

## MODERN SCIENTIFIC AND TECHNOLOGICAL ADVANCEMENTS: *MAQĀSID AL-SHARĪ'AH* IN PERSPECTIVE

By

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### ABSTRACT

Civilization is the core aspect of advancement in any giving society. The modern system of education adapted by the western world has contributed to a great deal in advancement as well as degradation. The advancement upon which the modern scientific development conferred to, was basically on inspiration from, and adoption from the sources of Islam. Thus, the current western system of “STEM” (science, technology, engineering and mathematics) is devoid of Islamic values. This research paper employed a non-empirical research based on the existing literatures. It uses the existing literatures written based on the positive and negative effects of technology devoid of Islamic ethical values. Findings indicate technological advancement has reached its peak. Thus, the globe is gradually witnessing an abuse in harmonious living between the technological advancements on one and the humanity on the other. There are numerous contributions by the science and technology to humanity. However, man is witnessing a world without morality in the technological era. This was as a result of abandoning the Islamic values enjoined the religion. The paper therefore, suggests the inculcation of morality into technological innovations for the wellbeing of humanity. Muslims should revert to the golden age of Islam and adopt the ways of the previous Muslim nations in handling any technological advancement, using the principles of Maqāsid al-Sharī'ah as a yardstick. These principles are capable of providing not a maximum production for its own sake, but for ultimate happiness on earth.

**Keywords:** Scientific and Technological Advancement, Islam, Maqasid Shari'ah

### 1. Introduction

Developments in science and technology are fundamentally impacting on the way people live, connect, communicate, travel and transact, with profound effects on economic development. They play a very significant role in the daily life of humanity. Science has given numerous useful gifts to mankind. Science and technology serve as key factors to development, because technological and scientific revolutions underpin economic advances, improvements in health systems, education and infrastructure. Science has made man's life quite comfortable, advancement of machines have made peoples work more easily with comfort. Hence, humanity is greatly indebted to science for its blessings. No doubt some inventions cause destruction to human life, environment, animals and plants. For example, wars and invention of weapons have created a lot of destruction. With the advancement in civilization, competition among technologically advanced countries is leading the world into destruction. Quest for economy and power had led man to

forget the essence of his existence in this transitory world. Wars are becoming much more horrible and rampant. (Barzilai, 2016). Today, wars have led to more killing than the greatest war ever fought on earth. But neither science nor technology is to be blamed. This is the handwork of man whose wrong use of this vast power has brought misery. Allah (SWT) said in the Qur'an: Corruption has appeared throughout the land and sea by (reason of) what the hands of people have earned so He may let them taste part of (the consequence of) what they have done that perhaps they will return (to righteousness) (Qur'an, Rum: 41). The Creator of man has bestowed science as a blessing when utilised in a proper way. Nevertheless, rejecting the existence of Allah (SWT) in the development of science and technology, or not applying His injunctions has made man to transgress the limit set by Allah. Therefore, the consequences become expetive.

## 2. Literature Review

Several literatures were written on technology and its advancement for the benefit of humanity. Others are written on how effective are the technological tools in the fields of health machineries, mechanical tools, transportation to mention but a few. Among all these, few put into consideration the moral ethics involved in the utilization of technology for the wellbeing of humanity. Most of the materials have stated the benefit of technological advancement to humanity. Transportation provides mobility for people and goods (Lee, 2007). Transportation uses vehicles, trains, airplanes, motorbikes, people, roads, energy, information, materials, finance and time (Duncan, et. al., 2009). According to (Sidel, 1989), technology uses chemicals to destroy indiscriminately irrespective of those involved. In another paper, Women, children, animal or generally the civil society that are not directly involved in the war, are the victims (Hashmi, & Lee, (Eds.) 2004). The same can be seen in other technological machineries that are devoid of moral guideline on their uses as observed by Foucault, 1988 While (Hamid 2016) in his paper observed three ways to deal with technology and its problems: A paradigm shift in technological world view should be put in place, objectives of the Shari'ah and public good should be introduced and a modification in the universities curriculum particularly those in science and technology fields. This is because technology has given a lot of benefits to humanity but the negative effects cannot be quantified. Despite being helpful in the field of education, game technology (play stations) has also consumed the time of many students which prevented them from learning. There are many literatures on the importance of technology and how it has become part and parcel of human life in this century. However, this paper aimed at showcasing the indispensability of the objectives of Shari'ah (Maqasid al-Shari'ah) in the contemporary advancements in science and technology for the wellbeing of humanity, considering how technology cannot be left without the inculcation of the objectives of the Shari'ah and public good in Islam.

## 2. Maqāsid AL-Sharī'ah in Islam

Islamic law or *Sharī'ah* is used in the Qur'an to mean the revealed way of life. Various definitions are given to the word *Sharī'ah* which includes: laws, way, divine law, road, path, highroad, and way of life. Examples of such meanings can be seen in chapter Al-Mā'idah verse 48- *shir'ah* and in al-Jāthiyah verse 18- as *Sharī'ah* (Auda, 2008). These established laws and orders revealed to the Prophet Muhammad (SAW) are contained in the Qur'an and the Sunnah which the Prophet (SAW) put into practice throughout his life for the Muslims to emulate. Islamic law can thus be defined as the revealed laws and ways of life from Allah (SWT) to Prophet Muhammad (SAW) in order to guide people to the right path (Qur'an, Al-Anbiya': 107).

*Maqāsid Sharī'ah* is derived from two root words: *Maqāsid* and *Sharī'ah*. While *Maqāsid* means objectives (singular is *Maqsad* i.e. an objective), *Sharī'ah* signifies divine Islamic law. Thus, the combination of the two words theoretically implies the theory on the objectives of Islamic law. The objectives of the divine law cover every aspect of human existence including human development with special emphasis on the general well-being of every individual. (Oladapo&Asmak, 2016)

According to Ibn Ashur, *Maqāsid al-Sharī'ah* (objectives of Sharī'ah) is a term that refers to the preservation of order, achievement of benefit and prevention of harm or corruption, establishment of equality among people, causing the law to be revered, obeyed and effective as well as enabling the *Ummah* to become powerful, respected and confident.

The performance of *Maqāsid* aspects in Islamic law can be seen from the meaning of the *Maqāsid* itself. The goals and objectives of the law giver (Allah SWT) is for the benefit and protection of the individual, community, and nation. Therefore, Islamic law falls under the category of necessity which entails the protection of all the five essentials namely, religion, life, intellect, wealth and progeny. (Auda, 2008).

The aim of the law giver is to establish and develop a steady and sustainable live for human on earth. When put in place, Islamic law will cater for the above mentioned objectives of the law giver. Thus, the Sharī'ah will protect the fundamental elements of human existence, (Opwis, 2010) which is in harmony with civil laws in certain areas of human life. By enforcing the required rules, Sharī'ah brings about preserving the religion, life, intellect wealth, and progeny of the individual-Muslim and non-Muslim alike (Auda, 2008).

### 3. Contributions of Science and Technology to Humanity and its consequences

Man is the *khalīfa* (vicegerent) of Allah on earth and he is entrusted with the responsibilities of taking care and maintaining his environment. Thus, Islam does not differentiate between matters of state and that of religion. The Prophet (SAW) said: "Muslims are like a building, each part supports other" (Al- Bukhari, no: 481, 6026; Muslim, no: 2585). The link between science and religion in Islam is proven by the allowance to pursuit knowledge for the benefit of mankind. The Qur'an has many topics on scientific interest to persuade Muslims to think and to investigate nature. Many verses suggest that mankind gained knowledge through critical recognition of Allah's signs. The Qur'an for example, says: "Say: "Observe what is in the heavens and earth." But of no avail will be signs or warner to a people who do not believe" (Qur'an, Yunus: 101). The means and end of sciences have no difference and are subject to ethical and value aspects of Islamic injunctions. Allowing science to pursue its own course irrespective of criteria for consideration of ethical and values, with the problems of mankind, has drag humanity into the present calamitous situation. In Islam, science and technology must submit to Qur'anic ideals, values and ethics. From this ultimate point of view, the pursuit of knowledge could not be abused nor lead to harmful effects in the world.

Science which gave birth to modern technology has great impact in human life. Technology and human life cannot be separated and the society nowadays has a recurring co-dependence on technology. There are several contributions to modern civilization by the science and technology. Various contributions of science and technology have helped in making life easy and comfortable, as well as, save time and man power. There are numerous contributions of science and technology to humanity in modern days. The following are some of the contributions:

### 3.1. Enhancing Education and Learning Process

Education is the backbone of every progress and a key to development. The first Qur'anic revealed to the Prophet (SAW) were on reading or acquisition of knowledge (Qur'an, Alaq 96:1-5) which serves as an important aspect in the journey of human life. For instance the Qur'an states: "Allah will exalt those of you who believe, and those who are given knowledge, in high degrees; and Allah is Aware of what you do". (Qur'an, Al-Mujadalah 58:11). The lifting can be seen in many ways including scientific and technological advancement. Another verse states: "And He taught Adam the names of all things; and placed them before the angels, and said: "Tell me the nature of these if you are right." (Qur'an, Al-Baqarah 2:31). It can be inferred from the above verse that the concepts of science and technology has been into existence since the creation of Adam (AS) and man as the progeny of Adam has been endowed with such nature which distinguishes him from the Angels.

Education is thus facilitated by the communications media (mail, e-mail, radio, television, videotape, computers, videoconferencing and others) with little or no classroom or other face-to-face contact between students and teachers. Technologies like internet, computers, projectors, iPads, smart mobile phones, and whiteboards are being used in classrooms to boost students' ethical learning. (Kasi Viswanath, et al., 2012; DeCecco, 1964). Visual education is becoming more popular and it has proved to be the best method of learning in many subjects like mathematics, physics, biology, geography, economics and much more. Thus, cloud computer has played an important role in creating a flexible, unified and open platform for educational advancement, sharing of educational resources, and alleviating the information gap between different areas of education. (Wang, & Xing, 2011).

Business community has invested money in various educational technologies which can be used by both teachers and their students. For example, on iTunes, there are many educational applications which can allow students and teachers exchange academic information at any time, this has made learning mobile (Gilakjani, et.al, 2013; Collins, & Halverson, 2018). Also, programs like Long distance learning have opened boundaries to so many scholars around the world (Bates, 2005; Masrom, 2007). Technology has made education itself easier (Kerski, 2003). It has provided options like smart classes, multimedia devices, e-libraries, e-books, and many others (Zhang, & Nunamaker, 2003; D'Ambra, et al., 2013).

In the area of Islamic learning, technology has played a vital role in many field of Islamic knowledge. Information Technology makes the Qur'an and Hadith easy and possible to carry around. Islamic software are available in audio and text formats for mobile phones, iPods and laptops. (Pulkkinen, 2007). These software are accessible via the web for free and Muslims living anywhere around the globe find it easy to utilize. Among such, there are Islamic software developed in the field of *tajwīd* for instance, where the Qur'anic recitation is understood and learned different from the traditional method. (Elhadj, 2012). Besides that, technology developed recording systems and electronic devices that could keep both text and sound of the Qur'an with *tajwīd* rules. Afterwards, listening to Qur'anic recitations recorded from genuine reciters became feasible. (Hosseini, et. el., 2014).

In the area of hadith studies, there are many software of *takhrij al-hadith* as well. All the *Kutub al-Sittah* and other hadith books can now be accessed easily. These Hadith collections are ordered according to topic such as ablution, revelation, witnesses etc. and are accessible in various searchable formats (Hosseini, et. el., 2014).

By educating the citizens various branches of Islamic knowledge, the religion is protected by understanding and applying the rules and regulations of the creator. This gives room to the ruled

and ruler to discharge their duties and shoulder the responsibilities accordingly. Rights of all parties are preserved and protected by ensuring the requirements of the Sharī'ah are implemented. When the application of technology is used properly, it will enhance knowledge and advancements. However, if not, it will lead to the birth of fake information of which the end result would have a negative effect on the entire humanity. The Prophet (SAW) was reported to have mentioned that three groups of people are problems to religion among whom is a person with fake knowledge (Sunan al-Dārimī 214).

### 3.2. Improved Communication system

Communication is used for a number of purposes. Both society and organizations depend on communication to transfer information. People use technology to communicate with each other. Electronic media like radios, televisions, internet, and social media have improved the way to exchange ideas and develop societies (Kalla, 2005). In many countries, radios and televisions are used to voice the concerns of the society; they organize live forums where the community can contribute through mobile phones or text service systems like tweeter (Licoppe, & Smoreda, 2005). With the help of internet, not only immense knowledge on science and technology can be disseminated, but also help in connecting friends and family, continuously (Carroll, et al. 2002). Communication technologies like Televisions, radios, and internet can be used to persuade, entertain, orient and inform the society. Small businesses also used the internet and mobile communication technology to grow and improve their customer service (Luftman, et.al, 1993).

However, not all information in the internet or media are genuine. Islam frowns at fake or fabricated information which leads to disruption or disintegration within the humanity. Every information needs to be verified before it can be shared or disseminated. The Qur'an stated that: "Oh you who believe! If a *fāsiq* (sinner) comes to you with information, then verify it, lest you harm others out of ignorance and as a result of what you have done, you will regret." (Qur'an, Al-Fath 46: 6). By following the injunctions in the verse, all the five objectives of the Sharī'ah are protected.

### 3.3. Mechanized Agriculture

Modern agricultural technology allows a small number of people to grow vast quantities of food in a short period of time with less input which results into high yields and RIO 'return on investment'. Through government subsidies, small and medium-sized farmers have managed to acquire ploughing, sowing, watering and harvesting machines (Aimin, et. al., 2000). The use of technology in agriculture has also resulted in the manufacturing of genetic crops (Gasser, & Fraley, 1989), which can grow fast and may be resistant to many pests and diseases. Also, farmers have access to artificial fertilizers which may add value to the soil and boost the growth of their crops and enable them to produce high-quality yields (Ward, 2010). Farmers in dry areas have been in a position to grow healthy crops, they use advanced water pumps and sprinklers which derive water from rivers to the farms (Chandel, et.al. 2015), and all these processes can be automated to save time. For instance, the point on establishing a modern and effective agriculture, trade and industrial institutions, cover the need of the citizens. This is followed by developing the intellects of the citizens by educating them to involve in agricultural economic activities, and business opportunities.

On the contrary, many manufacturing and processing factories are working hard for production which on the process, releases harmful chemicals and gasses which have polluted the environment

resulting in climate changes (global warming) (Kampa, & Castanas, 2008). That is to say, the more technology enjoyed and more harm to the environment. The soil is being exploited and heavy application of chemical and commercial fertilizer to yield healthy harvests. These fertilizers have chemicals which are dangerous to the soil and human lives (Förstner, & Wittmann, 2012).

Even though, Islam does not negate any new positive agricultural development in as much as it does not lead to harm, however, the protection of agriculture means the protection of religion, life, intellect, wealth and progeny. The kind of food eaten is reflected on the wellbeing of the family. Thus, by protection of the agricultural sector through producing healthy and nutritious food indicates the end result of a healthy society. The preservation and conservation of agriculture leads to the achievements of all the five objectives of the Sharī'ah (Ahmed, et.al. 2015). The Prophet (SAW) was reported to have said concerning technological innovation in farming and agriculture: "You know better about your worldly affairs". (Muslim: 6128: 1997). Any agricultural technology that causes harm and temper with life and intellect is prohibited in Islam as the renowned legal maxim of Maqasid al-Shari'ah indicates that: "harmful should be removed". And also the hadith which says: "There should be neither harming nor reciprocating harm." (Ibn- Mājah, 2000), makes the use of any harmful agricultural technology be it chemical or whatever prohibited in Islam. Moreover, the Qur'an warns humans to neither engage in harming themselves nor indulge in harming other creatures of Allah. The Qur'an says: "And kill not one another. Lo! Allah is ever Merciful unto you". (Qur'an, Al-Nisā'4: 29), and also "Do not cause your own destruction" (Qur'an, Al-Baqarah 2: 195).

### 3.4 Improvement in Transportation System

Transportation is one of the basic areas of technological activity. Both society and businesses have benefited from the new transportation methods. Transportation provides mobility for people and goods (Lee, 2007). Transportation, like all other technologies, can be viewed as a system. It is a series of parts that are interrelated. These parts all work together to meet a certain goal. Transportation uses vehicles, trains, airplanes, motorbikes, people, roads, energy, information, materials, finance and time (Duncan, et. al., 2009). All these parts work together to move and relocate people and goods. Technology has helped in advancing all the four types of transportation and these include ; (1) road transport used by automobiles ,(2) air transport which is used by airplanes ,(3)water transportation which is used by ships and speed boats and (4) space transportation used to go to the moon. The most used of all these is road transportation, this one facilitates the movement of goods and people. Technologies like automobiles, buses, and trucks have improved the way humans move and how they transport their goods one place to another.

For instance, Road accident and traffic causes dangerous problems worldwide. One of such is climate changes which causes a lot of upheavals in human life. The freedom, flexibility, convenience, and comfort offered in modern transportation is cherish by all. That love affair has been clear and unchallenged since the advent of the Model T a century ago. Now the privately owned, human-driven, gasoline-powered automobile is being attacked from many directions, with change threatening to upend travel and transportation as we know it (Sperling, et. al. 2018). However, from the objectives of the Shari'ah, all aspects of life are cross check and most tally with the rule of law. The progress that causes harm is removed under the sharī'ah of Islam. (Muhsin, et. al.2019)

### 3.5 Organ Transplanting and Stem Cell Production

Protecting the progeny is as well put in place by consciousness of the injunctions of Sharī'ah in marriage and family life. Integration of mundane science and revealed knowledge for maximum outcome such as organ transplanting and stem cell is discussed by Muslim scholars on various

*Fiqh* academies. Scholars unanimously agree on the legality of organ transplant if the life of the organ donor will be threatened or lost. (Uskun, & Ozturk, 2013). This however should not be implemented without Islamic ethical considerations. (Golmakani, et.al. 2005). This is because the objective of the law giver is to ensure the protection of life and goodness of the society.

The issue of stem cell (Ilkilic, & Ertin. 2010) is also discussed and Islam does not object into anything for the benefit of mankind so far as there is no harm and no transgression of Allah's limit. Muslims married couples who are unable to have children in a normal way can use vitro fertilization. The rule is the fertilized ovum is place in the mother's womb from whom the eggs are taken. This has to be with the sperm of her lawful husband being alive, not dead and as husband and wife. This is to protect the progeny of the unborn baby and the parent's honour (Auda, 2008).

### **3.6 Security and Weapon Proliferation /Indiscriminate Destruction:**

With the aids of science and technology, weapons of mass destruction are invented by man. The wickedness in human has blinded his mind and become unconscious to perceive the way he is destroying himself. He uses chemicals to destroy indiscriminately (Sidel, 1989). Women, children, animal or generally the civil society that are not directly involved in the war, are the victims (Hashmi, & Lee, (Eds.) 2004). The concept of just war is outside the domain of chemical weapons. Besides that, the drone is used to fight and kill extensively. The opponents are at the receiving end since the person attacking is not physically available. Technological devices are replacing physical confrontations (Holland, et.al. 2017). The concept of justice in war rarely is abided. Allah (SWT) has condemned destruction of human lives, animals, and property for unjust cause. The Qur'an says:

“And of the people is he whose speech pleases you in worldly life, and he calls Allah to witness as to what is in his heart, yet he is the fiercest of opponents. And when he goes away, he strives throughout the land to cause corruption therein and destroy crops and animals. And Allah does not like corruption. And when it is said to him, "Fear Allah," pride in the sin takes hold of him. Sufficient for him is Hellfire, and how wretched is the resting place”. (Qur'an, Al-Baqara, 2:20-206)

Islam strongly advocates any developmental progress (Berghout, 2010) be it technological, scientific, cultural, economic, and as such calls for a balanced development in all spheres. *Hifz al mal* (preservation of wealth) is one of the most important objectives of the Sharī'ah. Muslim jurists viewed that the concept of *hifz al mal* goes beyond its literal meaning. It does not mean to preserve the wealth per se, but the concept also covers the encouragement to generate, accumulate, preserve as well as distribute the wealth in a just and fair manner (Hassan, et.al. 2022). It propagates the common human values, such as protection of life, intellect, property, freedom, justice, peace, mercy, balance, integrity, and security. Allah (SWT) declares:

“But seek, with the wealth which Allah has bestowed on thee, the Home of the Hereafter, nor forget thy portion in this world: But do thou good as Allah has been good to thee, and seek not occasions for mischief in the land” (Al-Qur'an, Al-Qasas 28: 77).

### **3.7 Technology and Health Sector**

Every aspect of life has its advantages and disadvantages. The utilization of technological tools within the health sector cannot be over looked. There many contributions that technology has done

to the health sector. Many types of machinery are invented to help test, scan, and x-ray, diagnose, control, and treat patients from various illnesses. (Yen, & Meesad, 2001). Technology plays a vital role in almost every aspect of human life. This happens irrespective of our consciousness. Among the few things that technology may positively effects human physical and mental health includes health applications that track chronic illness and communicate vital information to doctors. There are others that help to track diet, exercise, as well as mental health information. The online medical records cannot be left behind as it assist in accessing test result that allows doctors/patients to fill prescription forms.

With these, technology can said to have contributed immensely for the improvement of human as well as animal health. With the current pandemic, the corona virus has brought a lot of attention to breathing machines known as ventilators. The devices can be lifesaving for some critically ill patients. As the machineries in Intensive care units (ICU) takes care of patients with severe cases causing respiratory failure, ventilators are improvised through the use of technological inventories. (Ñamendys-Silva, 2020; Murthy, et. al., 2020). Not without side-effects, the ventilator itself can do damage to the lung tissue based on how much pressure is required to help oxygen get processed by the lungs. Corona virus patients often need dangerously high levels of both pressure and oxygen because their lungs have so much inflammation. Also, ventilators create a path for a wide range of infections to reach the lungs. However, ventilators work really well for patients with common forms of pneumonia (Buheji, at.al. 2020). These machineries helps patients with critical conditions to inhale more oxygen into the lungs and take carbon dioxide out. During the period of corona virus pandemic, technology has contributed as well in conducting other aspects of life without hindrance. (Hern, 2020). For instance, any dispute within the family about the paternity of a child can easily be trace through the DNA test which can help identify the father of the child. (Prajapat, & Jain, 2022). This is recommendable work in Islam, as the honour of both the father, mother and child is being respected and protected (Gunardi, S. 2021).

Likewise, the development of biomaterials nowadays is a growing field of research which points to the introduction and application of some specific materials to substitute or supplement human tissues. The biomaterial technology plays a crucial role in providing cell environment. It is employed in treating millions of patients by means of various biological devices and prosthesis such as pace makers, artificial hip joints, hearing aids, etc. (Hosain, Et.al. 2017). This serves as a means of saving the life of an individual in Islam. At the same time rapid development in the area of assisted reproductive technology (ART), has benefited mankind by addressing reproductive problems (Ibrahim, et.al. 2018).

Another aspect is the congenital heart defect interventions which may benefit from the fabrication of patient-specific vascular grafts because of the wide array of anatomies present in children with cardiovascular defects. Three-dimensional (3D) bio printing is used to establish a platform to produce custom vascular grafts, which are biodegradable, mechanically compatible with vascular tissues, and support neotissue formation and growth. It is an advanced and emerging technology having great potential in the field of tissue engineering. Bio printing uses cell-laden biomaterials, generally called bio-inks, to deposit in a layer-by-layer fashion. The goal of 3D bio printing is to offer an alternative to autologous or allogeneic tissue grafts to replace or treat damaged tissues (Barua, et. al. 2023). All these new emerging technologies in health aspect helps in one or the other in rescuing the life of humanity.

### **3.8 Increased Pollution**

Under the name of development, human beings have been so absorbed in cultivating new science and technology so hasty in their quest for industrialization, that they have not noticed its negative



aspects. Rapid progress in technology and industrialization has brought the contamination of air, rivers, sea, and noise of industrial plants and transportation. Pollution affects the land to grow crops on, the water to drink and the air to breathe. It has destroyed the environment and has given ill influence to the health of human beings and animals alike (Vitousek, et.al. 1997). Under the protection of wealth, the *Maqāsid* framework includes not only monetary values and assets but also the protection of environment, universe, and all the surroundings; the seas, earth, and skies. Islam cares about the environment the human and animal alike are living. It harbours anything that temper with the environment, be it pollution, deforestation, or destruction through industrialization. Allah (SWT) has warned the believers not to cause damage to their environment. The Qur'an says: "do not commit evil on earth after it is set upright" ( Al-Qur'an, A'araf:56).

#### **4. Modern Method of Repelling the Problem of Pollution**

The challenges are clear. Experts have tried to implement ways of reducing this impact by encouraging factories to go green. To some extent, this has been achieved through the development of green technologies like; green cars, green computers. Nonetheless, a great effort is still needed to reduce the pollution of the air and the earth. Efforts are directed towards maximizing those technologies already developed, generated and exploited new scientific discoveries (Beddington, 2010). Thus, emphasis is redirected more through science and technology in order to solve the problems rather than towards the misapplication of the method adopted by man in his disobedience to Allah (SWT). The focus on the deprived blessing is in human action on earth as vicegerent of Allah (SWT). The Qur'an categorically mentions: "And if only the people of the cities had believed and feared Allah, We would have opened upon them blessings from the heaven and the earth; but they denied (the Messengers), so We seized them for what they were earning". (Qur'an, AL-A'raf 7:96). Modern technology is more concern about market and income. The consideration for saving humanity and the ecosystem is not the first priority (David, & Otsuka, 1994). The recent action on saving the ecosystem is not manifested in manner to be clearly understood by a layman.

#### **5. Conclusion**

It is believe in Islam that Allah (SWT) created mankind and entrusted them as vicegerent on earth. He (SWT) reveals the Qur'an through Prophet (SAW) which provides the laws and regulations comprising belief, laws and moral system. Implementing such by mankind would help in governing their lives suitably. However, in this modern age, humans are faced with many challenges as a result of modern scientific and technological advancements. Islam as a complete way of life comprises everything that definitely can be handled by Islamic ethics. The Qur'an, the Sunnah and other Islamic sources had provided guidelines for the life of a Muslim. Islam teaches *Akhlaq* on good conduct and advocates shunning away from mischief or wrong doing. So, the objectives of the Shari'ah are capable of providing best solution as a guideline to effectively regulate modern scientific and technological advancements. Applying such in the end products can give benefits to all and sundry without harming any creature.

#### **6. Recommendations**

Science and-technology are not always universal or value free, because both, how a man recognizes science, and how he approaches scientific truths will be affected by his priori perceptions, which are shaped by his surroundings and culture. The followings are some of the recommendations:

1. Rectifying the cultural barriers and religious, or adherence to nature, protection and preserving the environment as assigned by the Creator is a compulsory task upon the Muslims.
2. In order to save the world from destruction as a result of science and technology deprived of the consciousness of the dictates of Allah (SWT), tertiary institutions should improve their curriculum especially in the field of science and technology to include religious ethics and morality for any kind technological product.
3. The teaching of science and technology in schools should include Islamic values in innovations. For Muslims should regain their lost glory and break the barrier of just a follower, consultation with doctors and philosophers which was the method of the early Muslims scientist for new inventions should be adopted.
4. Emphasise should be made on any new inventory machine to check impact of its production whereby moral production be the bottom line.
5. The link of science and technology is necessary for Muslim scholars to inspect whether innovations will be desirable or not for the humanity. In this aspect, Islamic legal maxims that deal with anything which leads to harming the wellbeing of humanity should be avoided and rules of Maqāsid be given emphasis in every new innovation.
6. Islam emphasises on a system full of ethics and values covering all aspects of life such as individual, communal, social, political, economic as well as intellectual. Thus, application of the objectives of the law giver and public good are first and famous before economic gain of the individual technologist in producing machineries.
7. Protection of life is part of the objectives of the Shari'ah as mentioned above. Protection of life is a necessary aspect in Islam, thus, weapons of indiscriminate destruction should be sanctioned. Protection of life is fundamental in all religions. Islam forbids and rejects killings on no just cause. The Qur'an says: "And do not kill a soul that God has made sacrosanct, save lawfully." (Qur'an, Al-Isra'il 17: 33).
8. Murder is forbidden but the death penalty imposed by the state for a crime is permitted. Another Qur'anic verse states: "... whosoever kills a soul, unless it be for murder or for wreaking corruption in the land, it shall be as if he had killed all mankind; and he who saves a life, it shall be as if he had given life to all mankind." (Qur'an, Al-Mā'idah 5: 53).
9. Technology is expected to fulfil the duty of embellishing the quality of life or the improvement and attainment of perfection of public life conditions. For example technology is expected to create transportation with free air pollution, technology for water purification, technology that will not destroy fertile land for agriculture with harmful chemicals and the like.
10. Man should be made to understand that the environment is his dwelling place and, thus, should be well maintained for his wellbeing. Therefore, taking good care of it is a compulsory responsibility worth discharging.
11. Being a vicegerent of Allah (SWT) on earth, man is obliged to preserve, conserve, and protect his dwelling place. By so doing, man will enjoy his safeguarded shelter, worship Allah (SWT) and prepare for his abode in the next world. This indicates that man is not created in vain. Serving Allah (SWT) is the purpose of his being in this world. And this worship encompasses of all aspects of life irrespective of mundane and the hereafter.
12. There is no secularity in Islam, therefore, all actions should be scrutinized before execution in order to serve the Creator and protect the wellbeing of man and his environment.

13. This western concepts and innovations should be improved with Islamic thought and transpose through a new spiritual and intellectual forms. Implementing the teachings of the Prophet (SAW) is capable of rectifying the current global problems caused by the exploitation of science and technology devoid of virtuous standards and harmonious living.

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