy branches: the axiology study. In axiology, a theory is formulated consistently to set standards of ethical behavior.²⁶ Ethics concentrates on views about duty, justice, love, and kindness. Thus, the author uses a philosophical approach; such a paradigm that is used to explain the core, purpose, wisdom or essence of an object.²⁷ A characteristic of the philosophical approach is its systematical discussion to become a comprehensive discussion.²⁸

Ethics is science discussing about human and hence it is connected to many scientific disciplines including the technology.²⁹ But in the 17th century, science and technology claimed free from moral and ethical judgment.³⁰ That accident leads to the appearance of science and technology that did not only give benefits to human life,

²⁵ Muthoharoh, *Konsep dan Strategi Pendidikan Akhlaq Ibn Miskawayh dalam Kitab tahdzib AL-Akhlaq*, (Institut Agama Islam Negeri Walisongo: Fakultas Ilmu Tarbiyah dan Keguruan, 2014), p. 6

²⁶ Hamdani, *Filsafat Sains*, (Bandung : Pustaka Setia, 2011), p. 24

²⁷ Zainul Kamal, *Menuju Kesempurnaan Akhlaq (Kata Pengantar Edisi Bahasa Indonesia)*, (Bandung : Mizan, 1998), p. 11

²⁸ *Ibid.*, p. 11

²⁹ Muhammad Alfian, *Etika Islam, Bandung*; Pustaka Setia, 2012., p. 21

³⁰ Jalaluddin Rakhmat, *Islam...*, p. 158

but also caused harms and damages. Realizing that technology is now threatening human's life, philosophers and thinkers act differently. There is a group of thinkers who are philosophically concerned about humanity and the future of man's nature.³¹ They try to construct a renewal moral philosophy as a preventive ethics to control the development of technology. Those philosophers called the ethics to deal with technology as the technoethics.

One of those thinkers is Shannon Vallor, a young professor of philosophy in Santa Clara University. Through her book under the title *Technology and the Virtues; A Philosophical Guide to a Future Worth Wanting*, she introduces a new understanding that guides us making and participating through techno-scientific innovations. Vallor projects this book to provide the tools to create this new understanding, the one that she called *the technomoral virtue*.³² Despite all other traditional ethical concepts, Vallor decides to begin her work in virtue ethics.³³

Virtue ethics is sometimes described as character ethics. An ethical theory focusing on good characters criteria habitually developed on individual rather than attempt to focus on typical consequences, duties, and social contracts play in moral system.³⁴ It has the purpose to help us figure what type of person we want to become. After knowing sort type of personality, the main thing that virtue ethics aim is to help us decide how we should act to become this type of person.³⁵ It is promoting the idea of attitudes improvement on oneself.

Virtue ethics lead human to deal with the technology with

³¹ *Ibid.*, p. 163

³² Damien William, *Cultivating Technomoral Interrelations: A Review of Shannon Vallor's Technology and the Virtues*, (Social Epistemology Review & Reply Collective vol 7, no 2, 2018), p. 2

³³ *Ibid.*, p 2

³⁴ Herman T Tavani, *Ethics and Technology: Controversies, Questions, and Strategies for ethical Computing*, (United States of America: Wiley, 2013), p. 64

³⁵ Vanessa Nurock, *Nanoethics: Ethics For, From, or With Nanotechnologies?*, (HYLE-International Journal for Philosophy of Chemistry, vol 16, 2010), p. 33

virtuous character and thus he can manifest noble values through his actions. Those virtues are courage, temperance, prudence, and justice.³⁶ They can't be in a person naturally inborn; they need to be cultivated through some processes. First of all, a person needs to know who he truly is, or the nature of human. Second, virtues need to be cultivated through habits and experiences. Third, all the human actions have one single destiny that he should direct all his action to achieve this destiny. Lastly, all the action must be oriented in social dimension.

Ibn Miskawayh has the concept of ethics that was built upon rational thought and the God revelation. He focuses in cultivating noble character through education and habituation so that human will be able to do virtuous without any deliberation. To interact with the technological advancements and to have the ethical standard to use, people would constantly need a noble character so that he would be easily considering the virtuous action.³⁷ Thus, it is so possible to build the technoethics or technomoral virtue on the concept of ethics according to Ibn Miskawayh because it has the similar characters. Here, the writer tries to describe the ethics of Ibn Miskawayh and relates it to the tenets explained by Shannon Vallor to build the technomoral virtue.

1.6. Research Method

1. Research Design

This writing supposed to be library writing (library research), using the literature (literature), either in the form of books, records, and reports the results of the research of the previous writing as the resources of data.³⁸ This is because the elements used in this paper is in the form of textual materials, such as books, papers, journals, and

³⁶ S Bolsin, *Practical Virtue...* p., 127

³⁷ ابن مسكويه، تهذيب الأخلاق في التربية، بيروت لبنان، دار الكتب العلمية، ص. ٢٦

³⁸ M Iqbal Hasan, *Principal Creative Writing and Applications*, (Jakarta: Ghalia Indonesia, 2002), P 339

other library resources.³⁹ Viewed from the aspect of its subject matter, according to M. Atho Mudzar, this paper can be categorized in the culture research. Culture research is a model of writing that concentrates on ideas, values, and ideas of culture as a product of human thinking.⁴⁰

2. The Sources of Data

The researcher decided to divide the resources into two kinds; primary, and secondary.

a. Primary Resources

- 1) Ibn Miskawaih, *Tahdzib Al-Akhlaq*, this book was published in 1975 by *Dar al-Kutub al-Ilmiyah*. Here, Miskawayh clarified everything about ethics, moral, morality, education, the concept of happiness, virtues, lust, etc.
- 2) Some writings about technology and technomoral virtue in the form of journals written by Shannon Vallor, such as; *Conceptual Frameworks in Technology and Engineering Practices*, *Social Networking Technology and the virtues*, and *The Future of Military Virtue: Autonomous System and the Moral Deskillling of the Military*.

b. Secondary Resources

For secondary resources in this library research are books, articles, journals, website, etc written by scholars dealing with the issue discussed. The works about concept of *akhlaq* accords to Ibn Miskawayh, and in addition of course, works about technologies including history, concept, and issues.

3. Data Collection Technique

The Appropriate technique to collect data in such kind of research is the documentation. In the format of which are the researcher

³⁹ Singarimbun, *Writing Methodology Survey* (Jakarta: LP3ES, 1989), P 45.

⁴⁰ Mudzar, M. Aatho, *Approach Islamic Studies in Theory and Practice* (Yogyakarta: Student Library, 1992), P 37

documents all literatures, books, journals, papers, letters, records, etc.⁴¹

4. Data Analysis Method

For the purpose of data analysis, the researcher uses the following methods:

- a.** Descriptive method is a method to observe the state of people, objects, situations, systems of thought, or incidents. It searches the facts using an appropriate interpretation method. It expounds the systematical, factual, and accurate information about the manuscript using a deduction or induction method.⁴²
- b.** Analysis method, to check all the documents systematically, and objective so that the researcher could conclude the main things of each variables and to relate one to each other.⁴³

⁴¹ Jonathan Sarwono, *Metode Penelitian Kuantitatif & Kualitatif*, (Bandung : Graha Ilmu, 2006), p. 226

⁴² Moh Nazir, *Metode Penelitian*, (Bogor: Ghalia Indonesia, 2014),p. 43

⁴³ *Ibid.*, p. 304

CHAPTER II

ETHICS, IBN MISKWAYH, AND TECHNOETHICS

2.1. Ethics

1. Definitions

Etymologically, the term *ethics* is derived from ancient Greek, *ethos* means *custom* or habitual action, or sometimes it's defined as *characters*.⁴⁴ According to Burhanudin Salam, ethics is a branch of philosophy talks about values and moral norms, and hence decides human action in his life.⁴⁵ Ethics talks about the sense of good and bad of human action, not in the term of cultural tradition, but the sense of good and bad from the essence of human nature.⁴⁶

Ethics is often regarded as morality, or in Islam considered as *Akhlaq*. But in some specific discourses their meanings are quite different or simply not equal. What is meant by morality is preaches, standards, teachings, and collective rules about how to do well, or how to be the good human beings.⁴⁷ The word *Akhlaq* is derived from an Arabic terminology; from the word *khuluq* means custom, character, habit, and religion.⁴⁸ While ethics isn't anything about teachings, or rules, or standards, as Franz Magnis Suseno's statement in his book, *Etika Dasar*, "*Ethics isn't an additional source for moral teaching, but it is the philosophy or critical thought about the moral teaching, and moral views*".⁴⁹

⁴⁴ Agustinus W Dewantara, *Filsafat Moral; Pergumulan Etis Keseharian Hidup Manusia*, (Yogyakarta; Kanisius, 2017), p. 3

⁴⁵ Muhammad Alfian, *Filsafat Etika Islam*, Bandung: Pustaka Setia, 2017., p. 17

⁴⁶ *Ibid.*, p. 26

⁴⁷ Frans Magnis Suseno, *Etika dasar; Masalah-masalah Pokok Filsafat Moral*, (Yogyakarta; Kanisius, 1989), p. 14

⁴⁸ Muhammad Alfian, *Filsafat...*, p. 17

⁴⁹ *Ibid.*, p. 14

Thus, the distinction is obvious that ethics doesn't have an authority to teach goodness; otherwise it entirely explains the thought of morality.⁵⁰ Morality tells simply what actions are considered good and what actions are bad, yet ethics explains the sense of *why* and *how* they could be considered so. Two important points when describing ethics are the terms values and human actions. Both are basically the objects of ethics. Human behaviors and actions are what regarded as the material object of ethics. While the sense of good or bad, moral or immoral, values or disvalues are what regarded as the formal object of ethics.⁵¹ The discussion in ethics is not questioning about what or who human is, but rather it's questioning how human should act or behave.⁵² Studying the ethics isn't studying about what is good for granted, but it's the study about how to be good.

According to an Islamic philosopher, al-Kindi, the purpose of studying ethics is to know the truth and to make actions in accordance with the truth.⁵³ Ethics' role for the life of humans is very fundamental. It helps them to decide what actions they should take, to decide what sort of life that they are going to live in. Ethics would always support humans to find their orientation, for the purposes that they know why should they follow certain moral teachings, and that they could be responsible for their life.⁵⁴

2. The Principles of Ethics

a. Human Action

Human action is the main object in ethical discussion, but not all actions can be figured as ethical action. Ethical action is having a precondition, which is freedom. If an action isn't based

⁵⁰ *Ibid.*, p. 14

⁵¹ Totok Wahyu Abadi, *Aksiologi: Antara Etika...*, p. 194

⁵² *Ibid.*, p. 194

⁵³ Muhammad Alfian, *Filsafat...*, p. 17

⁵⁴ Frans Magnis Suseno, *Etika dasar...*, p. 14

on freedom, it couldn't be considered an ethical action.⁵⁵ Freedom is having two preconditions to be said so, those are *knowing* and *demanding*.⁵⁶ Knowing that a person always has another alternative to do,⁵⁷ knowing all the consequences and all the purposes of certain action. Consciously a person knows that he could at any times do the opposite of what he should or shouldn't do.

Besides *knowing*, a person must be the one who demands certain action. An ethical action must be free from other's influences such as threat, force, compulsion, and warn.⁵⁸ One example is in making decision to a religion; a person should decide the religion for himself with no compulsion from others. As Allah has said in the Qur'an (2:256) tells that, "*there is no compulsion in (embracing) the religion (Islam), indeed it has been clear the difference between the way of right, and the way of deviate.*"⁵⁹ A person should be consciously knowing and demanding his action so that he could be responsible of whatever his action cause to. Freedom and responsibility are two terms connected one to each other. He is regarded being responsible only if he has freedom.⁶⁰ Responsibility only belongs to human, because he is the only creature in this world having the sense of freedom. As for animals, they aren't charged with the responsibilities because their action is based on instinctual sense, and they never have another option of what should be done.⁶¹

In Islam, ethical action includes some elements such as maturity, well-minded, and knowing the rules of an action. It is goes in accordance with one hadith of Prophet Muhammad SAW explained that rules wouldn't be prevailed on three groups; a

⁵⁵ Agustinus W. Dewantara, *Filsafat Moral...*, p. 13

⁵⁶ *Ibid.*, p. 13

⁵⁷ Franz Magnis Suseno, *Etika Dasar...*, p. 22

⁵⁸ Muhammad Alfian, *Filsafat Etika...*, p. 35

⁵⁹ *Ibid.*, p. 36

⁶⁰ K Bertens, *Etika...*, p. 73

⁶¹ Franz Magnis Suseno, *Etika Dasar...*, p. 21

sleepers until he's awake, a child until he's mature, and an insane person until he's recovered.⁶² Another Islamic thinker, Ar-Razi has the similar idea; he noted that human action must be based on ratio or mind.⁶³ This sense explains how important the role of mind to one's action. Without those mentioned requirements, humans wouldn't be charged with obligations and responsibilities.

The essence of freedom clearly explained that humans are charged with responsibility to fulfill their space of freedom with valuable and meaningful things.⁶⁴ When a person decides to act valuably instead of satisfy his personal needs, his action is then regarded as a moral action. No other creature in this world can do a moral action because they don't have freedom. This world of earthly life would be a valuable world if all human beings living on it having actions based on moral responsibilities; the valuable actions, or the moral action.

b. Moral Value

To consider if an action is regarded as moral action, we need a measurement instrument. The instrument is in the form of basic values which figured as moral values. Value is something that encourages people to do certain action. There are many values figured as moral value, but all those point to a single value named the sense of goodness.⁶⁵

Goodness is regarded as the basic value and the standard of all moral values. Goodness is a natural character of human that should be implemented in their action. The common ethical theory noted that doing goodness means treating somebody or something not because of their benefits. But doing the goodness includes demanding, approving, supporting, keeping others purely because

⁶² Muhammad Alfa, *Filsafat etika*...., p. 37

⁶³ *Ibid.*, p. 194

⁶⁴ K Bertens, *Etika*...., p. 80

⁶⁵ Franz Magnis Suseni, *Etika Dasar*....,p. 129

it is all good deeds.⁶⁶ The value of goodness can lead someone to the other values like honest, fairness, and loyal.

In Islamic ethics which sourced from the holy Qur'an and the *sunnah*, the moral action measurement is based on God revelation.⁶⁷ The Islamic law has distinctly explicit about anything regarded as good deeds, and anything regarded as bad. All the things that are in accordance with God's demand regarded as good, while all the things that contradicts with God's demand regarded as bad. Nashruddin At-Thusi supports this idea that according to him, all the goodness in this world is sourced from God.⁶⁸

The moral action contains universal value to anyone. The views about goodness promoted by many ethical theories in this world are different. But all of them note that doing goodness is for the purposes of achieving personal satisfaction. Even there is a theory stated that doing goodness is for the purposes of the goodness itself. Such thing seems to be impossible because action that was done without any distinct goal will be unconditional. Islamic ethics sees this matter in a different way, all human actions are aimed for the first goodness and the first truth, and it is the almighty God. Every human activities including eating or drinking are intended for achieving the goodness which is in accordance with God's goodness.⁶⁹ The idea about truth in God's revelation is explained through the holy Qur'an (39:2), mentioned that "*indeed We have sent down this holy book (Qur'an) to you (Muhammad) carrying the truth in it, so worship your God sincerely*".⁷⁰

c. Happiness

Human is the being created with goals and destiny, for

⁶⁶ *Ibid.*, p. 131

⁶⁷ Muhammad Alfian, *Filsafat etika...*, p. 71

⁶⁸ *Ibid.*, p. 225

⁶⁹ *Ibid.*, p. 45

⁷⁰ *Ibid.*, p. 50

that reason he needs an orientation to guide his steps to achieve his goals. The orientation which prevents him from lost. It is the part where ethics take its primary role to the life of human; as the orientation that guide humans to achieve their goals. Some theories of ethics encourage that man's destiny in this life is to achieve the happiness.⁷¹ And for that reason, all his actions must be the effort to achieve the goal.

Through his book *Risalah at-Tanbih as-Sabil*, Al-Farabi stated that happiness is a kind of goodness. It is more likely to be the highest goodness that is done for the sake of goodness itself.⁷² It means that when a person does something good, he has no specific aim for his action but to achieve the goodness itself. Happiness is meant to be the end of all good actions. According to Al-Farabi, happiness could be achieved with the strong desire, consequence, and willing to be obedient to all the moral rules.⁷³ Al-Ghazali has a different idea about happiness, his thought concerns on the true happiness that will be found in the life of hereafter. All human actions are his effort to fulfill the moral duty, to achieve the happiness. The moral actions done by human in earthly life would be rewarded by the hereafter happiness.⁷⁴

Except those figures, the idea of happiness can be found in some traditional theories of ethics. Those theories are hedonism, utilitarianism, and virtue ethics. First is hedonism, a theory which word is derived from *hedone*, means pleasure. Hedonism views that human must achieve the happiness because it's the ultimate goal of his life. While happiness according to it is something derived from

⁷¹ Mustain, *Etika dan Ajaran Moral Filsafat Islam: Pemikiran Para Filosof Muslim tentang Kebahagiaan*, (Ulumuna, Jurnal Studi Keislaman, vol 17, no 1, 2013), p. 194

⁷² Endrika Widdia Putri, *Konsep Kebahagiaan Dalam Perspektif Al-Farabi*, (Thaqaffiyat, vol 19, no 1, 2018), p. 102

⁷³ *Ibid.*, p. 102

⁷⁴ Mustain, *Etika dan Ajaran...*, p. 198

the feelings of pleasure. On the contrary, the unpleasant feeling will bring misery.⁷⁵ Thus, people must find pleasures as much as possible to bring him to happiness.

Second is utilitarianism, often regarded as the ethics of success. It judges the value of an action from the benefits.⁷⁶ Also, someone's value is judged from the benefits of his actions. The more benefits someone could result, the more good and valuable he will be. Benefits and moral are regarded as the similar thing in this theory.⁷⁷ In utilitarianism, someone is encouraged to do things that result the greatest good and benefits. The happiness will be found in the form of benefits and the greatest pleasure, and in the absence of pain and disadvantages.

Third is virtue ethics, this theory focuses on realizing the virtues in someone's character so that he could find the happiness.⁷⁸ Different from the hedonism, virtue ethics doesn't look for the physical pleasure. Every person has the divine values that should be established in the actions. The virtues are cultivated habitually until someone is in the state of excellence. Excellence is the complete virtues and by then someone will achieve the happiness. In Aristotle's thought, human poses the potentials in the form of virtues.⁷⁹ He wouldn't be a happy person if those potentials are not cultivated and let die.

3. The Virtue Ethics

Virtue Ethics is focusing on the qualities of a person as analysis' object. Each individual person has different characters and qualities which determine how he would act in certain problematic situation

⁷⁵ Muel Kaptein en Johan Wempe, *The General Theories of Ethics and the Integrative Role for the Integrity Theory*, (SSrn Electronic Journal, 2002)., p. 4

⁷⁶ *Ibid.*, p. 122

⁷⁷ Muel Kaptein en Johan Wempe, *The General...*, p. 7

⁷⁸ Franz Magnis Suseno, *Etika Dasar...*, p. 119

⁷⁹ Muel Kaptein en Johan Wempe, *The General...*, p. 21

so that it could be evaluated in moral terms.⁸⁰ Etymologically, virtue derived from *virtus*, a Latin word means ‘excellence’ refers to person’s capability to carry out values what is expected from him.⁸¹ Sometimes it also refers to someone’s ability to achieve certain goal. Virtue has a strong relevance to goodness; it is something that makes things or persons stand out or excel. Goodness refers not only to human, but also including states of affairs. One of the scholars who devoted his life in virtue ethics is Aristotle. With his teleological philosophy, he concerned that virtues lead to human’s primary destiny or what he defined as the highest good *eudaemonia*. *Eudaemina* is often being understood as happiness. Happiness is by then the greatest good of human nature that could be achieved by a person through virtuous activity. Because virtuous actions would bring pleasure to a person, so that if the actions are habitually done he would then be a happy virtuous person.

Virtue ethics is focusing on cultivating a person’s quality. To achieve the virtuous character, a person certainly needs training and continually habituation. Aristotle mentioned four terms considered as moral virtues; courage, self-control, generosity, and honesty.⁸² There is also wisdom as the value of intellectual virtue.⁸³ Those virtues wouldn’t have been in a person as they’re born. But somebody must have a serious training to act with courage, generosity, and honesty until they become a habit. As well as he should be trained to think with wisdom so it would be stamped in his character. For that reason, a parent’s role to build the virtuous character upon their children is extremely important. Parents should be able to help their children acquiring the virtues until they become habit.

⁸⁰ *Ibid.*, p. 19

⁸¹ *Ibid.*, p. 20

⁸² Iffan Ahmad Gufon, *Menjadi Manusia Baik Dalam Perspektif Etika Keutamaan*, (Yaqzhan; vol 2, no 1, 2016). P. 99

⁸³ Muel Kaptein en Johan Wempe, *The General*,, p. 22

2.2. Ibn Miskawayh

He has a complete name Abu Ali Ahmad ibn Ya'qub ibn Miskawayh. ⁸⁴ Now he is famous by the name Miskawayh or sometimes known as *Ibn* or son of Miskawayh. In fact, as well supported by many of his autobiographers such as al-Tawhidi, al-Tha'albi, and al-Sijistani stated that his *laqaab* or title "*Miskawayh*" is his own, and not that of his grandfather or father. ⁸⁵ He is born around the year 320 H / 932 in the city of Rayy, and passed away in Isfahan around the year 412 H/ 1030. ⁸⁶

The young Miskawayh had a dream to be a chemist, it is all the problems according to his family which made him then decided to leave the chemistry and forgot his dream. ⁸⁷ He learned History to Abu Bakar Ahmad bin Kamil especially on *Tarikh at Tabari* and also learned philosophy especially Aristotle's works to his teacher named Ibnu Khamar. ⁸⁸ Through his young life, he made friends and good career under the dynasty of Buwaihyds. He worked as financials, secretary, librarian and teacher of Buwaihyd's leader's children. ⁸⁹

When he was librarian in several Buwaihyds, a library in those days known as *khizanat al-kutub*, he studied a lot of philosophy books, especially the works of Aristotle. Due to his trustworthiness, he got a title as *al-Khazin* means the keeper, trustworthy, or probably because he is doubled both as financials and librarian under the governance of Sultan 'Ad ud al-Dawlah. ⁹⁰ By this title, he was considered as *polymath*; a person who mastered many subjects of knowledge and science. He also joined discussions regarding to philosophy with many influential figures such as al-Sijistani, al-Tawhidi and ibn Sina. ⁹¹

⁸⁴ Muhammad Alfian, *Filsafat Etika Islam*, (Bandung: Pustaka Ssetia, 2011), p. 204

⁸⁵ Mohd Nasir Omar, *Islamic Social Ethics: An Analysis of Miskawayh's Thought*, (European Journal of Multidisciplinary Studies, vol 1, no 1, 2016), p. 81

⁸⁶ Nizar, *Pemikiran Etika*,, p. 36

⁸⁷ Kamal Azmi Abd Rahman, *Pemikiran Akhlaq Miskawayh*, (International Conference on Aqidah, Dakwah and Syariah 2016), p. 416

⁸⁸ Nizar, *Pemikiran Etika*,, p. 37

⁸⁹ Hariyanto & Febriana Anjaryati, *Character Building, Telaah Pemikiran Ibnu Miskawayh Tentang Pendidikan Karakter*; (JPPII, No2, Vol 1, 2016), p. 111

⁹⁰ Mohd Nasir Omar, *Islamic Social Ethics: An Analysis*,, p. 81

⁹¹ Kamal Azmi Abd Rahman, *Pemikiran Akhlaq*,, p. 417

Miskawayh is also attributed as the Third Teacher, after al-Farabi and Aristotle due to his mastering in logic and Greek philosophy.⁹² Miskawayh is one of the most outstanding personalities in Muslims' philosopher history, his work in philosophy made him famous. Different from preceding Muslim philosopher such as al-Farabi, Miskawayh did not stop short at logic and theology. Rather, he concerned on ethics more than most other studies of traditional philosophy at that time. Hence, he is considered as the first ethical thinker in the world of Muslims.⁹³

By his book *Tahdzib al-Akhlaq wa Tahtir al-A'raq* he is now known as the father of Islamic ethics.⁹⁴ Through this book, he emphasized his great admiration for the Greek philosophy. Miskawayh is very distinguished from his previous who worked in science and philosophy within Islamic civilization that he did not aim for reconciling between religion and philosophy nor he did not attempt combining them. But through the opinions he set forth, he naturally remained in Greek, and sometimes attributed to their original exponents.⁹⁵

Describing his personality, Abu Hayyan stated that Miskawayh's words were so polite, tender, understandable, containing wisdom, and so careful.⁹⁶ Miskawayh had written many books, some of them are; *Tajarib Al-Umam*, *Ta'qub Al-Himam*, *Taharat Al-NAfs*, *Adab Al-Arab wa Al-Firs*, *Al-Fawaz Al-Asghar fi Ushul AL-Diyanat*, *Al-Fawaz Al-Akbar*, *Kitab Al-Siasat*, *Mukhtar Al-Asy'ar*, *Nadim Al-Farid*, *Tartib Al-Sa'adat*, *Al-Adawiyah Al-Mufridah* and *Al-Asyribah*.⁹⁷ Only few of his books have been published and are now extant; *Fawaz Al-Asghar*, *Tajarib Al-Umam*, and *Tahdzib Al-Akhlaq wa Tahtir Al-A'raq*. The last book mentioned is considered as the best work of him, the first book investigating ethical philosophy deeply.

⁹² *Ibid.*, p. 417

⁹³ Nadia Jamal al-Din, *Miskawayh*, (Paris, UNESCO; International Bureau Education, vol 24, no 1, 1994), p. 2

⁹⁴ Muhammad Alfian, *Filsafat Etika*,, p. 204

⁹⁵ Nadia Jamal al-Din, *Miskawayh*,, p. 2

⁹⁶ Ibnu Al-Khatib, *Tentang Ibnu Miskawayh*, (Sambutan Editor Menuju Kesempurnaan Akhlaq, Bandung : Mizan, 1998), p. p 29

⁹⁷ *Ibid.*, p. 29

Discussing his books especially *Tahdzib Al-Akhlaq* is always interesting. It has been the ultimate reference in ethical discussion. So many literatures have been written based on this book. The combination of strong and thick tenets of Greek thought with Islamic thought based on divine revelation is a great work that nobody can ignore.⁹⁸ Miskawayh succeeded in explaining the ethics in excellent way, which was based on deep philosophical thinking and at the same time carrying the revelation of God.

Miskawayh divided this book into six parts. The first part is discussing about the principles of ethics, the soul, virtues, and vices. The second part, Miskawayh explains ways to achieve noble character, and how to get to the highest goal of human life. The third part, he discusses about virtues and happiness, their relevance, their levels and how to achieve them. The fourth part, he clarifies about justice. The fifth part is the discussion about love and friendship. And the last part Miskawayh explains about the mental health and ways to recover its diseases. Even though he's a classic thinker, his philosophical thinking would always be relevant to modern issues we often face today.

2.3. The Technoethics

1. The Value-free Claim

Etymologically, technology is derived from *techne*, a Greek term meaning art or skill.⁹⁹ And the word *Logos* means science or knowledge. Technology means the science about tools, facilities, and features all to manipulate and control the environment.¹⁰⁰ From the words' origin, technology is explained as "*scientific knowledge used*

⁹⁸ C.K Zurayk, *Kata Pengantar Edisi Bahasa Inggris "Menuju Kesempurnaan Akhlaq"*, (Bandung: Mizan, 1998), p. 20-21

⁹⁹ Heru Santosa, *Etika...*, p. 67

¹⁰⁰ La Shun L. Carroll, *A Comprehensive Definition of Technology from a Ethological Perspective*, (Social Sciences, vol 6, no 126, 2016), p. 2

in practical ways in industry, for example in designing new machine".¹⁰¹ And sometimes, technology is regarded as all human creations, the act of creating, utilizing, all stuff made by human.¹⁰² The most common conception is that technology as the manipulation and representative of existing physical and biological environment made by human.¹⁰³ In certain phase of technological development, it could be understood as applied-science-model.¹⁰⁴

The use of advanced technology has many potential benefits, and causes much more harm. The examples are modern technology that takes place in this 20th century. It belongs to the physic age, as scientists finally succeeded cracking the atom and found semiconductors to improve technology in the field of information and telecommunication.¹⁰⁵ The greatest technological project in this age is *the Apollo* project that targeted bringing human to the moon, and *the Manhattan* project, which aims making nuclear bombs used in World War II.¹⁰⁶ After finding electrons, scientists began developing nuclear energy, and they did it by making *the trinity* bomb that destroyed Hiroshima and Nagasaki in 1945.¹⁰⁷ The trinity bomb is supported by nuclear technology that at the same time is used as an alternative source of energy as other energy sources begin to shrink. The medical world has also used it not only to diagnose the disease, but also to kill cancer cells. Meanwhile more than 50,000 nuclear weapons existing in the world has millions of times the destructive power than ordinary bombs. Weapons which have killed millions of people and thousands of lives.¹⁰⁸

¹⁰¹ Oxford Dictionary

¹⁰² Heru Santosa, *Etika...*, p. 69

¹⁰³ Peter Kroes, *Technology, philosophy of. Routledge Encyclopedia of Philosophy*. London: Routledge. Retrieved January 12, 2005, from <http://www.rep.routledge.com/article/Q103>, p. 2

¹⁰⁴ *Ibid.*, p. 3

¹⁰⁵ K.Bertens, *Keprihatinan Moral,,*, p. 80

¹⁰⁶ *Ibid.*, p. 80

¹⁰⁷ Sohail H. HAshimi, *Ethics and Weapons of Mass Destruction; Religious and Secular Perspectives*, (Edinburgh: Cambridge University Press, 2004), p. 8

¹⁰⁸ Rachmat, Jalaludin, *Islami Alternative* (Mizan, Bandung; 1991) case 150

Biology and chemistry has spawned technologies that maintain the structure of modern life, such as water purification, waste disposal, immunization, agriculture, health, treatment, and storage of food. In fact, biotechnology has been able to transform bacteria into a kind of chemical plant to produce insulin and interferon, becoming beneficial for people with diabetes and cancer. At the same time, biotechnology also produces biochemical weapons to devastate crops, livestock, and even humans. There is even biotechnology that specifically studies about human manufacture using technology.¹⁰⁹ Biotechnology then takes place in the early 21st or familiarly known as neuroscience.¹¹⁰ It's carrying the giant project *The Human Genome Project*; which aims to cunningly mapping and sequencing the biochemical code from human genomes.¹¹¹ If this project were to finish, all problems according to human health would be solved.

The ambivalences that occur, caused by the appearance of several issues, one of them is the value-free stigma in the development of sciences and technology which appeared in 17th century. What is meant by value-free is that sciences and technology neutral on moral judgment or moral values. The word 'neutral' means that something does not take sides, balance, or pure. In the context of science and technology, being neutral means that it does not show partiality to anyone. It does not show partiality whether on good nor evil presumptions.¹¹² The detachment will maintain objectivity in science and technology. For that reason, ethical values do not belong in the realm of science and technology. That would due because ethical values are not based on objective empirical facts that make them so difficult to be regarded as truth.¹¹³

¹⁰⁹ *Ibid.*, P 151

¹¹⁰ Rafael de Asis Roig, *Ethics and Robotics. A First Approach*, (The Age of Human Rights Journal, No 2, 2014), p. 1

¹¹¹ K.Bertens, *Keprihatinan Moral*,, p. 80

¹¹² Hamdani, *Filsafat ...*, p, 151

¹¹³ A Sonny Keraf, *Etika Lingkungan...*, p, 336

The development of modern science and technology goes along with purities principles means that its developments are for the sake of science and technology itself. Science and technology does not care and concern about the purposes of its development whether it tends to be good or evil because it is not their duty.¹¹⁴ Science and technology absolutely have an autonomous authority that would not concern to judgments from the other side including religion and ethics. Their value-free claim on science and technology is intended to protect the autonomy and objectivity in the knowledge of science and technology itself.¹¹⁵ But as things went through, the scientific autonomy has been abused in the extreme way so that many scientists started leaving the moral responsibility as he is a member of the moral community.¹¹⁶

Technology will not stop supplying the damages without any restriction held by scientists and the users of technology. Science without moral responsibility will only give birth to science and technology that destroys its own master. Excessive attention to the autonomy of science and technology also affected to an occasion that a person will do anything for the sake of the truth, even though it sacrifices many parties in this world.¹¹⁷ Furthermore, when advances in the field of science and technology are not controlled by moral values, they will be controlled by other parties especially the power of politics and economy.¹¹⁸ The progress that is created will be utilized for the sake of profit-making business and politics. If the economic and political interests have taken control over the development of science and technology, they will change the goals of the development itself, which should be aimed for the benefit of all mankind, and not just for the benefits of certain groups.

¹¹⁴ *Ibid.*, p. 336

¹¹⁵ A Sonny Keraf, *Etika Lingkungan...*, p, 347

¹¹⁶ *Ibid.*, p. 347

¹¹⁷ *Ibid.*, p, 350

¹¹⁸ *Ibid.*, p. 350

Essentially, having concern with ethical and moral values is not the task of science and technology, but it is human's tasks who take control upon them.¹¹⁹ The progresses that were made must be directly proportional to the policies that follow. Man must determine the limits whether or not the technology could be applied based on virtue or moral consciousness.¹²⁰ Because however, science is neutral, it is not in favor of the good and the bad.¹²¹ But it is human who should determine the attitude and decide their goals over the science and technology implementation. The neutrality of science lies only on its ontological side. In epistemological and axiological dimensions, human is the judge who decides the values of science and technology.¹²² As aphorisms stated by Albert Einstein, that science without religion is blind, and religion without science is lame.

The discussion about ethics and technology has been done under the term technoethics. It is the area of research discussing on theories and methods from many interdisciplinary knowledge to provide the ethical view of the advancing technological system and practices. This term was first introduces in 1977 by Mario Bunge, a philosopher who notes that technology must be developed on responsibilities.¹²³

2. The Technomoral Designs

Science and technology impacts the damages and massive harms that the world is finally aware and starts to monitor the ethical aspects in the development of technology and its implementation. Some ethical institutions work to watch the technology are built, one example is *The Institute of Society, Ethics and Life Sciences* in Hastings New York.¹²⁴ Other than formal institutions, some philosophers and

¹¹⁹ Heru Santosa, *Etika dan...*, p. 47

¹²⁰ *Ibid.*, P. 48

¹²¹ Totok Wahyu Abadi, *Aksiologi; Antara ...*, p. 190

¹²² *Ibid.*, P. 190

¹²³ Rocci Luppisini, *The Emerging Field*, IGI Global, copyright 2009. p. 2

¹²⁴ Jalaluddin Rakhmat, *Islam...*, p., 158

thinkers contribute their idea to form the standard of ethics to deal with technology.

One of those thinkers is Shannon Vallor who tries connecting the technology to virtue ethics.¹²⁵ It then produced a framework which she called as the technomoral virtue. She sees the lack in the other traditional concept of ethics such as utilitarianism and deontological so that she began her work in virtue ethics. According to her, the utilitarianism would allow us to make the terrible choices under the name of the greater good, while the deontological ethics would always be inflexible in the face of challenges posed by the development of technology.¹²⁶

Utilitarianism is an ethical theory focuses on results, the maximum amount of happiness for the most number of people. One of philosophers who bring this theory is John Stuart Mill, he states that action will be right as it is promoting the happiness. While happiness is derived from pleasure, and the absence of pain.¹²⁷ Utilitarianism is an action theory claims that each individuals seek to promote their own utility, it is then considered to be selfish and ignoring the utility of others.¹²⁸ According to this principle, Vallor argues that this wouldn't be match to be an ethical standard for technological development and its implementation.

Another theory, the deontological theory focuses on moral rules, rights, principles, and duties. Whether it tends to be universalist, on its application is impossible to follow certain rules without breaking the other.¹²⁹ And because of that, this theory wouldn't be a good standard to

¹²⁵ Jan Kyree Berg Friis, *Vallor, Shannon. Technology and the Virtues...*, p. 1

¹²⁶ Damien William, *Cultivating Technomoral Interrelations...*, p. 65

¹²⁷ Thomas J. Frohlich, *Ethical Consideration in Technology Transfer*, (Library Trends, vol 4, no 2, 1991), p. 283

¹²⁸ Antoinette Baujard, *Utilitarianism and anti-Utilitarianism*, (Groupe D'analyse De Theorie Economique Lyon-St-Etienne), p. 2

¹²⁹ Shannon Vallor, *Conceptual Framework in Technology and Engineering Practice: Ethical Lense to Look Through*, (Markula Center for Applied Ethics, Santa

be applied in technological development and its application.

Vallor aims to provide the new understanding to help us reexamine of how should we respond and participate through the innovations in the field of science and technology.¹³⁰ So she explored the world's three leading virtue ethical traditions and summarized them to make the new approach to cultivate the technomoral virtue. This approach is focusing on how we can cultivate our virtue in order to be able to deal with technological change in ethically better way.¹³¹ While virtue ethics is "*habituated states of a person's character that reliably dispose their holders to excel in specific contexts of action and to live well generally*"¹³². Virtue ethics doesn't set in the points of right or wrong action or certain goal of an action, but it rather focuses on the cultivation of character helping people avoid the difficulty of facing the unpredictable situation.

To cultivate the virtue in a person's life, Shannon Vallor concerns on three points; experiences as the practice to shape the habitual character, understanding the essence of human life, and seeking the highest good of human beings.¹³³ For the essence of human life, she adopted Aristotle's theory of soul, which is divided into some parts they are; a vegetative part, a perceptive part, the desires, and the reason. These parts of soul are interacting each other in a cognitive system.¹³⁴ One sometimes dominates the others. If the soul of reason is holding the control of other souls, one could acquire the wisdom as the highest virtue cultivated in a person. According to Aristotle, virtue would be

Clara University, 2018) p. 1

¹³⁰ *Ibid.*, p. 64

¹³¹ Wessel Reijers and Mark Choeckelbergh, *Narrative Technologies Meets Virtue Ethics In Alternate Reality*, (ACM SIGCAS , Computer and Society, 47(4)), p. 98

¹³² Shannon Vallor, *The Future of Military Virtue: Autonomous System and the Moral Deskillling of the Military*, (NATO CCD, 5th International Convergence on Cyber Conflict, 2013)

¹³³ Wessel Reijers and Mark Choeckelbergh, *Narrative Technologies...*, p. 98

¹³⁴ Nicholas Barberich, Klaus Diepold, *The Virtuous Machine-Old Ethics for New Technology?*, (Munich Center for Technology in Society, 2018), p. 7

found in the excellent use of the reason as a cognitive apparatus.¹³⁵

A person couldn't be virtuous ever since he was born without practices, experiences, and habituations. Because virtues are rather habituated than inborn, and their level depends on whether they engaged repeatedly in practices.¹³⁶ For example is the virtue of honesty, would only be obtained by a person with intensive practices of truth-telling. The practice, of course needs the guidance from a virtuous model, someone who is already honest.¹³⁷ Specifically, to cultivate the technomoral virtue we have to practice our virtue with dealing and facing the reality of technological change rather than just focusing on the theory of how could we cultivate our virtue. Virtue ethics concerns not only with habit but also with internal intentions; it is so important that virtue ethics must be consciously brought to bear through cases.¹³⁸

Since the virtues have been completely cultivated in a person, he would be in a state of stable character trait, namely excellences.¹³⁹ An excellent person is the virtuous agent who has cumulatively developed traits of character that enable him to live life in ethically excellent way, and is able to display his principle of the virtues such as wisdom, conscience, temperance, courage, integrity, self-knowledge, justice, and friendship.¹⁴⁰ Principally, those virtues and other unmentioned ones are the branches of four cardinal virtues of *prudence, courage, temperance, and justice*.

¹³⁵ *Ibid.*, p. 7

¹³⁶ Shannon Vallor, *The Future of Military Virtue: Autonomous System and the Moral Deskillling of the Military*, (NATO CCD, 5th International Convergence on Cyber Conflict, 2013)

¹³⁷ *Ibid*

¹³⁸ Edmund G. Seebauer, *Fundamentals of Ethics: the Use of Virtues*, (Practical Ethics for Food Professional: Ethics in Research, Education and the Workplace, 2013), p. 7

¹³⁹ Shannon Vallor, *Social Networking Technology and the Virtues*, (Ethics Inf Technol, DOI 10.1007/s10676-009-9202-1, 2010), p. 158

¹⁴⁰ S Bolsin, *Practical Virtue Ethics: Healthcare Whistleblowing and Portable Digital Technology*, (J Med Ethics, no 31, 2005), p. 614

Those are the process of cultivating the virtue, but there are still several requirements to practice the virtue in the technomoral interrelation, they are; moral attention, an extension of moral concern, and the prudential judgment.¹⁴¹ Moral attention for the first, concerning the approaches taken for deciding an action. That moral value should be a standard or action-based decision in every condition. Doing a moral-based action isn't that enough as challenges of moral concern extend. The right action shouldn't be enough as it should be appropriate to the right being, at the right time, to the right degree, and in the right manner.¹⁴² Hereby, an appropriate action on specific situation could be misappropriated on different situation. The last dimension of cultivating practical wisdom is the prudential judgment. Prudential judgment states each value of character into its mean, the middle of two extremes which is better than them. For the example is the value of courage, lies between foolhardiness and cowardice.¹⁴³

Those processes would never be a final achievement. Each step of cultivating the technomoral virtue must be continual process of training and habituating. Despite all the important processes, they also have to be undertaken in a community because only by working communally we could build a moral system and societies necessary to sustain the virtues in this world. The main relevance of virtue ethics and the development of technology is that virtue ethics provides the framework which would certainly help everyone to cope with problematic technological situation in this 21st century life.

3. Modern Technology and Technomoral Virtue

Modern technology is the most technological fields having advancement in this 21st century. Many of scientists have narrowed the modern technology into some field that was characterized by the

¹⁴¹ Nicholas Berberich, Klaus Diepold, *The Virtuous Machine*..., p. 12

¹⁴² *Ibid.*, p. 14

¹⁴³ *Ibid.*, p. 15

rise of neuroscience or biotechnology, as to par as the technology of robotics and artificial intelligent having strong connection with other areas especially the social networking technology.

a. The Biotechnological Human Enhancement and the Virtues

Biotechnology is a term defined as the application of engineering principles on biological sciences.¹⁴⁴ It has carried a revolution of hopes to solve problems according to health, agriculture, food care, waste-disposal, and a lot of human primary needs.¹⁴⁵ Starting from the humble examples such are vaccine of foods, the use of microbes to make cheese and yoghurt, until in the mid-eighties, when scientists finally found *insulin* to treat diabetics and as blood-reducing enzyme for heart attack victims are the gifts from biotechnology.¹⁴⁶ It appeared that nothing to worry about the biotechnological advancement but on the contrary, things that man should appreciate to.

Just about a decade after, a revolution in medical field occurred, exactly in 1973, the first baby to be conceived outside the body by *In-Vitro Fertilization* is born.¹⁴⁷ Such thing became a common phenomenon in the world today. In 1997 there is a successfully cloning of the Dolly Sheep that led to a thinking whether this trial could be applied to human or other organisms.¹⁴⁸ Biotechnology started from humble and simple points into such things called *the Genetic Engineering*; the application of techniques from biotechnology and bioengineering to modify the genetic

¹⁴⁴ Hafiz Muhammad Ahmad, etc. *Ethical Issues of Biotechnology, Possible Risks and Their Management*, (Journal of Biology, Agriculture, and Healthcare, vol 5, no 11: 2015), p. 49

¹⁴⁵ M Fahri, *Bioteknologi dan Bioetika: Cetak Biru Untuk Masa Depan Umat Manusia*, (Khazanah, Jurnal Ilmiah Bestari No 31 : 2001), p. 76

¹⁴⁶ Hafiz Muhammad Ahmad, etc. *Ethical Issues*,, p. 49

¹⁴⁷ Allan J Day, *Biotechnology and Medical Ethics*, (ISCAST: Christian in Science and Technology), p. 2

¹⁴⁸ *Ibid.*, p. 2

makeup of an organism.¹⁴⁹

One biggest project of the Genetic Engineering is a term named *Human Enhancement* which gains popularity in the last decades.¹⁵⁰ The academics working on this project have the motto *if we can, we should*. Literally, Human Enhancement is the effort of reducing human weakness and potentially improving human abilities by modifying the DNA, or parts of the body.¹⁵¹ There is a case which made the Human Enhancement evident, is the story of a disabled African runner named Oscar Pistorious who got the implementation of Flex-Foot Cheetahs and managed to win the T44 200m gold medal in 2005. His scores somehow defeated the normal runners.¹⁵² Pistorious is considered experiencing the undergone enhancement.

This program allows human to enhance their physical and cognitive ability using the nanotechnology.¹⁵³ It's supported by the trans-humanist that according to them this program has an ethical justification and is morally good because it allows us to enhance ourselves. While virtue ethics is carrying the idea of self-improvement of one's attitudes and action and still involved the sense of moderation.

According to virtue ethics principles, this program is absolutely problematic because of three points as to follow. First, the idea of enhancement is by its essence contradicts to the idea of moderation in virtue ethics, yet it is more like the immoderation. Secondly, virtue ethics concerns on self-improvement with habituation, education, and effort. It's clearly in distinction to the

¹⁴⁹ Dr. Mirko Garasic, Dr. Steffen Steinert, *Ethics and Technology: Some Issues*, (Hamburg University, Tekethics, 2018), p. 33

¹⁵⁰ *Ibid.*, p. 13

¹⁵¹ *Ibid.*, p. 13

¹⁵² *Ibid.*, p. 15

¹⁵³ Vanessa Nourock, *Nanoethics For, From, or With Nanotechnologies?*, (HYLE, International Journal for Philosophy of Chemistry vol 16, 2010), p. 33

instant enhancement endorsed by the nanotechnology. Thirdly, virtue ethics is connected with the society while the nanotechnological enhancement carrying the idea of individual and self-centered enhancement.¹⁵⁴

Moreover, modifying the human body will impact to the changing of human nature in terms of degradation of human values. The biomedical enhancement will lead to erosion of some human natural values.¹⁵⁵ One self will not be considered free anymore because he is now the object of technology itself. The other value that may be reduced is the capacity to be grateful, to appreciate what is beyond one's control, and to have shared experience with others. In this case, human is no longer natural beings, but he has changed to naturally transformative and technological beings.¹⁵⁶

b. Social Networking Technology and the Virtues

The most impressive development of technology lies in the field of IT, especially the social networking technology. Social networking referred to applications and sites that facilitate social interaction via online.¹⁵⁷ This kind of technology focuses on how humans are interacting each other and sharing the information. The social networking technology has millions of users spread in the world wide. There are lots of websites that are currently used such as Facebook, MySpace, Instagram, Twitter, and Bebo.¹⁵⁸ The social networking technology impacts human lifestyle as it has the potential to form the quality of human relationship.

Looking at this kind of technology through virtue ethics we

¹⁵⁴ *Ibid.*, p. 33-34

¹⁵⁵ Marco Stango, *Human Body, Enhancement, and the Missing Technomoral Virtue*, (Sociologia Y Technologia, vol 1, no 8, 2017), p. 50

¹⁵⁶ *Ibid.*, p. 44

¹⁵⁷ Stanford Encyclopedia of Philosophy, *Information Technology and Moral Value*, (Published June, 2012)

¹⁵⁸ Shannon Vallor, *Social Networking Technology and Virtues*, (Ethics Inf Technol, 12:157, 2009), p. 157

may focus on the virtue of justice as it has strong relation to the community. Shannon Vallor takes the analysis based on Aristotle theory noted that a good and true life will be realized through virtuous friendship. And virtuous friendship composed from some virtues as the branches of justice they are; reciprocity, empathy, self-knowledge, and shared life.¹⁵⁹ Although there are some issues growing from the social networking technology such as privacy issues, textual bullying, and also cyber-crime, they're still can be prevented with virtuous habit of the users. To maintain the virtuous social networking technology, its users should develop some virtues of relationship includes honesty, patience, and empathy.

Honesty is a virtue that already threatened by the social media because anyone has the ability to misrepresent his identity when inputting the data. Honesty means the willingness in words and deeds to put one's authentic self in play, and it involve certain risk; risk of being disliked, risk of giving offense, and risk of seeming different. And it's clear that social media may actually promote such risk-taking.¹⁶⁰ But Aristotle once said that virtue is a mean between two extremes of vice, one a deficiency, the other an excess. Honesty in using the social media lies between the deficiency of candor and extreme of openness.¹⁶¹ So the user should be aware of the data that he supposes to share, and the data he supposes not to.

While patience is a communicative virtue means slowness to anger.¹⁶² As social media is universal characterized, showing the anger in it may cause the problem to its user. Patience helps the other to know how commitment someone is in community relationship.

¹⁵⁹ Stanford Encyclopedia of Philosophy, Information Technology and Moral Value, (Published June, 2012)

¹⁶⁰ Shannon Vallor, *Social Networking...*, p. 166

¹⁶¹ *Ibid.*, p. 166

¹⁶² *Ibid.*, p. 165

And the last virtue is empathy or compassion. It is the habit of conducting oneself in socially pleasing way. To have an empathy, someone may share the joys and suffering to others.¹⁶³ Thus, to build virtuous friendship even through social media, someone should have these virtues. The social media can be virtuous by facilitating and strengthen the friendship if its user is a virtuous person already.

Humans now are in the urgent need of the valid solution to reduce the disadvantage brought by the development of technology. A solution which anybody got chance to participate. Once in her work, Shannon Vallor writes, "*How can humans hope to live well in a world made increasingly more complex and unpredictable by emerging technologies? ... in essence my answer is this: we need to cultivate in ourselves, collectively, a special kind of moral character, one that express what I will call the technomoral virtues.*"¹⁶⁴

¹⁶³ *Ibid.*, p. 167

¹⁶⁴ Marco Stngo, *Human Body...*, p. 54-55

CHAPTER III

BUILDING TECHNOMORAL VIRTUE BASED ON IBN MISKAWAYH'S CONCEPT OF ETHICS

3.1. Ibn Miskawayh on Ethics

Miskawayh was a figure of Islamic ethics, and therefore the teachings that he had, derived from the Qur'an, described by the prophet Muhammad through his deeds and words.¹⁶⁵ Miskawayh describes ethics as *akhlaq* or moral, and it includes two meanings. First, it is science that deals with standard of right or wrong of human action. Second, it means good character or good human behavior.¹⁶⁶ The goal of ethics or science that related to morality according to Ibn Miskawayh is to enable people to achieve his purposes and perfection, which is to produce noble and beautiful deeds.

1. The Principles of Ethics

The principles of ethics are the primary objects of ethics that often been discussed. There are three basic objects in the discussion of ethics; human action, moral value, and happiness.

a. Human Action

To conceive the whole concept of ethics, Miskawayh starts from the point of human action which has a relation to man's essence. Man is a small reality which is also a part of natural reality.¹⁶⁷ He stresses that man isn't composed solely from a single element called the body or physic. Yet, it has another element with specific and typical nature, which contradicts from the body's

¹⁶⁵ Jalaluddin Rahmat, *Islam ...*, p.

¹⁶⁶ Bbdurezak A. Hishi, *Islamic Ethics: An Outline of its Principles and Scope*, (Journal of Revelation and Science, vol 1, no 3, 2011)., p. 123

¹⁶⁷ ابن مسكويه، تهذيب الأخلاق في التربية، ص. ١٠٠

nature and its physical actions.¹⁶⁸ It is the element which has its own deeds, distant and different from the physical deeds. We call that element as the soul; it is not even a part of the body, and it is not any material things as well.¹⁶⁹ The understanding of soul according to some Qur'an interpreter is something that owns a shape and is not created from natural elements.¹⁷⁰ To manage moving and realizing its actions, the soul requires a form, that's where bodily function turns out. Thus, it's never been the body that needs soul to realize its actions, but it is the soul who demands actions, and body is the *intermediary*.¹⁷¹

Physical, material, and bodily things are substances of the body. The body may find out sciences and knowledge through contacts with its senses.¹⁷² For that reason, it always tends to things that can only be absorbed and perceived by these senses such as physical pleasures, the desire to win, and so on. If one got fulfilled his physical requirements, his body will then feel comfort, good, and pleasant.¹⁷³ That may due because those physical characteristics and material requirements are the substances and reason of the existences of the body.

In contrast with the body, the soul is a higher entity. Soul tends to something that is not physical or material, it has the desire of knowing the reality of God, understanding all beyond the physical things which is nobler than the material things.¹⁷⁴ The

¹⁶⁸ *Ibid.*, p. 36

¹⁶⁹ Syamsul Bakri, *Pemikiran Filsafat Manusia ibn Miskawayh, Tela'ah Kritis atas Kitab Tahdzib Al-Akhlaq*, (Jurnal Pemikiran Islam dan Filsafat, vol 15, no 1, 2018), p., 151

¹⁷⁰ Fatimah Halim, *A Critical Assessment Of Thinking About Life (al-nafs) In Islamic Philosophy*, (Journal of Al-Daulah, vol 1, No. 2, 2013), p. 62

¹⁷¹ Muhammad Alfian, *Filsafat Etika...*, p. 112

¹⁷² Syamsul Bakri, *Pemikiran Filsafat Manusia...*, p. 153

^{١٧٣} ابن مسكويه، تهذيب الأخلاق في التربية، ص.٦٠

¹⁷⁴ Syamsul Bakri, *Pemikiran Filsafat Manusia...*, p., 155

more it is away from physical things, it would be then, more perfect. As well as the more it's sheering away from the senses, and not fixated on them, the more it would be perfect and strong. Although soul still needs senses to be able to absorb sciences, its principles and behaviors are controlled by reason. As reason is the crucial necessary to the soul, it would never need other than the reason to digest and cultivate science and knowledge.¹⁷⁵

The discussion about the soul is also a crucial issue discussed by many Islamic philosophers, such as al-Kindi, who stated that the soul is a single substance. According to him, the soul has a divine and spiritual nature that even though it was in touch with the body, it is still not a part of the body.¹⁷⁶ Meanwhile, al-Farabi, in his discussion about the soul he focuses on soul's relation to mind. In his idea, the soul is a substance that has the power and functions.¹⁷⁷ Soul has the power to control the bodily action based on the knowledge it poses. Thus, human action which is controlled by the soul is regarded as the ethical action because soul has the sense of freedom to decide for itself.¹⁷⁸ Human always have the choice of what he should or shouldn't do, it is the fundamental requirement for an action to be regarded as ethical action.

b. Moral Values

Moral value is the measurement instrument to see if an action is regarded as moral action or not. The basic moral value is the sense of goodness, according to ibn Miskawayh, goodness is related to the soul as it is the essence of human nature. The term goodness in his thought is often considered as virtue. As Human's essence is the soul, it always covets sciences and knowledge as those things related to its substance. The soul's virtue is judged from how great

^{١٧٥} ابن مسكويه، تهذيب الأخلاق في التربية، ص. ٨.

¹⁷⁶ Muhammad Alfian, *Filsafat Etika*...., p. 174

¹⁷⁷ *Ibid.*, p. 115

¹⁷⁸ Ismail Raji Al-Faruqi, *Tauhid*...., p. 61

it's coveting sciences and knowledge, as well as its turning away from physical and material desires also considered as the soul's virtue.¹⁷⁹ While the highest level of science and knowledge is the knowledge about God.¹⁸⁰ Thus, soul's highest good would only be reached if it has achieved the divine knowledge, or the knowledge about God.

Soul has the power to control mind and actions. Mind and action are closely related, when mind has achieved its perfection, which is the knowledge about God; it could manage to organize the bodily deeds. Good deeds are the result of the great and right work of mind. Therefore, someone who's thought is right, correct, and manages to take the right choice for his actions; he is regarded to have a greater humane perfection than someone who does not have it.¹⁸¹ Man's purpose in life is to realize virtuous character and noble deed. Due to their excellent mind and reason, man can realize his goal, so that someone who is constantly working and achieving his goals will then be considered as a good person.¹⁸² Then, a good person is who works hard, struggling to achieve virtuous character and noble deeds. Thus, goodness is the result of achieving the divine knowledge, while the divine knowledge is sourced from religion. The virtues as well are then sourced from God, taught in the religion and God's revelation.

c. The Virtues

After getting a proper understanding about soul as the essence of man, Miskawayh continues the discussion to the principal virtues which are derived from different faculties of the soul. The soul is divided into three different faculties, in which one of them can control the other. The excessive development upon

¹⁷⁹ ابن مسكويه، تهذيب الأخلاق في التربية، ص ٩

¹⁸⁰ *Ibid.*, p. 12

¹⁸¹ *Ibid.*, p. 11

¹⁸² *Ibid.*, p. 11

one of those faculties can destroy the other.¹⁸³ The first faculty is the faculty associated with thinking, viewing, and determining the reality of everything. He is the faculty of thinking (al-Quwwah an-natiqah), regarded as the king of the faculties with the brain as the organ it used.¹⁸⁴

The second faculty, associated with courage, anger, self-esteem, power, and honor. It is the faculty of anger (al-Quwwah al-ghadabiyah) is considered as the faculty of beast with a heart as the organ of intermediary.¹⁸⁵ The third is the faculty regarding to lust appetite, physical and sensual pleasure, named the faculty of lust (al-Quwwah as-syahwiyah). It used the heart as an organ of the intermediary and hence regarded the animal faculty.¹⁸⁶ The strength of these three faculties are different from one person to the other, depends on the temperament, habits, and discipline.

As previously described, if man has completed his mind it will be in the state of perfection. As the faculty of king, the mind will be able to subdue the other faculties and not drift into the impulses of desire. In such situations, a person has achieved the primacy of the soul of thinking namely, the wisdom (*arif*).¹⁸⁷ Wisdom is the knowledge that includes the divine and human knowledge.¹⁸⁸ Knowledge that can determine the things that should be done and what should not be. Wisdom has many subdivisions namely; cleverness, remembrance, thinks, quickly to understand, clear in the mind, and ability to learn easily.¹⁸⁹

¹⁸³ *Ibid.*, p. 14

¹⁸⁴ Mohd. Nasir Omar, *The Soul (An-Nafs) and its Effects on Character: An analysis of the thought of the Great Muslim Mofalist, Miskawayh (D. 1030)*, (Sci.Int vol 30, no 1, 2018), p., 55

¹⁸⁵ *Ibid.*, p. 55

^{١٨٦} ابن مسكويه، تهذيب الأخلاق في التربية، ص. ١٦

¹⁸⁷ *Ibid.*, p. 16

¹⁸⁸ Adibah binti Abdul Karim, Understanding Islamic ethics and its Significance on the Character Building, (International Journal of Social Science and Humanity, vol 3, no 6, 2013), p. 513

^{١٨٩} ابن مسكويه، تهذيب الأخلاق في التربية، ص. ١٦

As well as thinking faculty, the faculty of anger also got its virtue, something that we called courage. Courage is someone's ability to express anger, showing energetic and vigorous pursuit strives for domination, undertaking the danger, having promotion and variety of honor.¹⁹⁰ Courage will appear in a person when the soul of anger is obedient to the soul of thinking, so that someone will not be afraid to cope with the worrying things. Courage also has subdivisions namely; patient, high-minded, tenacious, tough, quiet, steadfast, self-controlled, strong, and resilient in the work.¹⁹¹ Patience means being patient towards scary things. Tough is the feeling of confident in dealing with scary things. Quiet intended as a state when facing good fortune or the bad one, as well when facing the adversity. Steadfast is the firmness of the soul in abstaining from evil promptings. Self-controlled is the ability to control one's self and hold it in the right path.¹⁹²

Meanwhile the virtue of lust faculty is the character of temperance; it will appear in a person when he directs his passion to things that are good and not overdone it. Temperance refers to someone who satisfies his desires in the right measure, in the right way, in the right time, and in the right situation.¹⁹³ The subdivision of temperance character are; shame, quiet, patience, loyalty, integrity, satisfy, self-discipline, optimism, graceful, dignified, and wara'.¹⁹⁴

Shame is meant to refrain from embarrassment did, and bad things, to avoid the taunts and insults. Quiet is the ability in abstinence. Integrity is the policy of the soul in finding treasure on the right path. Satisfied means moderation in eating, drinking, and dressing. Loyal is the soul submission on praiseworthy things and

¹⁹⁰ Adibah binti Abdul Karim, *Understanding....*, p. 512

¹⁹¹ ابن مسكويه، تهذيب الأخلاق في التربية،..ص. ١٨

¹⁹² *Ibid.*, p.18

¹⁹³ Adibah binti Abdul Karim, *Understanding....*, p. 513

¹⁹⁴ ابن مسكويه، تهذيب الأخلاق في التربية،..ص. ١٧٠

having passion in doing virtues. Discipline means the soul ability to assess everything properly. Optimism is always expecting the goodness and noble. Graceful and dignified is the soul hardness in the face of the world's demands. And *wara'* is the self-appearance to always do well, to aim the perfection.¹⁹⁵

There is still another kind of virtue, which appears from the integrity of the three virtues that have been mentioned, namely justice.¹⁹⁶ Justice is the virtue that pushes someone to do justice to himself and others.¹⁹⁷ Justice-also has subdivisions, they are; friendship, live socially, *silaturahmi*, giving retain, behave in cooperation, keen in deciding problems, love and affection.¹⁹⁸ Justice is the virtue that has a strong relation to the social life. With justice, a person could showcase their virtues to other people.

Thus, Ibn Miskawayh explains the divisions of the soul and their virtues then it becomes clear now. Those virtues are in the form of wisdom, temperance, courage and justice, which each of them includes several subdivisions.¹⁹⁹ To measure the right position of any virtue, Ibn miskawayh explains that a virtue lies at a midpoint between the two ends of vices.²⁰⁰ For example, wisdom is the midpoint between the stupidity and foolhardiness.²⁰¹ Temperance is the midpoint between the two vices; complying with lusts and ignoring them.²⁰² Courage lies in the midpoint between cowardice and recklessness.²⁰³ And the justice is the midpoint between inflicting injustice and suffering injustice.²⁰⁴

¹⁹⁵ *Ibid.*, p. 17

¹⁹⁶ Adibah binti Abdul Karim, *Understanding....*, p. 513

¹⁹⁷ Mohamed, *Greek Thought....*, p. 244

¹⁹⁸ ابن مسكويه، تهذيب الأخلاق في التربية، ص. ١٩-٢٠

¹⁹⁹ Adibah binti Abdul Karim, *Understanding....*, p. 512

²⁰⁰ Y Mohamed, *Greek Thought....*, p. 242

²⁰¹ ابن مسكويه، تهذيب الأخلاق في التربية، ص. ١٩

²⁰² *Ibid.*, p. 21

²⁰³ *Ibid.*, p. 22

²⁰⁴ *Ibid.*, p. 8

Even if someone owns all those characters of virtue, he will never get to the real virtue if he had lived alone and had no dealings with others.²⁰⁵ Because humans are social creature, which means that they are always in need of the society to fulfill their needs. The point is that the virtuous character on somebody must also be perceived by others. Although the virtuous characters are not really visible, but they still must be manifested in action on the society sphere.²⁰⁶

d. The Happiness

The word of happiness means the state of being satisfied that something is being good or right. While the word 'happy' defined as showing the feeling of pleasure.²⁰⁷ Happiness in Aristotle's idea and other thinkers is the end of everything.²⁰⁸ According to Ibn Miskawyh, happiness is the highest level of goodness. Due to the two elements that make up or construct a human, he-was confronted by two worlds that correspond to those two elements that formed him. Those worlds or natures are the high nature and the low nature. Low Nature is a sensual nature, which can be only reached by the senses, the nature where physical virtues are obtained. In this nature, human beings can equal the animals' degree. And the high nature couldn't be obtained by the senses, but it would only be obtained by the mind power instead.²⁰⁹

Man's happiness can be valued from two conditions. The first, when he was in the nature that has particularly low levels of physical dimension and finds happiness there. But at the same time he was looking for things that are noble, he by then will love

²⁰⁵ Mohd Nasir Omar, *Islamic Social...*, p. 83

²⁰⁶ *Ibid.*, p. 84

²⁰⁷ Ernita Dewi, *An Integrative Relationship...*, p. 52

²⁰⁸ ابن مسكويه، تهذيب الأخلاق في التربية، ص. ٦٣

²⁰⁹ *Ibid.*, p. 69

them, and get satisfaction with them.²¹⁰ Second, when humans are in a spiritual level that is at high nature, close to the things that are spiritual and manages to obtain happiness there. But it did not make him forget and leave the low nature; he keeps observing physical and material things to take a lesson from them.²¹¹ Thus, we can conclude that happiness wouldn't be found in the matter of the body itself nor just in the soul. But both of the body and the soul has a part of carrying the happiness to somebody.

In the matter of happiness levels, Ibn Miskawayh shared thought with Aristotle that happiness is divided into three parts. First, when people try to meet the benefits of himself in the world including the physical and spiritual benefits. He fulfill his needs in a reasonable portion and not excessive. Although he still influenced by lust, but it is still within a proper limits. His actions did not deviate from virtue judgment of reason and mind.²¹² Secondly, when human attempt his efforts to achieve the perfect goodness of the soul. He is not affected with desires and passions, and do not pay attention to the needs of his body but in emergencies situations. The highest level of happiness is the Divine happiness. At this level, a man will spend his time only on divine matters. He attempts and works in it without demanding any commission.²¹³ Another Islamic thinker named Al-Farabi also stated that happiness is the goodness intended for the goodness itself, because it is the final goal of human life.²¹⁴

The highest level of happiness was indirectly also considered as the final stage of virtue. It is when all human actions have the divine purposes; it means that he was doing it without any purpose

²¹⁰ *Ibid.*, p.70

²¹¹ *Ibid.*, p.70

²¹² *Ibid.*, p.73

²¹³ *Ibid.*, p.73

²¹⁴ Endrika Widdian Putri, *Konsep Kebahagiaan ...*, p. 108

but the action itself. At this level, human actions resemble the action of God, the creator of all things. He will do something without demanding any wages or commissions or profits, his purpose when doing the actions is the actions themselves. He acts for the sake of its own essence which is the soul or the mind that always craves divine actions, as has been discussed earlier in the matter of human essence.²¹⁵

Thus, the ultimate goal of human action is to obtain kindness which the highest level is the happiness.²¹⁶ The truth happiness is related to human essence which is the soul who always craves the divine action and divine knowledge. To obtain happiness, humans must first have moral perfection or character, which is a state where people can determine the ultimate act without having to think and consider deeply. A noble character will only be obtained humans through habituation and training in a long time. Thus, people who managed to face all the problems in this world by doing virtuous deeds, and promote the rational soul of his wise deeds, is the one who is happy and blessed.

2. The Refinement of Character

It has been previously explained that man is consisted of two elements; body and soul. It will then, effects the human actions, that also covers two elements, the mind's actions belong to cognitive dimension, while the body's actions belong to practical dimension. Cognitive is a tendency to a wide range of science and knowledge. While the practical one is a tendency in organizing things.²¹⁷ Therefore, the perfection of man-was assessed from these two aspects. The soul would be perfect if it has managed to reach the divine knowledge which

²¹⁵ ابن مسكويه، تهذيب الأخلاق في التربية،..ص ٧٣

²¹⁶ *Ibid.*, p.63

²¹⁷ *Ibid.*, p. 63

is the highest level of knowledge.²¹⁸ While the body's perfection lies in the perfection of actions works in line with the will of a perfect reason and knowledge.²¹⁹

To achieve perfection, at the start point, man must understand what is needed by his body, knowing his physical deficiencies so as to eliminate and correct them. In the matter of food, for example, the body needs food to maintain his balance. Therefore, one should eat only when foods are needed to overcome his deficiencies, and in order to maintain his viability. Even if he fulfills his desires or lust in a way of slightly exceeds the limit, it must be still in reasonable doses, so as not to make him accused of greed.²²⁰ Humans also need clothing to protect their body and to cover their nakedness. Both are conditions that allow people to dress. Man should not dress in an overly way that breaking the limits, so it made him seem to be greedy, arrogant, or stingy.²²¹ Similarly, on the other needs of man, he should provide them within reasonable limits or portion, and shouldn't take away the rights of others.

In addition to considering his physical deficiencies, humans are also required to carry out his soul's defects. Because reason and mind are not exactly perfect, they need the food which suits them, such as seeking the knowledge, thinking about the nature of life, proofs against the truth, and rejection against the falsehood.²²² If someone has fulfilled his soul of thinking's needs, it would be able to do its job properly; organizing the other faculties. It could manage disciplining the soul of

²¹⁸ Syamsul Bakri, *Pemikiran Filsafat Manusia*, p., 161

²¹⁹ *Ibid.*, p. 161

²²⁰ ابن مسكويه، تهذيب الأخلاق في التربية، ص. ٦٠

²²¹ *Ibid.*, p. 46

²²² Ernita Dewi, *An Integrative Relationship among Happiness, Virtue, and Love According to Miskawayh's Thought*, (IOSR, Journal of Humanities and Social Science Vol 23, no 8, 2018), p. 51

lust and anger, and brought them to noble.²²³

If a person does not accustom himself to fulfill his physical needs in an appropriate portion and limits, or simply that he does not get used to meet the needs of his minds well, such condition will not take him to virtues but it on the contrary it will take him to the vices. A mind which is not accustomed to the true knowledge will not attain wisdom but stupidity and foolhardiness instead. Humans who used to be glorious with their temperance, when he was excessive in supplying his physical needs, he will then be greedy, stingy, arrogant etc.²²⁴ Those characters of vices will not lead a man to perfection, but it will make him despicable. This is supported by one verse in the holy Qur'an surah Yusuf verse 53 said that lust will always lead human into vices.²²⁵

Human perfection will be achieved if one can fulfill his soul's requirement of virtues. Because of those virtues can distinguish man from other creatures, in term of those virtues were the ones that make human beings as human being. So that the daily activities of humans is in purpose to perfect himself, and cover his deficiencies. When someone is breaking or coming out of this purpose, his degree of humanity would be decreased.²²⁶ He could be that equal of wild animals or beasts because they are promoting their soul of anger. And he may be equal with animals because of overly satisfying his lust. As Miskawayh mentioned that Allah says in Qur'an, (91-7-10), "*And a soul and Him Who perfected it. And inspired it (with conscience of) what is wrong for it and (what is) right for it. He is indeed successful who causes it to grow and he is indeed a failure who stunt it.*"²²⁷

If someone's mind has been perfect and due to the perfection

²²³ ابن مسكويه، تهذيب الأخلاق في التربية، ص. ٤٦.

²²⁴ *Ibid.*, p.45

²²⁵ Muhammad Alfian, *Filsafat Etika*..., p. 113

²²⁶ Syamsul Bakri, *Pemikiran Filsafat Manusia*..., p, 157

²²⁷ ابن مسكويه، تهذيب الأخلاق في التربية، ص. ٣٠.

of his actions, he would then be said to have the perfect character or *akhlaq*.²²⁸ *Akhlaq* or character according to Ibn Miskawayh is a state of the soul that makes people act without hard thinking or deliberation.²²⁹ This notion is also found in the thoughts of al-Ghazali, according to him, moral is a state that inherent in the soul and can produce deeds that are done easily without the need of consideration.²³⁰ *Akhlaq* or character is divided into two kinds; the natural character, and character that are formed through custom and habituation.²³¹ Habituation is starting from a hard deliberation, but if it is done continuously, it will become permanent in human character.²³²

This is where the parents' role takes part to their children educations. The parents must educate, advice, and familiarize their children to noble characters so that they are accustomed to them.²³³ Also, parents must educate theory children with religion, because religion is the sourced of all virtues.²³⁴ If this condition goes along through the children's development, it will be embedded in their character and hence become noble and virtuous. Prof Hamka, a modern Islamic thinker has the similar argument. He stated that early education is a great *intermediary* to cultivate noble character in a self. The education is intended to recognize the children, not only to good and bad things, but also to teach the children about God, and ways to worship Him, to teach them making good relationship with human being, and to keep the nature.²³⁵

²²⁸ Syamsul Bakri, *Pemikiran Filsafat Manusia...*, p, 157

²²⁹ Mohd. Nasir Omar, *The Soul (an-nafs) and its Effects ...*, p, 53

²³⁰ Syamsul Bakri, *Pemikiran Filsafat Manusia...*, p, 70

²³¹ ابن مسكويه، تهذيب الأخلاق في التربية،..ص. ٢٥

²³² Mohd. Nasir Omar, *The Soul (an-nafs) and its Effects ...*, p, 53

²³³ ابن مسكويه، تهذيب الأخلاق في التربية،..ص. ٣٠

²³⁴ *Ibid.*, p, 30

²³⁵ Syamsul Rizal Mz, *Akhlaq Islami...*, p. 71

3.2. Building the Technomoral Virtue Based on the Concept of Ethics of Ibn Miskawayh

1. Culivating Technomoral Virtue

Of all the three traditional concepts of ethics, Ibn Miskawayh introduced the concept of ethics that has a lot of similarities and hence can be considered as virtue ethics. It is the concept of ethics which focuses on cultivating and building noble character in order that human manage to deal with unpredictable situations, presenting noble values in their actions.²³⁶ Noble deeds which were done without much or hard thought and consideration as was essentially and proportionally good. Because of a noble character will always constantly manifest the noble deeds.

Rather than focusing on the goal of an action to determine whether the action is good or bad, Miskawayh's concept of ethics prioritize on paying attention to the goal of human life. Miskawayh explain that human has a goal of obtaining the highest good in the form of happiness.²³⁷ That interesting characteristic makes virtue ethics may be applied to even in complex situations and would not to be affected by the times changing.

Facing the value-free and ambivalent development of technology, where the given impacts are in the form of profits and damages, various scientists and philosophers have tried to find this way out. The solution is currently on the ethical dimension. Because technology does not tend only to scientific theory, but it tends more to the applications. So attempting to find a solution which lies on epistemological dimension will not be sufficient. Some scientists tried to find the connections between the developments of technology with

²³⁶ Shannon Vallor, *The Future of Military Virtue: Autonomous System and the Moral Deskillling of the Military*, (NATO CCD, 5th International Convergence on Cyber Conflict, 2013), p. 12

²³⁷ ابن مسكويه، تهذيب الأخلاق في التربية، ص. ٦٣.

traditional ethics existing in this world.

One of them is Shannon Vallor who tried to link between the technology and virtue ethics, because she once saw some lacks in the other two traditional ethics. Vallor argued that if virtue ethics associated with technological it will form a framework which she described as technomoral virtue.²³⁸ The Framework will be achieved by man through several processes. Here the authors attempted to link Miskawayh's ethical concept that has some similarities with virtue ethics to the technological developments. It is to form a framework to view the development of technology that we refer to as technomoral virtue.

If Shannon Vallor used the term 'cultivating the virtue', Ibn Miskawayh introduced his by a term 'the refinement of character'. Here is a comparison of some steps to get a good noble character that has been described by Ibn Miskawayh and so did by Snannon Vallor through virtue ethics.

The Refinement of Character According to Ibn Miskawah	Cultivating the Virtue
Understanding human essence	Understanding human essence
Improving the soul of reason	Moral habituation
Morals and values habituations	To the highest good of human
Attention to Social Dimension	Attention to Social Dimension
To the end of happiness	

First, is to understand the essence of man, here Ibn Miskawayh explained that the essence of man is the soul.²³⁹ Soul has the characteristics which contradict to the bodies. Therefore, the soul's necessities are too

²³⁸ Jan Kyree Berg Friis, *Vallor, Shannon. Technology and the Virtues...*, p. 1

²³⁹ Syamsul Bakri, *Pemikiran Filsafat...*, p. 148

distant and distinct from physical needs.²⁴⁰ The soul's needs that should be provided are related to science and knowledge with its highest level is the divine science and knowledge.²⁴¹

The soul is divided into three faculties, related to anger, lust, and reason or wisdom.²⁴² All these three souls are interconnected to one another. Human goodness lies in the faculty of thinking associated with the intellect. Because if human's faculty of thinking run its function properly, the faculty of anger and lust would certainly comply and perform their functions in accordance with the reason's dictation.²⁴³ When anger dominates life and does not obey to the soul of thinking, man will be controlled by ego and the desires of controlling other. If it happens in human life, his degree will then become lower, equal to the degree of beasts. Similarly, if the soul of lust controlling appetite, people will be greedy, and his human degree will then become lower, equal to the animals.

Those three souls can give birth to virtue and vice as follows; the virtue of anger faculty is courage, the virtue of lust faculty is temperance, the virtue of thinking faculty is wisdom, and the combination of these three virtues are one virtue, we call it as justice.²⁴⁴ So is in the case of Shannon Vallor's concept of virtue ethics which derived from Aristotle's, he described that the human soul is divided into several parts: a vegetative part, a Perceptive part, the desires, and the reason. According to Aristotle, the ultimate virtue was also located on the soul of thinking namely the wisdom.²⁴⁵

The second step is improving the faculty of thinking. Just like the soul of lust which is in need of food, drinks, clothes and other

^{٢٤٠} ابن مسكويه، تهذيب الأخلاق في التربية، ص.٧.

²⁴¹ *Ibid.*, p. 7

²⁴² Mohd. Nasir Omar, *The Soul (Al-Nafs)*..., p. 55

^{٢٤٣} ابن مسكويه، تهذيب الأخلاق في التربية، ص.١٣.

²⁴⁴ *Ibid.*, p. 16

²⁴⁵ Nicholas Berberich, *Old Ethics for New Technology*..., p. 7

physical things to supply its deficiencies. The soul of thinking also requires the foods in the form of sciences and knowledge, justification, approval, etc.²⁴⁶ Due to the human perfection is judged by two things; cognitive and practical. Cognitive related to science and knowledge, while practical relates to organizing things. Practical perfection is also referred to as the perfection of *akhlaq* or character.²⁴⁷ However, practical perfection can only be achieved if human beings have the perfection in a cognitive dimension or perfection in the soul of thinking.

If human have understood his essence, and then understand what he has do to reach the perfection of his character, thing to do next is to habituate himself with virtue. Because that noble character will be gained with effort, it wouldn't be settled in a person for granted; he needs habituation and early education.²⁴⁸ So that when someone become adult, he will get used to doing things that are noble, and will be able to determine the attitude towards a complex situation easily.

Virtues and the perfection of a character will not be implanted in humans in the absence of their relationship with the community.²⁴⁹ Because humans are social creatures, so they need people and society to meet their needs. Society is at the same time also an object of his actions, so that their virtues must be perceived by others within socializing and interacting with others. That situation is related to one virtue, namely justice. Justice is one virtue manifested in the form of the virtues of love, friendship, reward, collaboration, social eager etc.

The purpose of man's life is to achieve goodness and perfection.²⁵⁰ It was explained earlier that human perfection lies in the soul of thinking. The highest good is happiness, thus the purpose of

²⁴⁶ Ermita Dewi, *An Integrative Relationship...*, p. 51

²⁴⁷ ابن مسكويه، تهذيب الأخلاق في التربية،..ص. ٣٥

²⁴⁸ *Ibid.*, p. 26

²⁴⁹ ابن مسكويه، تهذيب الأخلاق في التربية،..ص. ٢٥

²⁵⁰ *Ibid.*, p. 63

man is looking for happiness in life. Human happiness is judged by two conditions. The first is when humans are in the nature of matter, in which he tried to meet his physical and bodily needs in moderation way and at the same time he was looking for things that are noble of in that nature, he will then like it, got a lesson and satisfaction from it.²⁵¹ it means that the nature of matter is the *intermediary* to obtain the divine knowledge, and wisdom. The second is when a person was in the highest nature or in the spiritual state when he doesn't interest with any material pleasures but that doesn't mean that he'll forget the material nature.²⁵² He would still pay attention to the material nature to take lesson from it.

2. Meeting the Technology with Virtuous Character

After understanding about the noble character and ways to get it, now the researcher tries to associate it with the development of technology. Someone who has a noble character is the one that can manifest the virtues of his soul in deeds and actions. So the decision he had chosen towards certain actions are virtuous decision. The cardinal soul virtues there are four; temperance, courage, wisdom, and justice.²⁵³ Those four virtues have many branches.

Technology is understood as tools, systems, and the practice of science that has the purpose of helping and facilitating human life.²⁵⁴ Therefore its position according to human is regarded as foods, drinks, clothing, treasures, and other material stuff. As the time is always changing, technology evolved into an indispensable requirement for humans. Not only for meeting the physical needs, technology is also widely applied to facilitate spiritual needs. Such as the technology used for education for example. Technology also has become a benchmark

²⁵¹ *Ibid.*, p. 66

²⁵² *Ibid.*, p. 70

²⁵³ *Ibid.*, p. 9

²⁵⁴ La Shun L. Carroll, *A Comprehensive...*, p. 2

of the progress of a country.²⁵⁵ Frequently, technology is also used as a mean to raise the social status of man in society.

Someone who has a noble character, who has a perfect soul of thinking, will be able to determine the appropriate action in the face of technology. More details, he will be able to subdue the soul of lust faculty and the soul of anger faculty so that his human perfection can be achieved. He will understand that if he is excessive in the use of technology to satisfy the physical needs his degree of humanity would be reduced; it will become equal as the animals degrees. Similarly if he is facing the technology, using it to satisfy his ego and pride, so he will turn into someone who is arrogant then his degree of humanity will descend resemble the degrees of beast.

The perfection of a character manifested from the virtues in someone's deeds, such virtues as has been mentioned ever before, is the virtue of the three faculties of the human soul; temperance, courage, wisdom and justice. That would be the same in the face of technological implementations someone who owns a noble character will reveal the virtues of his soul. If everyone has a noble character and show the virtues that exist in the face of technological era, it can reduce the threat and danger presented by the development of modern technology.

The first is the temperance, this value associated with a person's ability to master and the volatility of the passions, moderation in eating and drinking, and fortitude in the face of the world's demands.²⁵⁶ In the face of technological developments which today have become worldly demands, a person must have temperance. Means not excessive, unpretentious, and suffice the technology to meet the deficiencies of his physical needs. Suffice does not mean looking for satisfaction in it.

An example is in the robotic and artificial intelligent technology

²⁵⁵ Muhammad Wahyudi, *Kemajuan Teknologi...*, p. 34

²⁵⁶ ابن مسكويه، تهذيب الأخلاق في التربية، ص. ١٧.

which is designed to assist the work of man. Because human is not a flawless creature, the existence of robots to do jobs that they cannot do is legitimate and isn't something wrong. However, as the development of robotic technology, it turned into a tool for that pampering the human. The robots, or tools that are equipped with artificial intelligent in this modern era can do almost all the work of man, and are functioned to be human's friend.²⁵⁷ Such as to read something, taking care of the baby, send messages, making schedule, drive and control the car, and so on. Someone who has the temperance nature will understand that it makes her lazy and too much for him. So rather than trying to satisfy himself with such interesting technological developments, he will suffice only on what he needs to complete his deficiencies.

The second is the value of courage in action. Daring attitude associated with courage in the face of danger, the attitude of anger, self-esteem and dignity.²⁵⁸ Someone who has the courage in the face of technological development will not use it for a being arrogant in the face of society, because it can degrade his honor as a human being. An example is the enhancement of human technology that allows people to change the physical capabilities to be better, to change his body to become more beautiful, etc. Someone who does it has the reason that he is too afraid to be considered weak and low, and worries to meet the demands of the world. Or he does it due to his desire to be considered good, powerful, more than any other human being etc. For sure, it is contrary to the character of courage on human whose character is perfect.

The third is justice. It is the attitudes related to social, friendship, social excited, stay in touch, cooperation, love, dignity, being away from hostility, etc.²⁵⁹ For that reason, a person whose character is noble,

²⁵⁷ Gumiyanti Awaliyah, *Robot Sosial Kian Dibutuhkan*, (Inovasi; Republika, April 9th, 2019), p. 22

²⁵⁸ ابن مسكويه، تهذيب الأخلاق في التربية، ص. ١٨٠

²⁵⁹ *Ibid.*, p. 19

and has a fair character in her nature will not use the technology for the sake his profits for granted. He will think of the consequences for others, even the consequences for people living in the future. An example is the nuclear technology used to make powerful bombs. Although these technologies can make the benefits for political interests, but the impact was damages that much more remarkable. Many people, were killed and maimed along their life, the environment is damaged, and sadness for the people who were the victims of that tragedy.

The development of technology especially in the field of robotics somehow reduces the intensity social life of human being. Some people in modern country such as Japan have now begun to make friends and relationship with their robots. Even though robots are intended to help their tasks, but through its development, people started showing the emotional feeling to them.²⁶⁰ If this circumstance keep going on and on, the social life intensity among human being will be reduced, replaced with robots instead. Human couldn't display their virtues upon machines and robots, because they're dead things as well. This also contradicts from the virtue of justice because human couldn't simply do justice with a machine. Human would need intense interaction and communication with their beings to practice the virtues, to manifest his virtuous character, and to achieve the true happiness.

The last virue is wisdom. It is associated with personal ability on making inferences over science, knowledge, and the ability of the soul to reflect on those experiences.²⁶¹ The wisdom in a person's character could lead him to always do right, and take lessons from each incident. Its relation with the development of technology is that he will not use the technology that could endanger the safety of himself and his environment. He will not use technology that can reduce his

²⁶⁰ Gumiyanti Awaliyah, *Robot Sosial Kian Dibutuhkan*, (Inovasi; Republika, April 9th, 2019), p. 22

²⁶¹ ابن مسكويه، تهذيب الأخلاق في التربية، ص. ٤٦

degree as humans. But it does not mean that he is completely away from the technology because he can take lessons from it. He will use the technology because he thinks that technology could help him obtain the divine knowledge, as a means to worship, and to lead him to achieve the divine knowledge.

One example is the existing of technology in the field of medicine; it can cure diseases that can't be cured in ancient times. That case will make a wise person more understand the greatness of God, that He has given his knowledge for the benefit of mankind. Also some modern technologies such as satellite, telescope, microscope, etc., can help people see the majesty of God upon His creation that cannot be seen with the naked eye. With Internet technology, people will be more familiar with the diversity of people around the world, so that the spirit of social interrelation and the desires to do good will increase time by time. When these things have been absorbed in a human being, he will improve his quality of worship because he thanked God, and exalt the glory and the greatness of God. Thus the technology is the *intermediary* for someone to attain divine knowledge.

If people have these attitudes, and have achieved the perfection of his character, he has by then achieved his goal, namely goodness and happiness. Someone who is happy and if that situation is being related to the development of technology will be:

First, someone who is happy is the one who is in the nature of matter, (including technology), uses them to fulfill the deficiencies of his physical and spiritual need by moderation. And at the same time, he seeks wisdom and noble things upon them, and hence loves them.²⁶² Technology used as a tool or means to manifest noble qualities, and also a means to increase and reach the divine science and knowledge. Second, is someone who is at high nature (spiritual). He was not interested in looking for fun with technology and other objects. That

²⁶² *Ibid.*, p. 95

was because he has reached the divine knowledge. But that does not mean that he left the technology and other objects.²⁶³ He was still watching, and using them to seek wisdom and lessons for him.

Virtuous character can be applied as a framework to judge the modern technological fields, or to cope with them. The examples are the human enhancement program promoted by biotechnology, and the technology of social networking. Those are kinds of technology having most advancement in this era.

a. The Biotechnological Human Enhancement and Virtuous Character

Biotechnology is a term defined as the application of engineering principles on biological sciences.²⁶⁴ It has carried a revolution of hopes to solve problems according to health, agriculture, food care, waste-disposal, and a lot of human's primary needs.²⁶⁵ One biggest project of the Biotechnology is a term named *Human Enhancement* which gains popularity in the last decades.²⁶⁶ The academics working on this project have the motto *if we can, we should*. Literally, Human Enhancement is the effort of reducing human weakness and potentially improving human cognitive and practical abilities by modifying the DNA, or parts of the body.²⁶⁷

We can consider this program through the concept of ethics of Ibn Miskawayh by looking into some aspect; the natural essence of human and the virtues of soul. First, as human is a part of the universe, his essence isn't composed solely from the physical material thing but he also has the metaphysics component which we call as the soul. Body is the product of nature that God has created

²⁶³ *Ibid.*, p. 95

²⁶⁴ Hafiz Muhammad Ahmad, etc. *Ethical Issues of Biotechnology, Possible Risks and Their Management*, (Journal of Biology, Agriculture, and Healthcare, vol 5, no 11: 2015), p. 49

²⁶⁵ M Fahri, *Bioteknologi dan Bioetika: Cetak Biru Untuk Masa Depan Umat Manusia*, (Khazanah, Jurnal Ilmiah Bestari No 31 : 2001), p. 76

²⁶⁶ *Ibid.*, p. 13

²⁶⁷ *Ibid.*, p. 13

it from the soil. This project of human enhancement encourages human to change their selves using the technology. It will not only change the body, as it also changes the natural essence of human. Human will no longer be the natural creature whose body and soul are the natural giving from God. In accordance with Shannon Vallor's idea, that if this project is applied to human, he will be then, a technological transformational creature.

Second, as human's goal in this life is to achieve the virtuous character, he should manage to establish the virtues such as temperance, courage, wisdom, and justice in his actions. Temperance refers to someone who satisfies his desires in the right measure, in the right way, in the right time, and in the right situation.²⁶⁸ It looks like the program of human enhancement opposing the virtue of temperance because it facilitates human to satisfy his desire and lust to experience pleasures as much as possible. Not only satisfying the bodily pleasure, this program also facilitating human to satisfy their sense of honor because if human has changed their body to be better, it will bring the additional prestige to them, this can lead someone to be arrogant. And of course this program doesn't suit the virtue of courage. The virtue of courage means that someone is able to subdue their desire of honor and pride, encourage people to be always humble.²⁶⁹

Human enhancement also promoting the changes that personally oriented, while its effect could harm not only him but the natural life of all human beings. It contradicts to the virtue of justice while justice supporting the balance for the whole society.²⁷⁰ If it doesn't fit to the virtue of temperance, courage, and justice, no doubt this program wouldn't fit the virtue of wisdom. Wisdom contains the knowledge of God; it will be achieved if someone

²⁶⁸ Adibah binti Abdul Karim, *Understanding....*, p. 513

²⁶⁹ *Ibid.*, p. 512

²⁷⁰ Y Mohamed, *Greek Thought....*, p. 244

managed to subdue his lust and desire of honor.²⁷¹

Looking from some aspects in the concept of ethics according to Ibn Miskawayh, human enhancement project is problematical because this program prevents them to achieve the perfection. Also, the implementation of this program will change the natural essence of human beings.

b. Social Networking Technology and the Virtuous Character

Communication is one of the most fundamental need as human is social creature.²⁷² Technology provides some facilities to support this need by the appearance of social networking technology that has made the interaction pretty much easier. This era, this kind of technology couldn't be separated from the life of human. Like the other kind of technology, the social networking technology is regarded as tools, which have the purpose of helping and facilitating human life.²⁷³ It can be a virtuous tool if its user is already virtuous. So, when utilizing the social networking technology, someone should establish the virtues.

In this social networking technology, information shared in the huge and unlimited scale. Its easiness and speed in system enable everyone to share the information and communicate in a wide range.²⁷⁴ Information becomes cheap and available at any time and any places. This technology is often being used to commit crimes such as sharing the hoaxes, privacy violation, textual bullying, and cyber-crime.²⁷⁵

^{٢٧١} ابن مسكويه، تهذيب الأخلاق في التربية، ص ١٦

²⁷² Luh Suryatni, *Komunikasi Media Sosial dan Nilai-Nilai Budaya Pancasila*, (Journal of Surya Dharma University, 2018), p. 117

²⁷³ La Shun L. Carroll, *A Comprehensive...*, p. 2

²⁷⁴ Maya Sandra Rosita Dewi, *Islam dan Etika Bermedia (Kajian Etika Komunikasi Netizen di Media Sosial Instagram dalam Perspektif Islam)*, (Research Fair Unisri, vol 3, no 1, 2019), p. 139

²⁷⁵ Wahyudi M Pratopo, *Pandangan Tokoh Pers Terhadap Etika Media Baru*, (Jurnal Pustaka Komunikasi ASI, voll 1, no 1, 2018), p. 188

To prevent such bad circumstances, the users of social networking technology should have the noble character, and able to establish the virtues of himself. And hence the social networking technology wouldn't be only beneficial to share the information and communication, but also as the instrument to establish the virtuous deeds. The virtue such as temperance, which includes the senses shame, optimism, and satisfied, should be manifested when someone is using the social networking technology.

Shame is meant to refrain from embarrassment did, and bad things, to avoid the taunts and insults.²⁷⁶ In the using of social networking technology, someone should keep his disgrace and other's by sharing what is proper to be shared. Optimism is always expecting the goodness and noble.²⁷⁷ With the optimism someone is requested to always expect the goodness from everything he does. So as to the information someone is searching for, should be the good kind of information. And satisfied means moderation, someone should suffice to search the information, only on what he needs and not excessive.

The virtue related to courage when facing this social networking technology is self-control. Self-control is the ability to control one's self and hold it in the right path.²⁷⁸ Self-control means to restrain one's self from committing bad deeds. Such as showing the anger, breaking other's right of privacy, and many more. Also, the social networking technology should be utilized on the principle of friendship that related to the virtue of justice. Friendship is the love between human beings to help each other in goodness and sharing problems to find a solution together.²⁷⁹

²⁷⁶ ابن مسكويه، تهذيب الأخلاق في التربية، ص ١٦

²⁷⁷ *Ibid.*, p. 16

²⁷⁸ *Ibid.*, p.19

²⁷⁹ *Ibid.*, p. 20

Lastly, in utilizing the social networking technology, people should apply the virtue of wisdom. Wisdom is related to the activity of thinking and considering; knowing the truth. Thus, when someone is digesting the information, people are obliged to ensure the truth about the information, and shouldn't just believe it without doing some research.

While Snannon Vallor focuses on the virtue related to social dimension to deal with social networking technology,²⁸⁰ we can take the different approach to make a framework with the concept of ethics according to Ibn Miskawayh. There are some virtues that fit the ethical requirement to deal with social networking technology such as; shame, satisfied, optimism, self-control, and wisdom. If all the users of social networking technology have the noble character and able to establish those virtues, maybe the problems that occurred can be reduced or even more, they can be solved.

²⁸⁰ Stanford Encyclopedia of Philosophy, Information Technology and Moral Value, (Published June, 2012)

CHAPTER IV

CLOSING

4.1. Result

Ibn Miskawayh starts the discussion in ethics by dividing the soul into three faculties. Those are, the faculty of reason, the faculty of anger, and the faculty of lust. Human's virtue that exceeds him from any other creature in this world lays in the soul of thinking. If somebody's soul of thinking is excellent, it could guide the other faculties to reach the virtues of each soul. From those three faculties of soul appear many kinds of virtues as the branches of four cardinal virtues, they are; temperance, courage, wisdom, and justice.

Achieving the excellence in the soul of thinking which will guide a man to achieve the excellent deeds and actions is man's purpose in life. The excellent deeds and action is considered as the noble character or virtuous character. Character or *akhlaq* is a state of the soul that makes people act without hard thinking or deliberation. A man would achieve the noble character with practices, habituations, and educations. If someone owns a noble character or virtuous character he would be able to act virtuously even in complicated situations. Having noble character or achieving the excellence would guide a man to achieve happiness, which is intended to be the highest goal of human life.

Building the technoethics based on Ibn Miskawayh's concept of ethics will be so accurate because it focuses on character cultivation that won't change in any circumstances. As it's sourced from the ratio and God's revelation make it not only rational, but also religious characterized. While human, when he's using the technology he's not expected only to fulfill his needs and necessities, but also to make it as worship to Allah. Because worshipping Allah, is the purpose that human is created in this world.

To manage facing the challenges poses by technology using Ibn Miskawayh ethical framework, someone must have the noble character or the virtuous character. So that he wouldn't feel any difficulty in deciding the right action in problematic technological situation. Cultivating the noble character is a big deal to do. First, that someone must understand their natural essence. Second, improving the power of mind, or the soul of thinking because it is the source of all human action. Third, having practices and habituations to develop virtues on one's self. Fourth, intending all human actions to achieve the highest goal of human life, which is the happiness. And the last, paying more attention to social dimension, because virtues would only be cultivated and implemented through community.

Ibn Miskawayh stated that Human is a creature who always covets science and knowledge about God. That knowledge will be prevailed if someone has achieved the perfect mind and the noble character. Someone with a noble character in dealing with technology will also establish the virtues of his soul. Such as temperance; means not excessive and sufficient to what is needed. Courage means that when someone is using the technology is not allowed to showcase his power, make him arrogant, satisfying his sense of pride etc. Justice means that technology must be intended for the benefits of all members of community in this world, and not for the personal profit-making. Wisdom means that technology should be a tool or instrument to do anything that God likes us to do.

In this sense, technology could be a mean to do God's demands upon human. Besides it's used for completing human physical needs, technology could be used for completing human spiritual needs, to manifest noble qualities, and reach the divine science and knowledge. Because technology is a part of science and soul is always coveting science and knowledge. So, if someone wants to reach the real happiness in his life, he should utilize the technology moderately but it doesn't mean leaving the technology at all. Because if technology is being used correctly, it would bring a man to excellence and the real happiness.

4.2. Suggestios

After analyzing the concept of ethics according to Ibn Miskawayh, and set it as the foundation to build the technoethics, the researcher feels like it's an obligation to give her suggestion regarding this writing and research. The researcher intends to reveal the following suggestion:

1. For everyone who reads this research including the researcher herself, to always devote their times in learning and studying the religion. Because religion contains precious tenets and teachings that would guide us to cope with the modern world challenges, including the technological challenges. Especially for the millennial generations, to not being tricked by technological offers that seems to be glamor, marvelous, and wonderful. Remember that the future generations deserve well-living.
2. To everyone who interests to the ethical study, to continue and develop this research because there is some laxities in this research. Ibn Miskawayh's concept of ethics has a wide discussion including the theory about friendship, love, character education, and soul's disease cure, while the researcher only discusses his principal of ethics and the theory of happiness. Those topics are still possible to be discussed and continued by relating it to some issues in this modern era. Such as the issue of ethics in business and commerce.

4.3. Closing

Alhamdulillahirabbil'alamiin, all praises be upon God the master of this universe who has given his most wonderful blessing and mercy that the researcher manages to successfully and completely finish this thesis. Although there are still many mistakes in this writing and its process, the researcher hopes that this will be beneficial for the next generations and whoever reads it. Especially for the researcher herself, she hopes that this will be her best dedication along her study in the University of Darussalam Gontor, and will be beneficial for her life in this world and after.

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