

ORIGINAL ARTICLE

Ethical Issues in Arms Technology

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Abstract: The paper *Ethical Issues in Arms Technology* is written to highlight and explain some ethical issues in arms production. These issues include the act of innovation; issues with weapons of mass destruction, the issue of privacy; humanizing arms technology, artificial intelligence – military killer robots, etc. The paper advocated for a critical evaluation of the structural and potential nature of arms before they are mass-produced. We need to ask and address all possible moral questions at research level rather than wait for the technologies to be developed and sent to the market place. The research employed the methods of rational speculation, critical analysis, evaluation, and prescription to call for ethical assessment of all arms before they are made available to the markets. This paper advocate for a stop on the production of any arms technology that will destroy the relationship between man and his environment. Scientists and arms researchers should give ethics a stool the heart of their research and production. Before production, every arms technology template must be ethically worthy before consideration is made to mass-produce them. With this new development, we shall eradicate the production of non-human value-adding arms from our world. Humanity does not need everything. We should accept and produce only what we need.

Keywords: Technology, Disarmaments, Arms Technology

INTRODUCTION

According to former United States President Dwight D. Eisenhower, for every gun that is made, every warship launched, every rocket fired signifies, in the final sense, a theft from those who hunger and are not fed, those who are cold and are not clothed. The above statement is a clear pointer to the wickedness of humanity. Man will prefer to spend billions of dollars just to acquire military supremacy yet his people are dying of hunger and poverty. Humanity, concerning arms procurement is not spending money alone, it is spending the sweat of its labourers, the genius of its children, women, and men. This is not a way of life at all, in any true sense, under the cloud of treating war it is humanity hanging from a cross of iron (Global Issues).

Researchers have shown that arms trade is a major cause of human rights abuse. Some governments spend more on military artilleries than on social development, communications infrastructure and health combined. Humanity likes war than peace. Humans are genetically predisposed to kill each other (Psychology today.com). The rate of lethal human violence is even seven times higher than the average for all humans. Our violence operates far outside the

bounds of other species. Human beings kill anything. Slaughter is a defining behaviour of our species. We kill all other creature, and we kill our own. While every nation has the right and the need to ensure its security, in these changing times, arms requirements and production must need to change too.

ETHICS AND TECHNOLOGY

What is Ethics?

According to A. F. Uduigwomen in his book *Introducing Ethics: Trends, Problems and Perspectives*, a straightforward, univocal definition/meaning of ethics is not possible, however, we can deduce the meaning of ethics from its root meaning. Etymologically ethics is derived from the Greek words ‘ethos. The word ‘ethos’ is synonymous with ‘moral’, meaning customs, habit and accepted way of behaviour of an individual or a community. Ethical principles transcend all political and scientific principles. (Nwoye, Mfonobong & Bassey 40) Ethics deals with the question about human conducts. They include: What is the good life for man? How should we live? Shall we aim at happiness or knowledge, virtue or the creation of beautiful objects? If we choose happiness, will it be our own or the happiness of all? Is it right to be dishonest in a good cause? Is going to war justified in cases where innocent people will likely be killed? These and like questions are questions of ethical or moral value.

Human beings in every society have acceptable norms guiding the conduct of their behaviours. Ethics is that discipline tasked with the duty of evaluating an establish codes of conduct to guide man's conducts with his environment. Do animals have ‘right’? Do plants have ‘right’? When is it ‘right’ to go to war? Are governments under ‘obligation to employ any military capabilities against citizens of other nation in defense of their citizens? Is there anything wrong with same-sex marriage? The list of ethical dilemmas is endless.

What is Technology?

The word technology is used to define a systematic treatment or application of skills. It is the early 17th-century Greek word *tekhologia* “systematic treatment” from *techne* “art, skill” (Encarta Dictionaries). Technology is the application of skill or demonstration of artistic skill in the use of tools and methods. It can also be defined as “the branch of knowledge that deal with the creation and use of technical means and their interrelation with life, society, and the environment, drawing upon such subjects as industrial arts, engineering, applied science, and pure science” (Dictionary.com). Uduigwomen A. F. opined that technology is a term describing the use of both primitive and highly advanced tools and methods to work (*Science* 328). It is important to note what is common about the highlighted definitions of technology. It is that it is the term describing how man creates and use tools to work.

In the light of today or our current day World, technology is referred to as the industrial revolution and outstanding innovations. The World Today is machine-driven. This is the age of power-driven machines and the establishment of factories. Technology is as old as man. Throughout the ages, man has invented tools to make his work easier and more efficient. He invented roughly flat stones used for chopping and scraping. He discovered the technology of fire control, by striking flint against pyrites to produce sparks. He discovered waterpower, electricity and other sources of power that have helped to increase the rate at which he could work. He discovered the power of Atoms and produced Atomic bombs,

weapons capable of mass destruction.

What is Arms Technology?

The word 'Arms Technology' is a coinage of two English words; while arms are connected with equipment like firearms; a weapon that can fire bullets and missiles, technology, on the other hand, is the application of tools and methods or application of technical knowledge to make man's work easy. The combination of these two words automatically gives *arms technology* a meaning. Arms technology means the application of tools and methods or application of technical knowledge to develop weapons that can fire bullets and missiles. Arms technology is the application of knowledge especially in the area of arms production. It is the capability given by the practical application of knowledge to form and develop any device that can be used with intent to inflict damage or harm. Some of these devices are used to increase the efficacy and efficiency of activities such as animal hunting, crime, law enforcement, self-defense, and warfare.

The history of arms technology has shown that man has engaged in the production of arms since 250,000 years ago (History World). Man after his separation from the apes hurls sticks and stones for a catch. He built a natural tool for bludgeoning an animal to death. Another weapon is a sharpened spear used for hunt or war. The Stone Age witnessed the discovery of spear with a sharp flint attached to it. Man invented slingers spear-throwing device, known from about 14,000 years ago. About 15,000 years ago spear was discovered. Next development in man arms was dagger and sword in 7000 BC. These are flint shaped into a blade. With time other arms like ax heads, javelin, cross bow (4th century BC), longbow, Swiss spear or pikes, gun power, cannon, etc. were invented. Today man has invented swords, flamethrowers, firearms, martial arts arms, aircraft weapons, anti-aircraft weapons, rockets, drones, etc.

Ethical Issues in Arms Technology

Biological Arms/Weaponry

Biological weapons also known as germs weapon is the use of infectious disease-producing agents such as bacteria, viruses, fungi, toxins, or other biological agents as weapons against humans, animals or plants (Schneider par. 1). Lethal biological weapons may be capable of causing mass deaths. They are incapable of mass destruction of infrastructure, building or equipment like atomic bombs. Because of indiscriminate nature of these weapons and it's potential to start widespread pandemics, most countries over 170 have agreed to ban the entire class, yet according to the record produced by Nuclear Threat Initiative 16 countries plus Taiwan have had or are currently suspected of having biological weapons programmes: Canada, China, Cuba, France, Germany, Iran, Iraq, Israel, Japan, Libya, North Korea, Russia, South Africa, Syria, the United Kingdom and the United State.

The core reason countries invest in building weapons, even biological weapons are to defend themselves from potential attacks from other countries. Some other countries build it for attacking not so much for defending. Many arguments are against biological weapons and warfare. For scholars like Machiavelli, the production of biological weapons is not immoral as far as it is necessary to achieve a certain goal. To Omoregbe Machiavelli is a notorious famous philosopher because he holds that it is somewhat necessary to act in a way that is admittedly immoral (187). That is why his moral theory is evil. No man should be encouraged

to use any means possible to achieve goals, not even the production of biological weapons. Anyone who produces a biological weapon has an intention to use or sell it. The question is: is it morally right to produce a weapon in violation of Just War Theory? The answer is 'No'! Just war theory expects us not to hurt non-combatant in warfare. The effects of biological weapons are uncontrollable. The paper advocates for biological weapon-free World.

Chemical Weaponry

A chemical weapon is a chemical used to cause intentional death or harm through its toxic properties. This is done through munitions, devices and other equipment specifically designed to weaponise toxic chemicals. Under Chemical Weapon Convention (WC), the definition of a chemical weapon includes all toxic chemicals and their precursors (OPCW). Nerve gas, tear gas and pepper spray are three modern examples of chemical weapons.

There is a moral argument against the production of chemical weapons because their use makes them more reprehensible than other forms of conventional weapons. Poison gas is excruciatingly painful, and the injuries from it often kill you over a very long period. They are incredibly indiscriminate and uncontrollable. A person using these weapons shows a pretty incredible amount of carelessness with respect to non-combatants and unnecessary suffering.

Nuclear Arms

Ethical issues surrounding the production of nuclear capabilities in warfare has raised a lot of ethical discussions. These discussions have produced critical moral questions. They include the following: Is it 'right' to produce weapons capable of mass destruction? Are nations 'free' to use nuclear weapons on other nations for self-preservation? Are governments under 'obligation' to employ nuclear capabilities against citizens of other nations in defence of their citizens ?



Figure 1:
(From Wikipedia.org- Pakistan Nuclear warhead)

The production of an atomic bomb for warfare is an act of suicide because no country can win a nuclear war. These strategic bombs can now be launched to any part of the planet. A

nuclear bomb can destroy a large city like Lagos and remove its trace from the man of Africa. Ownership of nuclear weapons confronts humanity with an ethical dilemma. It confronts humanity with complex alternatives, whether to or not to live with nuclear bombs (Nwoye, Mfonobong & Samuel 42)? The World is faced with possible risk on each side of the alternatives. On one hand; if the World decides to live with the bomb, it face the risk of extinction any day these bombs are used again. On the other hand, if the World decides to abolish the bombs, this decision presents the challenge of how the bomb can be eliminated; what it will cost and how long it will take to achieve it. This same problem poses the problem of personal gain and ambition. How possible will it be for a country like North Korea to give up its nuclear program, if the United States refuses to do the same? This ethical issue has given birth to two major camps. They are the camp for and the one against the production and use of nuclear warhead.

Some scholars have argued for the need for the production of a nuclear weapon. According to Jonathan Tepperman, before now, countries easily staged up wars and millions of innocent people die. Nuclear arms changed all that, by making the cost of war easy to calculate. Suddenly, even the most radical tyrant is forced to accept that war with a nuclear state is unwinnable and not worth fighting for. The World is safer, because of the presence of nuclear arms (par. 16). No doubt nuclear weapons have not been used since 1945. It is not contestable that there has never been a nuclear, or even a nonnuclear war between World powers since 1945. Is it true that the world is safer with nuclear arms? If the World is safer with nuclear arms, why do we have only nine countries in possession of them? If the World is safer with nuclear arms, why are some countries allowed to have nuclear weapons while others do not? Should not all countries have equal rights to nuclear weapons? Why did the United States allow India to develop a nuclear weapon but does not want other countries to do the same?

There is no moral justification for the production and use of nuclear arms. The production of these arms contributed to the neglect of the existential condition of man through the diversion of attention to arms production and talks, instead of concentrating on how to improve the living condition of man. The huge amount of money that would have been channeled to improving the existential condition of man, by (helping individuals, poor countries, war-ravaged countries and others involved in ethnic skirmishes), are foolishly and selfishly committed to arms production and maintenance of these arms. Ethics is the branch of philosophy that takes care of this situation. Ethical principles transcend all political and scientific principles. It does not respect personal ambition. It is neutral and postulates how man should live his life regardless of times and conditions (Uduigwomen 2). Ethical issues in Nuclear weapons should need critical attention. These weapons productions should be stopped or possibly replaced with conventional weapons. Conventional weapons are those weapons that are not weapons of mass destruction. E.g. Armoured fighting vehicles and Warships.

Weaponisation of Artificial Intelligence (AI)

Weaponisation of artificial intelligence is simply the act of equipping artificial intelligence devices to independently search and engage targets based on programmed constraints and descriptions to cause harm or destruction. Good examples of AI are lethal autonomous weapon systems (LAWS), lethal autonomous robots (LAR), robotic weapons, or killer robots. LAWS may operate in the air, on land, on water, underwater or in space.

According to Jayshree Pandya the quest to develop new technologies has become a rat race (Forbes par I). The quest to lead the emerging technology race and the futuristic warfare battleground, artificial intelligence (AI) is rapidly becoming the center of the global power play.

Due to their lack of emotion and legal and ethical judgment fully autonomous weapon would face significant obstacles complying with the principles of humanity. Legal and ethical judgment gives people the means to minimize harm. It enables them to make considered decisions based on an understanding of a particular context. Machine only make a judgment based on pre-programmed algorithms, which do not work well in complex and unpredictable situations.

A robot is a tool and as such, it is never legally responsible for anything. In a situation, a killer robot eliminates a non-combatant or commits war fraud or crime, who shall be held accountable? Procedures for attributing responsibility for robots should be established so that it will always be possible to determine who is legally responsible for their actions.

Assault Rifles

These are lightweight rifles developed from the submachine gun, which may be set to fire automatically or semi-automatically. These are selective-fire rifle that uses an intermediate cartridge and a detachable magazine. Assault rifles were first used during World War II. A good example of an assault rifle is AK-47. It can be set for automatic or semiautomatic fire.

It is a known fact that gun companies make a profit from death. They produce and sell products that are used for killing and they make money every time a deadly weapon is put into the hand of a person, whatever the purchaser intentions are. How moral is such a business? In defense proponents of situationism have articulated that situation or circumstance can affect our moral decisions. One may produce and use an assault rifle when the need arises.

Assault rifle kills very one or things around its target area. Killing is bad no matter the situation, producing weapons that will help man to kill more men is pure madness. This work opines that much attention should be paid attending to man's existential problems than producing more assault rifle, a tool produced to kill and nothing more.

The Issue of Privacy



Figure 2:
(From Wikipedia.org- A Drone)

Over two-dozen countries in the World of Drones database have armed drones. Drone is an unmanned aircraft or ship that can navigate autonomously without human control or beyond the line of sight (Brown 1). It is an unmanned aircraft that is guided remotely. Drones are used in many areas. There is no end when it comes to their possibilities. A drone allows recording and monitoring from the sky, and therefore, they are suitable to monitor public events, any suspicious happening without being heard and seen. It is therefore great tool for the Police.

The civilian use of drones has become an unprecedented issue in modern society. People's privacy is at stake here. Drones are used for malicious purposes, such as to plan home invasions or to blackmail an individual. Since there are little or no laws that regulate the use of this device, the acquisition of this information is perfectly legal. But, is it morally right to invade someone privacy without a proper warrant? Is it right to secretly acquire information on someone to blackmail him or her? This is another ethical issue associated with arms technology. Since the 9/11 terrorist attacks, the United States, in particular, has significantly increased its use of drones. They are mostly used for surveillance in areas and terrains where troops are unable to safely go. They are also used as weapons and have been credited with killing suspected militants. Their use in current conflicts and over some countries has raised the question about the ethics of this kind of weaponry, especially when it results in civilian death, either due to inaccurate data or because of their proximity to a 'target'. This paper is calling for a rethink on the production of this technology. Drone, when used, create social insecurity. This is a situation where people move around in fear of being spied. Drones production and use are secretive, lack sufficient legal oversight, and prevent citizens from holding their leader accountable. Moral investigation should be conducted and a conclusion reached to educate scientists to stop the production of any drone that will violet people's right to privacy.

Humanizing Arms Technology



Figure 3:
(From Wikipedia.org- Symbol of Humanising Technology)

It seems we want our technology to be more human. In 2017 Taiwanese dancer, choreographer and inventor, Huang Yi, recorded a dance duet with a robot, accompanied by a solo cellist. As I watched in awe of the machine's subtle, flowing movements and the

emotional connection. I wondered whether I was observing an intimate love story or just some freaky techno-art. Why are we striving so hard to enhance this symbolic relationship between human and technology? Why do we want to humanize arms technologies? Humanising arms technology is the term used to define the process or act of making arms technology human-friendly. It simply means making arms think like humans, reason or sense, and act like humans.

We have weapons with super intelligence. Right now drones use artificial intelligence to navigate very complicated landscapes to deliver bombs in battlefield conditions. But they are still piloted remotely by human beings. We all may be dead in 2050. According to Nesbit Jeff, the human race could vanish in the blink of an eye within our lifetimes. The physicist Stephen Hawking has said that the development of Artificial Super-intelligent Technology could spell the end of the human race. Microsoft co-founder, Bill Gates says he doesn't "understand why some people are not concerned that artificial super-intelligence machines might save or destroy human civilization. Billionaire entrepreneur Elon Musk fears that we are summoning the demons" in our race to create an artificial super-intelligence. The moral concern here is that we may very well approach an era sometime in the next thirty (30) years, where a powerful supercomputer finally replicates the human brain and mind and crosses over nearly instantly into super-intelligence. And then what happens next is unpredictable. Although supercomputer has made some of our work faster, like in data collection, yet caution has to be taken before computers and arms technology takes over the places of humans.

CONCLUSION

Scholars all over the world continue to wrestle with the moral implications of arms technology inventions. Now we have a killer robot, armed drones, and nuclear warheads. Research has shown that soon technology would be fully autonomous. What is harder in figuring out, is where to draw the line to determine how best to reduce the negative implication of arms technology. We need to live according to the principle of ethics that will not destroy our relationship with others as we use these arms. We know we ought not to lie, but what if it's done to protect someone's feelings? We know killing is wrong, but what if it's done in self-defense. Our language, culture, and concepts seem hopelessly procrustean when applied to our multifarious moral experiences and dilemmas. The same goes for the way we evaluate the production of arms technology. This paper opines that more critical analysis and evaluation is needed to tackle ethical issues in arms technology and proffer solution to overcome them. We should eradicate the production of non-human value-adding arms from our world. Humanity does not need everything. We should accept and produce only what we need. It will make our world a safer place.

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