**“The Question Concerning Technology”**

**Martin Heidegger**

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|     | German Philosopher  Most famous work: Being and Time   oExistential Analysis of DASEIN  Dasein – A German word that means “being there” or “being thrown into” |

According to Heidegger, we are thrown into a world that is already taken care of. We interact with

other Dasein and make sense of all the other beings in the world. We are therefore a being in the world

participating into something and interacting with other Dasein.

According to Heidegger’s Dasein, every act that we make is a way of comforting ourselves and for

Life to be meaningful it must have a social significance.

What is Science?

 It is a way in which we make sense out of reality

Leaping In

 Treating others as objects

Leaping Ahead

 Care and Help others

Cartesian Self

 An individual’s mind, separate from the body and the outside world, thinking about itself and its

existence.

Question for Reflection:

 Can machines replicate human beings?

Metaphysics

 According to Aristotle it is the study of being as being

 It deals with human reality and system of human thought that seeks to explain the fundamental

concept of man.

**WHAT IS THE ESSENCE OF TECHNOLOGY ACCORDING TO MARTIN HEIDEGGER?**

Technology Defined By the Oxford Dictionary

- Application of scientific knowledge for practical purposes especially in industry

But Heidegger redefined the essence of technology after 1954 – 9 years after WWII when the use of

technology have destroyed almost half of Europe and all of Nagasaki and Hiroshima.

He thought that technology is not just a result of human progression thru innovation.

He knew that this mentality can take mankind into a darker path.

The Essence of Technology is by no means anything technical. It is not simply the pushing

forward of innovation, of newer and faster and more efficient machines and systems.

**Essence** – is considered to be what the thing is.

 What do all technology has in common?

oEnframing / Revealing is the essence of technology according to Heidegger.

It is the bringing forth, unconcealing, revealing

Technology itself is a contrivance, or in Latin, an instrumentum

“Everything depends on our manipulating technology in the proper manner as means. We will,

as we say, get technology spiritually in hand

**Four Causes in Philosophy**

 Causa Materialis   
 oMaterial Cause   
 oWhat is the object made of?

oMaterial from which something is made   
o**Social Media: Hardware and the servers, user generated content and the profiles, the**  **links to articles and news. Both Raw material and Raw Data.**

 Causa Formalis   
 oFormal Cause   
 oHow does the object look like?

oShape of the material   
o**Social Media: Code of the social networking services, the Algorithms the types of**  **connections and how they’re organized and presented**

 Causa Efficience   
 oEfficient Cause   
 oWho created the object?

oCauser/manufacturer

o**Social Media: Owner or creator of platform.**

 Causa Finalis

oFinal Cause

oWhat is the purpose of the object?

oEnd use of the material

oReason why it is made

o**Social Media: The different reasons users want to connect with each other but**

**ultimately it’s about human connection, the desire to connect.**

**Concern of Heidegger:**

 Western Philosophy is obsessed with causes and with measuring things, with Aristotle, with

quantifying and surveying forms and materials.

 Those 4 causes reveal something more mysterious about being itself. For him each cause

belongs together and connected and responsible for each other. For him all four are uniting.

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|   | The causas bring something into appearance. They let it come forth into presencing” –bringing something from concealment to unconcealemnt. It’s name is veritas, truth.  Every bringing forth is grounded in revealing. We reveal something new and mysterious, what |

we can provide and what it can do for us.

oCraftsman brings forth the chalice

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|  | oEngineer brings forth the jet engine  Bringing forth something that is previously hidden. |

“We can’t solve problems by using the same kind of thinking we used when we created them.”

- Albert Einstein

“The advancement of machines is mistaken for the advancement of man.

- Unknown

**Questions for Reflection:**

 Should Science and Technology care about religion?

 Is technology the answer to sustainability? Or does the answer lie in “evolution of human

consciousness” from a selfish to universal altruistic states?

 Should science and politics be mixed?

oI believe that they should be mixed in a way that the essence of both Science and Technology and the essence of Politics will be served well so as to function hand in hand together to properly address the needs of the society as a whole.

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|   | Do you think spirituality can be helpful for scientific discourses? What is the aim of life? |

oFor Buddhist way of belief the aim of life is attain happiness and to avoid suffering. But one thing is for sure, life does not guarantee a life without having to experience pain and suffering. Along our journey, we will at some point, have to face loss and situations wherein our soul is going to be tested, damaged and put down by different sorts of sufferings. But then again, this is what I believe: “we have no control of the external circumstances but only our reactions to them.” We may experience trials and a sort of purging along the way, but we can always choose to be happy and be positive. We may never avoid suffering in this life but suffering can be an opportunity for us to be able to become better individuals and better caretakers of this earth where we live in.

 What has been the most important scientific discovery in your lifetime?

 Is technology a real evolution of the history of man, or does technology enslaves us?   
 oI think it depends on how we allow technology to affect us. If we use technology for the purpose of helping us to do our jobs better and have efficient results, then I believe technology can be considered as a real evolution in terms of the history of humans. But then again, seeing the many negative effects of this very same “technology” to the lives of many humans, especially to the members of the younger generation of this present age, I guess I would have to think again if my first statement is true for all. You see, we humans have abused our world and we created a lot of things that we thought would help us solve the very problems of human society to the point that we no longer think like rational beings but like machines, and I believe this is the problem: we failed to focus on why we developed technology in the first place. We became clouded by the amount of money we can get from it so we try to develop more and more machines and gadgets that are really not a need anymore but just to satisfy our wants, thus, creating a world which might actually loose its very essence soon if we don’t do something about them now.

**Human Flourishing**   
  It is said to be the best translation for the Greek word Eudaimonia, which for Plato and Aristotle, means not only good fortune and material prosperity but a situation achieved through virtue, knowledge, and excellence.

 Learning to be human is central to Confucian humanism and its ‘creative transformation’ of the self through an ever-expanding network of relationships encompassing the family, community, nation, world, and beyond.

 According to Aristotle, all humans seek to flourish. It is the proper and desired end of all of our actions. Flourishing, however, is a functional definition. To understand something’s function, you have to understand its nature.

 Four Aspects of Human Nature according to Aristotle: oPhysical

We require nourishment, exercise, rest, and all the other things that it takes to keep our bodies functioning properly.

oEmotional   
 We have wants, desires, urges, and reactions   
 We perceive something in the world that we want, and we have the power of volition to get it; likewise, we have the power to avoid the things we do not want.

oSocial   
 We must live and function in particular societies   
 Our social nature stacks on top of our emotional nature, such that we have wants and needs that we would not have were we not social creatures.

oRational   
  We are creative   
  We are expressive   
  We are knowledge-seeking   
 We are able to obey reason   
 Human Flourishing becomes an actuality when one uses his practical reason to consider his unique needs, circumstances, and capabilities, and so on, to determine which concrete instantiations of human values and virtues will comprise his well-being.

 Human flourishing is positively related to a rational man’s attempts to externalize his values and actualize his internal views of how things ought to be in the outside world.

**GOOD LIFE**   
  Everyone has a different definition of the word “good,” especially in the context of life, depending on many factors, such as where and how people live.

 Philosophers and thinkers, like Plato, Aristotle, Immanuel Kant, and Friedrich Nietzsche, once made the question of the good life central to their philosophy.

**THE TEN (10) GLODEN RULES by Michael Soupios and Panos Mourdoukoutas** 1.Examine life   
2.Worry only about the things that are in your control   
3.Treasure friendship   
4.Experience true pleasure   
5.Master yourself   
6.Avoid excess   
7.Be responsible human being   
8.Don’t be a Prosperous Fool   
9.Don’t do evil to others   
10.Kindness toward others tends to be rewarded

Aristotle’s Nichomachean Ethics is considered to be one of the most important treatises on ethics.

**Eudaimonia –** A word that often causes non-Greek readers of the Ethics problems is *eudaimonia*. This is often translated as “happiness.” The root of the word means something like “well-favored by a god.” It is literally “well-demoned,” except that “demon” here is a rather positive term, unlike our English usage, and it means something like a demigod or divine being. Furthermore, this “happiness” does not correspond to a feeling, as our word does, but it confers a type of status on someone, what we might call flourishing or a blessed state. More helpful than this Greek term is what was said in point 3 above: happiness or *eudaimonia* is an “activity of reason in accordance with virtue… and this is in a full life.”

**The Chief Good** – The inquiry which serves to guide the entire enterprise of the Nichomachean

Ethics is answering the question as to what is the chief human good. The chief good, still

familiar to us today through use of the Latin term, summum bonum, is that thing at which all

people aim, and for which all other things are done. Aristotle says that happiness is the chief

good, and famously says that happiness is an “activity of reason in accordance with virtue… and

this is in a full life” (1098a16-18).2) This last point is meant to emphasize that in order to

achieve the chief good one must live a complete life of excellence, all the way unto death.

**What is Human Existence?**

 Why are we here?

 What is life all about?

 Wh at is the purpose of our existence?

The search for life’s meaning has produced much philosophical, scientific, theological, and

metaphysical speculation throughout history.

The meaning of life as we perceive it is derived from these various approaches:

o**Philosophical Contemplation**

Tried to find the secret of existence, the meaning of it all

Believed that if we could find the real meaning of life, all this human effort, all

this wonderful potentiality of human beings could then be moved in the correct

direction, and we would march forward with great success

o**Religious Contemplation**

Of course their notion is summarized by the belief that human existence should

and must be centered on the belief about a Supreme Being which is God.

o**Scientific Inquiries**

Focus primarily on describing related empirical facts about the universe,

exploring the context and parameters concerning the “how” of life.

oSocial Ties

oConsciousness

oHappiness

Many other issues are also involved that paved the way for varied interpretations about human existence:   
 oSymbolic meaning   
 oOntology   
 oValue   
  Human existence is defined by how much value we put on our self and how much we value other people and our relationships   
 oPurpose   
  Human existence depends on our mission or about the things we do not for ourselves but for other people and for the world   
 oEthics   
 oGood and Evil   
 oFree Will   
 oThe existence of one God   
 oThe existence of multiple gods   
 oConceptions of God   
 oThe soul   
 oThe afterlife   
  Human Existence is defined by our actions towards attaining good in the afterlife.

**Plato, a pupil of Socrates**   
oWas one of the earliest, most influential philosophers of all time   
oHis reputation comes from his idealism of believing in the existence of universals.

oHis theory of FORMS purposes that universals do not physically exist, like objects, but as heavenly forms.

oHis theory on justice in the soul relates to the idea of happiness relevant to the question of the meaning of life   
oIn Platonism, the meaning of life is in attaining the highest form of knowledge, which is the IDEA (Form) of the Good, from which all good and just things derive utility and value.

**Aristotle is the most significant thinker and the most accomplished individual who has ever**  **lived.**

oHe defended reason, invented logic, focused on reality, and emphasized the importance of life on earth.

oThe importance of reality, reason, and logic in Aristotelian philosophy has enabled science and technology to develop and flourish.

oHis philosophy of reason embodied a primacy of existence approach that states that knowledge of the world commences by looking at and examining what exists.

oHe teaches that each man’s life has a purpose and that the function of one’s life is to attain that purpose.

oHe explains that the purpose of life is to attain happiness or flourishing that can be achieved via reason and the acquisition of virtue.

**What is a Public Good?**

 A product that one individual can consume without reducing its availability to another

individual, and from which no one is excluded.

Notions:

**Nonrivalrous**

oDenotes any product or service that does not reduce in availability as people consume

it.

**Nonexcludable**

oRefers to any product or service that is impossible to provide without it being available

for many people to enjoy.

In some cases, a public good can be excludable, and a private good can be

Nonexcludable

**Quasi-Public Good**

oGoods and services that have characteristics of being Nonrivalrous and Nonexcludable

but are not pure public goods.

Ergo: **“A Public Good must be available for everyone and not be limited in quantity”.**

**Rolando Gripaldo**

 A Filipino Philosopher, argues thus:

oThe public good is public in the sense that the beneficiaries are the general public

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|  | And that it is either delivered for service oriented or profit oriented |

**SPECIFIC ISSUES IN SCIENCE, TECHNOLOGY AND SOCIETY**

**Information Age**

 Also known as the computer age, digital age or new media age   
 A period in human history in which the modern age is regarded as a time in which information has become a commodity that is quickly and widely disseminated and easily available especially through the use of computer technology.

 The economic stability of the world’s market also depends on the well-rounded technology today.

 Digital industry creates a knowledge-based society surrounded by a high-tech global economy that spans its influence on how the manufacturing and the service sectors operate in an efficient and convenient way.

In 2005, Von Baeyer stated that information is poised to replace matter as the primary stuff of the universe. He said that it will provide a new basic framework for describing and predicting reality in the 21st century.

 We live in a world where being informed means literacy, and information allows learners to connect with the technological environment and the modern world of technology.

 The Information Age started when the Gutenberg era was first established by Johannes Gutenberg, who was responsible for shaping the nature of society and its institutions throughout the period. This was called “THE GUTENBERG PRINCIPLE”

**Johannes Gutenberg**

 Born in 1398 in Germany   
 A German blacksmith, goldsmith, inventor and publisher who introduced Europe to the idea of printing press.

 Prior to Gutenberg introducing the printing press, making a book was a laborious process in Europe. It wasn't that hard to write a letter to one person by hand, but to create thousands of books for many people to read was nearly impossible. Without the printing press we wouldn't have had the Scientific Revolution or the Renaissance. Our world would be very different.

**Gutenberg Principle**

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|   | The foundation and the basis of information age The Introduction of the Printing Press |

**Biodiversity and the Healthy Society**

 Human Health is greatly dependent on biodiversity, which sustains our food supply, the

nutrients and medicines that sustain life.

 We cannot have healthy societies without biodiversity, and yet the threats to biodiversity are

making the achievement of universal good health an even greater challenge.

“HEALTHY SOCIETY MEANS SUSTAINABLE BIODIVERSITY”

What is Biodiversity?

 It is the degree of the variation of life on earth.

 Also refers to the number or abundance of different species living within a particular region.

 It represents the wealth of biological resources available to us.

Importance of Biodiversity

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|   | It includes organisms from earth’s vastly different ecosystems, including deserts, rainforests, coral reefs, grasslands, tundra, and polar ice caps.  **Characteristics of a healthy and rich biodiversity:** |

oEach species in an ecosystem has a specific niche—a role to play.

oSupport a larger number of plant species and, therefore, a greater variety of crops.

oProtect freshwater resources.

oPromote soil formation and protection

oProvide for nutrient storage and recycling

oAid in breaking down pollutants

oContribute to climate stability

oProvide more food resources

oOffer environment for recreation and tourism

oProvide more medicinal resources and pharmaceutical drugs

 **Functions of biodiversity on the earth:**

o**Maintaining balance of the ecosystem**

Recycling and storage of nutrients

Combating pollution

Stabilizing climate

Protecting water resources

Forming and protecting soil

o**Provision of biological resources**

Provision of medicines and pharmaceuticals

Food for the human population and animals

Ornamental plants

Wood products

Breading stock

Diversity of species, ecosystems, and genes

o**Social benefits like tourism and recreation, cultural value, and educational research**

**WHY DO WE NEED TO LEARN AND UNDERSTAND THINGS ABOUT BIODIVERSITY?**

We need to sustain the natural area made up of the community of plants, animals, and all other

living things, which is beginning to be reduced at a steady rate as we plan human activities that

are being reduced by habitat destruction.

**The Gene Therapy**

**Genetically Modified Organisms (G.M.O.)**

oThey are any living thing that has had its genetic material altered in some way through

human scientific interference.

oGMO’s undergo a form of gene therapy under laboratory conditions whereby segments

of DNA are spliced, rearranged, or removed altogether.

Many industries stand to benefit from additional GMO research. For instance, a number of

microorganisms are being considered as future clean fuel producers and biodegraders.

Genetically modified plants may someday be used to produce recombinant vaccines.

**RISKS AND CONTROVERSIES SURROUNDING THE USE OF GMOs**

 There are unknown consequences to altering the natural state of an organism through foreign

gene expression.

oSuch alterations can change the organism’s metabolism, growth rate, and/or response

to external environmental factors.

oHorizontal gene transfer of pesticide, herbicide, or antibiotic resistance to some other

organisms would not only put humans at risk, but it would also cause ecological

imbalances, allowing previously innocuous plants to grow uncontrolled, thus, promoting

the spread of disease among both plants and animals.

THE RISKS OF GENETIC ENGINEERING:

oEnvironmental Hazards

oHuman Health Risks

oEconomic Concerns

**The Nano World**

Past decades had witnessed man’s attempts to address and combat various problems affecting

him like diseases, insufficient resources, and pollution among others, to increase his survival, as well as

to improve the quality of his living in this ever-changing world.

Nanotechnology

 It was coined by Professor Norio Taniguchi to describe semiconductor processes, such as thin film deposition and ion beam milling exhibiting characteristic control on the order of nanometer.

 It is the understanding and control of matter at dimensions between approximately 1 and 100 nanometers, where unique phenomena enable novel applications. (National Nanotechnology Initiative)   
 It is the study of phenomena and fine-tuning of materials at atomic, molecular, and   
 macromolecular scales, where properties differ significantly from those at a larger scale.

(European Commission)   
 It refers to a technology or technical details that are between 1 to 100 nanometers in size –it is a technology that is defined as working with, and/or producing things at atomic level. With nanotechnology scientists use atoms and molecules to design new materials, components or systems that have improve new properties.