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THE END GAME OF HUMANS THROUGH “GRIN” TECHNOLOGIES: UNIVERSITY  
EDUCATORS’ ROLE

by

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## ABSTRACT

The rapid pace of emerging technologies is playing an increasingly important role in overcoming fundamental human limitations. While the new dispensation of Fourth Industrial Technology (4IR) introduced a realization of a successful and sustainable digital economy, it has not yet achieved a smart society of strengthening techno-ethical inquiry of technology advances in areas unseen by creators while the users change the intended use of the new technology. Technological Singularity Theory was used in this article to discuss the theoretical framework. On one hand, the end goal is to have the earth produce beings that will be immortal and be able to understand mysteries. On the other hand, the problem of immortality with self-awareness and ego will likely disrupt the business as well as the society. The main purpose of this paper is to examine the end game of humans through 'GRIN' technologies and the role of Educators in universities. A systematic selection of science fiction movies were selected based on secondary data collected through documentary white papers from World Economic Forum and recent European novels that formed the findings of the paper. The findings showed that 'GRIN' technologies was being propelled by the universities as the 'think tanks' and may usher in unprecedented social and political upheaval that could affect all corners of the globe. In addition, professors/lecturers could borrow 'management by objectives' strategy to engage students on the need for techno-ethics. In conclusion, the government and academicians' interest in 'GRIN' technologies incorporated into the human body will merely provide a reimagining of what it means to be human. The paper recommended university stakeholders especially Daystar University which is a Christian university in Africa to spur guidelines for public policy towards morphological human enhancement and create awareness of this emerging technology.

*Keywords:* GRIN Technologies, Universities, World Economic Forum, Techno-ethics, Transhumanism, Human Enhancement

## 1. INTRODUCTION

Every citizen around the globe is demanding better and more services from the government to maintain or improve the quality of his/her live-hood (Higgs, Light, & Strong, 2000). The government and academicians are also calling on the adoption and implementation of the rapid emerging technologies for the betterment of societies. Kenya embarked on its digital transformation journey to ensure that digital economy benefits became a reality to its citizens. The digital economy blueprint according to the Kenya Digital Economy (2019, p. 2), “serves as one of the Kenya’s contribution in championing the growth of an African-wide digital economy for all of the Smark Africa Alliance Members”. The president Hon. Uhuru Kenyatta was supported in his agenda by Hon. Joe Mucheru, the Minister for Information Communication and Technology (ICT) who argued that, “Businesses are improving their productivity buoyed by both adoption and adaptation of new technologies...Further action is required to ensure all Kenyan citizens and residents can thrive in a global digital economy”.

While the new dispensation of Fourth Industrial Technology (4IR) introduced a realization of a successful and sustainable digital economy (World Economic Forum, 2018), it has not yet achieved a smart society of strengthening techno-ethical inquiry of technology advances in areas unseen by creators while the users change the intended use of the new technology (Orlikowski, 1992). Humans cannot be separated from these technologies because it is an inherent part of consciousness and meaning of life (Horn & Horn, 2010). From the classical book – the Bible shows how the first human being was the only part of God’s creation formed by His hands, rather than spoken into existence unlike the rest of the creation (Genesis 1). The ‘post-modern’ human began as a literary reference has evolved into an iconic metaphor representing a collective image of perfect humanity beyond the confines of genetic constraints (Winner, 1977; Borgmann, 1984; Kaplan, 2004; D’haen, 2013; Parker, 2015).

In 2012, the National Science Foundation and the United States Department of Commerce published a government report: *Converging Technologies for Improving Human Performance* that laid the blueprint for radical evolution of man and machines. The stated goal was to better man’s shortcoming by curing diseases, giving opportunity for people with no biological children, managing disabilities and such like through the Genetics, Robotics, Artificial Intelligence, Nanotechnology (GRIN) technologies. However, according to Strassberg (2015), many scientists, scholars, and futurists believe that the world is on the precipice of the next great technological revolution with the coalescence of the GRIN technologies that owe their foundations to all of humanity’s accumulation of past knowledge. Further, Horn and Horn (2010) argues that this benign mask hides an inner, sardonic grin that follows an ancient blue print to blend God’s perfect creature with the seed of fallen angels.

## 1.1 Background of Human Enhancement

Science routinely conducts experiments with transgenic mice, rats, chicken, pigs, cows, horses, and many other species. It is naïve to believe human alone have been left out of this transgenic equation (Weigner, 1954; Horn & Horn, 2010). If every scientist is talking about transgenic enhancement, then the law of humanity to remain human has been violated with the Declaration of Helsinki in 1964. The devil is in the details of GRIN technology as from the day human embraced transhumanism via implantation or injection, is the day not only in somatic or body cells multiplication happened, but also germ-line cells such as ova and sperm initiated intracellular changes materialized (Chorost, 2011; Dhaen, 2013; Horn & Putman, 2013; Sejnowski, 2018). This is because, transhumanism as explained by More and Vita-More (2013), is a life philosophy, an intellectual, and cultural movement that includes it as an area of study. Transhumanism is a type of nonreligious philosophy of life that rejects faith, worship and the supernatural, instead emphasizing a meaningful and ethical approach to living informed by reason, progress and the value of existence in our current life. Hence, transhumanism emphasizes the philosophy's root of enlightenment humanism. This paper wraps the GRIN technology into discourses that are influencing humanity to shape a better future but are never going to the 'saviour' of the world.

According to Monks (2014) on *Make, Create, Innovate, Scientific and Technology Series*, tells the stories behind GRIN technologies advancements breakthroughs that are reshaping the world. A collaborative project developed through the leading forum 'Biohack.me' draws on the shared knowledge of citizen science laboratory around the world. Their stated goals include: Eternal life and learning to fly; the paradigm for technology that has gone beyond wearable to implants. This is via the use of Radio Frequency Identification (RFID) technology which is part of GRIN technologies that employs tiny integrated circuits for storing and processing information using antenna for receiving and transmitting the related data. According to Aubert (2011), presented an overview on Radio Frequency Identification (RFID) technology for human implants and investigated the technological feasibility of such implants for locating and tracking persons or for remotely controlling human biological functions. The findings showed that miniaturization of implantable passive RFID devices as well as the choice of the transmission frequency in wireless communication was possible inside human body and an off-body interrogator. The two techniques that are currently being used (i.e., inductive coupling and electromagnetic coupling) are some documented biomedical and therapeutic applications of human RFID-implant devices (Warty, Tofighi, Kawoos & Rosen, 2008; Sani, Rajab, Foster & Hao, 2010). In support, Monks (2014) details that Motorola is also developing RFID-activated 'password-pill' that a user can swallow to access their devices without hassle of remembering the passwords. Nonetheless, precautionary measures are needed as Lee (2018) explains the use of 'near field communication' (NFC) in these implants have universal passwords for unlocking physical and electronic barriers and majority of people are complaining of. However, these implants are being shipped around

with the world backups of successful crowd funding campaigns. Further, an adult industry implants for erogenous zones are being made for achieving maximum pleasure and families are crying foul over these. There are also, magnet embedded ear phones under the skin of the ears that could be used to listen to music via a wire coil worn around the neck.

## 1.2 Problem, Purpose and Research Questions

The World Economic Forum Annual Meeting (2019) stated that these technologies' revolution shall be so disruptive that they are raising the questions about the efficacy of the current legal and regulatory framework around the world. This is because; these technologies have betrayed the traditional business and regulatory models, which thus calls for an in-depth study of their modus operandi in order to frame effective legislation. Despite the insurmountable limits in the form of economic, political and environmental risks, GRIN technologies can be cushioned with the heightened progression of moral and social improvement (World Economic Forum, 2016). The end goal is not to be cynical and apathetic against the benefits of GRIN technologies but the struggle with 'prophets' who promise that GRIN technologies will solve all problems. On one hand, the goal is to have the earth produce beings that will be immortal and be able to understand mysteries. On the other hand, the problem of immortality with self-awareness and ego will likely disrupt the business as well as the society. The main purpose of this paper was to examine the end game of humans through GRIN technologies and the role of University Educators. Two questions were discussed in depth: (1) what is the end game of human in using GRIN technologies? (2) How can University Educators create awareness to reduce the ethical and social dangers envisages?

This paper shall contribute to scholarly knowledge about GRIN technologies. To the Kenyan Citizens who are a majority of Christians shall spur them to discern more about implementation of GRIN technology. This is because Weigner (1950, cited in Sullins, 2018), showed that, "The world government which might be controlled by a machine superintelligence...may make radical changes to the human condition". To the University stakeholders it is to empower them not to object the use of GRIN technologies but to object the moral principle underlying transhumanism itself. It is imperative to create a conscious awareness to the unfolding ways that would help students make their decisions based on the whole truth of their surrounding environment concerning GRIN technologies.

The paper was structured in five sections: Section 1 dealt with the introduction. Section 2 gave a brief literature review. Section 3 explained the methodology applied in the paper. Section 4 gave the findings and discussion while, section 5 concluded the paper.

## 2. LITERATURE REVIEW

### 2.1 Theoretical Framework

This paper was based on a specific theoretical framework of GRIN technologies: The Technological Singularity Theory.

### *2.1.1: Technological Singularity Theory*

According to Vinge (1993), anticipation was based on the improvement of the computer hardware in the early years of artificial intelligence (AI) which was fathomed to be slow. The digital computers were incredibly primitive and memory forbiddingly expensive by today's standards (Sejnowski, 2018). The theory is based on four aspects: Firstly, computers will become "awake" and will advance to superhuman intelligence. Secondly, large computer networks may someday "wake up" and become superhumanly intelligent. Thirdly, computer and human interfaces will become so intimately entangled that superhuman intelligence will occur. Fourthly, advancements in biological science result in dramatic improvements to human intelligence. At a glance, there seemed to be a conflict between the artificial intelligence (AI) and the intelligence amplification (IA) in terms of funding projects. However, Vinge (1993) gave a clarification that artificial intelligence dealt more with computer networks and human-computer interfaces while intelligence amplification was a faster way to achieve superhumanly intelligence. Intelligence amplification seemed to be proceeding naturally while the artificial intelligence needed to be applied more in machine learning. Hence, Vinge based his work on Von Neumann - a mathematician, who expressed both surprise and concern with the idea that there was "an ever-accelerating progress of technology and changes in the modes of human life" (Synthetic Smart Teams, 2018). Although it appeared that Von Neumann was thinking of normal progress of a human with machine learning, not the creation of superhuman intellect. Vinge (1993) was quick to explain that, artificial intelligence advances will often have applications in intelligence amplification and vice versa. Conversely, the reality is that artificial intelligence and intelligence amplification was one and the same thing as explained by the GRIN technologies.

### *2.2: Empirical Framework*

This paper explained that, the idea of technological singularity is revealed as a real concept rather than a science fiction by Kurzweil (1999) where he probes the past, present and future of artificial intelligence from its earliest philosophical and mathematical roots to tantalizing glimpses of 21st-century machines with superior intelligence and prodigious speed and memory. Kurzweil's idea is based on a similar premise to Moore (1965), that was referred to as Moore's Law to show that the number of transistors on a chip doubled to mean greater computing power if the number of transistors continued to grow at a rapid pace without ceasing. The implication would be eventually that computers would process information faster than a human that was referred to as nanotechnology (Winner, 1977). The Singularity will represent the culmination of the merger of human biological thinking and existence with technology, resulting in a world that actually transcends the biological roots. That is to mean that, there will be no distinction between human and machine. Horn and Horn (2010, citing Kaczynski, n.d) revealed that, eventually a

stage may be reached at which the decision necessary to keep the system running will be so complex that human beings will be incapable of making them intelligently. At that stage, the machines will actually be in effective. People will not be able to just turn the machines off, because they will be so dependent on them that turning them off would amount to suicide. Currently, students are so dependent on a simple calculator machine that they cannot think without having to use the calculator. Also, is the addiction to social media where Chorost (2011), explains the addiction of what makes an individual hunger to touch his/her iPhone and the need to check email once they pop up. He proposes the same way it will be to design a mind-to-mind technology that would let people reconnect with their bodies and enhance relationships. With such technologies, he says could achieve a collective consciousness—a World Wide Mind. Further, it will be humankind's next evolutionary step. Such minds are indeed living because Chorost himself has computers in his head that enable him to hear: and to use the cochlear implants.

According to Luppicini (n.d), the ethical use of GRIN technologies is important in society today, particularly in areas where technological advances have a transforming effect on society. Techno-ethics was developed by Moore's Law, which holds that, as the social impact of technological revolutions grows; ethical problems increase (Moore, 2005, p. 117). Techno-ethics is holistic in orientation and provides an umbrella for grounding all sub-areas of applied ethics focused on technology related areas of human activity including, business, politics, globalization, health and medicine, and research and development (Luppicini, n.d). Specifically such as: (1) Engineering ethics; (2) Internet ethics and cyber ethics; (3) Educational techno-ethics; (4) Biotech ethics; (5) Media & communications techno-ethics; (6) Professional techno-ethics; (7) Environmental techno-ethics; (8) Nano-ethics; (9) Military techno-ethics; (10) Computer ethics.

### 3. RESEARCH METHODOLOGY

A systematic selection of science fiction movies were selected based on secondary data collected through documentary white papers from World Economic Forum and recent European novels that formed the findings of the paper. According to World Economic Forum (2016) showed that, "By imaginatively combining the rigour of science with the freedom of fiction, the genre plays a big role in expressing the hopes and fears human project into creation. It is important to be keen in understanding the contemporary hopes and fears" of 4IR. That is why perception and reception in emerging technologies lag behind before people appreciate technologies. For example, More Max the author of *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future* who began articulating the principle of transhumanism as a futurist philosophy in the 1990s was influenced by seminal works of science fiction and today it is a reality. The paper also used other literature reviews from medical journals, British Broadcasting Corporation and Cable News Network websites, government reports, and books. Narrative analysis was used to scrutinize the end game of



humans and how university educators can play a role of creating awareness of GRIN technologies in the higher education sector.

#### 4. FINDINGS AND DISCUSSIONS

##### 4.1: The End Game of Human in using GRIN Technologies

GRIN technologies may usher in unprecedented social and political upheaval that could affect all corners of the globe (Strassberg, 2015). Throughout humanity's short span of technological innovation, history has demonstrated that the creation of new tools can cause massive disruptions to sustained cultural norms, as well as to other life forms. Since, most of these theoretical frameworks were pictured a long time ago however recently, various science fiction movies have been speaking towards the support of these particular work: super humans and immortality of man (World Economic Forum, 2016, 2018).

*Table 4.1: Selected Science Fiction Movies Advancing GRIN Technologies*

SRN	Year of the Movie	Title of the Movie	Description of the Movie
1	2007	I am Legend	Robert Neville (Will Smith), a brilliant scientist, is a survivor of a man-made plague that transforms humans into bloodthirsty mutants. He wanders alone through New York City, calling out for other possible survivors, and works on finding a cure for the plague using his own immune blood.
2	2010	Inception	Dom Cobb (Leonardo DiCaprio) is a thief with the rare ability to enter people's dreams and steal their secrets from their subconscious. His skill has made him a hot commodity in the world of corporate espionage but has also cost him everything he loves. Cobb gets a chance at redemption when he is offered a seemingly impossible task: Plant an idea in someone's mind.
3	2010	Splice	Geneticists Clive (Adrien Brody) and Elsa (Sarah Polley) specialize in creating hybrids of species. When they propose the use of human DNA, their pharmaceutical company bosses forbid it, forcing them to conduct experiments in secret. The result is Dren, a creature with amazing intelligence and physical attributes. At first, Dren exceeds their wildest dreams, but as she begins to grow at an accelerated rate, she threatens to become their worst nightmare.
4	2013	Elysium	In the year 2154, humanity is sharply divided between two classes of people: The ultrarich live

SRN	Year of the Movie	Title of the Movie	Description of the Movie
5	2014	Lucy	<p>aboard a luxurious space station called Elysium, and the rest live a hardscrabble existence in Earth's ruins. His life hanging in the balance, a man named Max (Matt Damon) agrees to undertake a dangerous mission that could bring equality to the population, but Secretary Delacourt (Jodie Foster) vows to preserve the pampered lifestyle of Elysium's citizens, no matter what the cost. The implication is the digital divide between the poor and the rich.</p> <p>When a boyfriend tricks Lucy (Scarlett Johansson) into delivering a briefcase to a supposed business contact, the once-carefree student is abducted by thugs who intend to turn her into a drug mule. She is surgically implanted with a package containing a powerful chemical, but it leaks into her system, giving her superhuman abilities, including telekinesis and telepathy. With her former captors in pursuit, Lucy seeks out a neurologist (Morgan Freeman), who she hopes will be able to help her.</p>
6	2014	Transcendence	<p>Dr. Will Caster (Johnny Depp), the world's foremost authority on artificial intelligence, is conducting highly controversial experiments to create a sentient machine. When extremists try to kill the doctor, they inadvertently become the catalyst for him to succeed. Will's wife, Evelyn (Rebecca Hall), and best friend, Max (Paul Bettany), can only watch as his thirst for knowledge evolves to an omnipresent quest for power, and his loved ones soon realize that it may be impossible to stop him.</p>
7	2015	Ex-Machina	<p>Caleb Smith (Domhnall Gleeson) a programmer at a huge Internet company wins a contest that enables him to spend a week at the private estate of Nathan Bateman (Oscar Isaac), his firm's brilliant CEO. When he arrives, Caleb learns that he has been chosen to be the human component in a Turing test to determine the capabilities and consciousness of Ava a beautiful robot. However, it soon becomes evident that Ava is far more self-aware and deceptive than either man imagined.</p>
8	2019	Gemini Man	<p>Henry Brogan is an elite assassin who becomes the target of a mysterious operative who can seemingly predict his every move. To his horror, he soon learns that the man who's trying to kill him is a younger, faster, cloned version of himself.</p>

From the movie *I am Legend* Vinge (1993) explained that the Singularity will represent the culmination of the merger of human biological thinking and existence with technology, resulting in a world that actually transcends the biological roots. The question by World Economic Forum Annual Meeting (2019) is the issue of how to establish standards, guidelines and processes to regulate this world? While in *Inception* it is what Chorost (2011), proposed how it would be to design a mind-to-mind technology that would let people reconnect with their bodies and enhance relationships. With such technologies, he says could achieve a collective consciousness—a World Wide Mind. And it would be humankind's next evolutionary step. In *Splice* the World Economic Forum Annual Meeting (2019) stated that this technology revolution is so disruptive that it has raised questions about the efficacy of the current legal and regulatory framework around the world. It is actually here with us not as Vinge (1993) fathomed. *The Elysium* is explained by More and Vita-More (2013), transhumanists typically are looking to expand the range of possible future environments for posthuman life, including space colonial and the creation of rich virtual worlds. In *Lucy*, Horn and Horn (2010, citing Kaczynski, n.d) showed that, eventually a stage may be reached at which the decision necessary to keep the system running will be so complex that human beings will be incapable of making them intelligently. At that stage, the machines will be in effective. People will not be able to just turn the machines off, because they will be so dependent on them that turning them off would amount to suicide” In *Transcendence* McKenna (1998), with the emergence of the global internet, a human population of several billions, and an electronic “noosphere” that the world exists on, “we are now within the shadow of this transcendental object at the end of time. *Ex-Machina* is where Ava is created with a robotic body but a human-looking face and was being tested if she is genuinely capable of thought and consciousness, and whether a man can relate to her despite knowing she is artificial. Ava succeeds, destroys the creator and disappears to live with common crowds. According to Vinge (1993) said that on one hand, the end goal is to have the earth produce beings that will be immortal and be able to understand mysteries. On the other hand, the problem of immortality with self-awareness and ego will likely have the ability to communicate at variable bandwidths, including ones far higher than speech or written messages. The culmination is now on *Gemini Man* that is enhancing on the epitome of human enhancement known as cloning (that reproduces something that look like the original) transhumanist goal.

All these science fiction movies are the motivating researchers and academicians into creating robots that can speak and interact with humans. There are dozens of sci-fi movie franchises revolve around the idea of humanoid robots that can run, talk, clean floors, entertain people and keep the children entertained, do interesting tricks and pick objects (See Table 4.2).

Table 4.2: Selected Robots that are Emotionally Connected in the World - as at 30<sup>th</sup> June 2019

SRN	Name of the Robot	Country of Origin	Humanoid Type	Date of Activation
1	ASIMO	Japan – Sony and Honda	Responds to voice commands, identifies hand gestures, synthesizes speech, and can move based on noises. Can walk run and pick up objects.	Began in 1986
2	NAO	French robotics company	Teach social skills and are a useful teaching tool for educating others on robots and robot technology. It's quite manoeuvrable and has dexterous hands.	2008
3	Robear	Japan - Scientists from RIKEN and Sumitomo Riko Company Limited	A machine with a gentle touch. This facilitates gentle movements that ensure that the robot can carry out power dependant tasks such as lifting or carrying patients without causing them discomfort.	2009 and 2011 respectively.
4	PETMAN (Protection Ensemble Test Mannequin)	USA – Boston Dynamics	Great balance and runs a little bit faster. Was developed for the military was developed to test biological and chemical suits for the US military.	October 2009
5	Geminoid DK	Denmark: with Aalborg University, Osaka University, Kokoro, and AT	Geminoid type that was the first to be modeled after a non-Japanese person. It is also the first bearded model.	2011
6	ATLAS	USA – Boston Dynamics	The next generation of PETMAN that was designed for search and rescue efforts.	2013
7	Pepper	France - by SoftBank Robotics	Can interpret one's facial expressions, the tone of voice and other non-verbal cues, and respond appropriately. Best in supermarkets, and bank.	2014
8	Sophia	Hong Kong with citizenship in	This is a human-like robot with special appearance and behavior compared to previous robotic	2015

SRN	Name of the Robot	Country of Origin	Humanoid Type	Date of Activation
		Saudi Arabia.	variants. Sophia uses artificial intelligence, visual data processing and facial recognition. She talks and express herself very well.	
9	Alter	Japan - Researchers from Osaka University and the University of Tokyo	- Has a series of sensors that detect proximity, humidity, noise, and temperature of the room it's in. Changes itself depending on how many people are near it. Moves fingers as it sings 'nightmare' images.	2016
10	Zenbo	Taiwan - Asus technologies	A new robot friend for seniors and kids. Works as a smart home manager, security guard, hands-free kitchen assistant, and family photograph. The robot can also sing songs, dance to music, and tell stories, even promising to work as a tutor to children	2016
11	Samantha	Barcelona-based engineer Sergi Santos	A robot sex doll that has a brain that emulates the electrical activity of humans in the sense of excitement.	2017
12	Honda NeuV (New Electric Urban Vehicle)	Japan - Cocoro SB	The NeuV proposes to have an 'emotion engine' that will learn from the driver by detecting the emotions behind the driver's judgments and then, based on the driver's past decisions, make new choices and recommendations.	2017

The question is, "How to make sure the machines can be regulated not invade the human world?" The answer: These disruptive technologies have already invaded as the four ways Vinge (1993) proposed. Firstly, computers have already become "awake" and advanced to superhuman intelligence. Secondly, large computer networks have "woken up" and have become superhumanly intelligent. Thirdly, computer and human interfaces have become so intimately entangled that superhuman intelligence has occurred. Fourthly, advancements in biological science have resulted in dramatic improvements to human intelligence. That is the reason for

governments and regulators are on the rise to come up with policies and regulations to regulate these disruptive technologies.

#### *4.1.1: Christianity and Technology*

From the beginning, God created man in His own image and told ‘them’ to produce of their own species (Genesis 1:11, KJV). Angels, plants and animals were created lower than man to actually minister to the man, nourish man and man to take care of the plants and animals respectively. Though some animals can sense complex things like earthquakes and others can smell tumors, others can hear high sounds and others see wavelengths. The element of having integration with animals to have a higher dimensional human being is the key issues government sponsored projects are getting on the increase. However, when God ‘called out a people of His own’ named them Israelites and He gave the ten (10) commandments, various decrees and statutes. The commandments could be summed to loving God with all our heart, and with all our soul, and with all our might (mind) (Deuteronomy 6:5, KJV). So, when man and machines are intermingled, man ceases to be “natural man” and becomes a machine with no “soul.” Additionally, when God created man, He breathed through Him and He became a living soul (Genesis 2:7). God gave man a commandment to eat of all the fruits in the Garden of Eden except not to eat of the tree of knowledge of good and evil. For the day he shall eat of it, he shall surely die (Genesis 2:17). Due to man disobedience of God’s commandment he was banished out of the Garden of Eden and death came into their beings. For God so loved the world and His desire to redeem man from eternal condemnation of death (John 3:16), Jesus Christ came to die for man’s soul and save him from eternal death (John 3:36; John 17:3; 1st Timothy 1:16; Revelation 21:3-4). Jesus purged human sins and sat down on the right hand of God (Hebrews 1:3).

It is also important for a Christian to protect his/her mind against the spiritual invasion of the enemy. Roman 12:2 (KJV) that says, “And be not conformed to this world; but ye transformed by the renewing of your mind, that ye may prove what is that good, and acceptable and perfect, will of God. Immortality belongs to God and only Him can give it to man through Jesus Christ who is the way, the truth and the life (John 14:6) and anyone who wants to know God must know Jesus Christ first as the mediator between God and Man (1<sup>st</sup> Timothy 2:5). According to Kass (2002), human nature itself lies on the operating table, ready for alteration, for eugenic and psychic “enhancement, for wholesale redesign. Most scholarships and grants are confidently amassing their powers and quietly honing their skills, while on the street their evangelists (transhumanists) are zealously prophesying a post-human future.” (See current developments at <https://www.digitaltrends.com/cool-tech/coolest-darpa-projects/>).

The language of a Christian to what the Scientists are calling ‘enhanced human or super human’ is actually what is referred to as the “Nephilim.” In Genesis 6 (KJV), and it came to pass, when men began to multiply on the face of the earth, and daughters were born unto them, and angels

from heaven desired these beautiful daughters of man and intermingled with them. Giants (Nephilim) were born on earth and God saw only evil thoughts, corruption and violence existed in these people. Hence God was grieved and He destroyed the whole humanity except for Noah and his family. The same words God used them in Matthew 28 when he was explaining to the disciples the sign to the end of the world - it shall be like the days of Noah. During those days, only Noah was perfect to mean, Noah was the only human with a 'living soul'. The infusion of machines and man; beasts and men; or even men and plants imply a corrupt world that will grieve God's heart and the unfolding apocalyptic end and the Armageddon war. No wonder Daniel 2:43 interpretation of Nebuchadnezzar's dream said that the kingdom of the feet and toes that was part clay and part iron – 'they shall mingle themselves with the seed of men; but they shall not cleave to one another, even as iron is not mixed with clay...God of heaven shall destroy that kingdom. This disruptive GRIN technology according to Horn and Horn (2010, p.151), man may soon uncover through its species barrier-crossing technologies that dates back to ancient times, and that the science of human enhancement and transhumanism is unwittingly playing into the hands of powerful supernaturalism towards a Luciferian endgame – something "it" tried once before, and which 'it' was prophesied to attempt again just before the end time.

#### 4.2: How University Educators to Create Awareness to Reduce the Ethical and Social Dangers Envisages?

According to World Bank (1994, pg. iv: cited in Barrow, Didou-Arpetit and Mallea, 2003), defined higher education as "all post-secondary institutions with degree, diploma, and certificate granting programs...that produce new scientific and technical knowledge through research and advanced training as they serve as conduits for the transfer, adaptation, and dissemination of knowledge". The University Regulators have been at the forefront in spurring universities to get involved in applications of technology, innovation and skills enhancement. Prof. Chacha in the Commission for University Education Conference (2018) was particular to say that, "scholarship in the country is still going forward. There is creativity and innovation in different fields". While there are certainly some universities that do less research than others, Vincent-Lancrin (2004) argued that teaching is enhanced when the professors are also involved in graduate programmes and research work. Through this, more advanced work is being done to relate with the current developments, which makes teaching more relevant and valuable to the students. Therefore, the extent to which universities are engaging in research and development activities has a key role in determining the status and the quality of these universities (Daystar University Strategic Planning 2016-2021).

The Law of Techno-ethics makes two important contributions. First, it addresses the need for accountability among professors who create technology. This addresses the changing nature of GRIN technologies and how it affects society (Borgmann, 1984; Lin, Abney & Jenkins, 2017). Secondly, the need for privacy and confidentiality given the impending human revolution questions the production, access, and control of information will be at the heart of moral

challenges surrounding the use of information technology (Luppicini, n.d). Students and researchers are being encouraged to come up with innovation and originalities. It is also true that senior university lecturers and professors are encouraging students' mentorship and advice on programmes that are geared for partnership and collaborations. Therefore, it is imperative for the University Educators to look at the techno-ethical inquiry in the higher education sector. For example, on simple issues such as unauthorized materials in the campus, copying digital information from one source to another is areas referred to as plagiarism, issues of digital divide that exists between educational institutions in developed and developing countries or just have unequally unfunded universities within the same country to complex issues such as human enhancements of implants and RFID injections (Aubert, 2011). The recent concern for GRIN technology being advanced against the women and people of color photos being taken without their consent is a serious alarm. But the company involved according to Solon and Farivar - NBC (March, 2019) said that the concerned company "used these photos only for academics or for corporate research groups." However, other companies have pushed that further to have used it, to demonstrate the remarkable power of advances in artificial intelligence to make fake videos.

According to Horn and Horn (2010), Dr. Lin in his co-authored book on *Ethic of Human Enhancement: 25 Questions and Answers* raised profound questions saying, "No matter where one is aligned on this issue, it is clear that the human enhancements' debate is deeply passionate and personal one striking at the heart of what it means to be human. Therefore, understanding the role of moral values in information technology is indispensable to the design and use of these technologies. To the conservatism Christians perhaps these implantations for human enhancements (transhumanism) could be related to the culmination of the 'mark of the beast' where no one will be expected to buy or sell without that special number. In September 20, 1973, a feature named *Who is Watching You* was cited in Horn and Horn (2010, p.238) explained that the secular high school journal speculated that all buying and selling in the high school program would be done by the computer. "No currency, no change, all items of consumer goods will be marked with a computer mark and people would receive a biometric number that would be assigned to them and cannot be seen with naked eyes but will be permanent as a finger print". Today this is a reality and a norm.

Warning has gone against these GRIN technologies by professional medics from the University of South Carolina and Editor of Bioengineering Journal where the call was emphasized for solving problems rather than enhancing health people (Monk, 2014). But the professional medic was quick to accept that biohackers could be the drivers for public acceptance of emerging technologies of either physical and sight impaired people. The direction being chosen is the use of tattoos that is already popular in the commercial development and marketing strategy (Kumar, Pattnaik & Pandey, 2017). Recently a professor at Brigham and Women's Hospital (BWH); Harvard medical School, a researcher affiliated at MITS Hoch Institute for Integrated Cancer Research showed the use of 'smart pill' that could offer doctors new ways to diagnose, monitor



and treat diseases. The implantable medical devices are currently equipped with batteries. They are now exploring ways of wirelessly powering the implants device (Warty, Tofighi, Kawoos, & Rosen, 2008; Ma, Luo, Steiger, 2019).

This paper encourages the university educators to borrow from the Management by Objective (MBO) strategy that injects an element of dialogue into the process of passing plans and objectives from one organizational level to another. The superior (likened to university educator) brings specific goals and measures for the subordinate (likened to the student) to a meeting with this subordinate, who also brings specific objectives and measures that he or she sees as appropriate or contributing to better accomplishment of the job. Together they develop a group of specific goals, measures of achievement, and time frames in which the subordinate commits himself or herself to the accomplishment of those goals (Thompson, 1998).

The implication of GRIN technologies could mean an end of humans as created originally by God if human enhancement/ transhumanism is adopted and adapted. It seems that GRIN technologies have a strong dissonance created in the competing values of security and openness that is worked right into the design of these technologies. One such value is hacking which is thought as important to political-government hacking to gaining access to hidden knowledge of information and at the same time dangerous in ethical lacking values (Lessig, 1999; Horn & Horn, 2010; Sullins, 2018). Another conflicting value is in intellectual property versus pornography and censorship information. However, this paper assumes justification in granting access to some store of information, and then there is a duty to ensure that that information is truthful, accurate, and useful. It is the University Educators' responsibility to create the urgent awareness in the public debate of one human enhancement technology, transhumanists desires, and make their concerns known. Students of history have looked with interest at the scramble for Africa, which was marked by death and torture under the European imperialist that eventually resulted in unprecedented cultural and monetary success. While citizens in Africa were rejoicing of their freedom, thousands of them had also died in guerilla wars. Hence, the University Educators need to create a conscious awareness to the unfolding ways that would help students make their decisions based on the whole truth of their surrounding environment concerning GRIN technologies.

## 5. CONCLUSIONS AND RECOMMENDATIONS

The government and academicians' interest on GRIN technologies, is an existing idea of post-humanity that is hollow because advanced technologies incorporated into the human body will merely provide a reimagining of what it means to be human (Strassberg, 2015). University educationists who do not integrate faith and learning could end up in a cultural divide of mankind that is beginning to "play God" and another insisting "if we can, we must" so where should a Christian stand?" The answer is to understand the basics that God alone is the Creator of life. Unless students understand the ways of God and His purpose concerning human beings

role in Creation, their God-given dominion, and responsibility on earth could be a conflict between science and religion. The students and Educators must understand that GRIN technologies are poised to redefine what it means to be human, and to remove anyone or enmity that stands its way. The University Educators must prepare well in this area and must be willing to speak the unaltered truth at all times.

*Recommendations:* To the University Educators, it is imperative as they spur the guidelines for public policy towards morphological human enhancement to take a personal responsibility of explaining to the students, staff, and any other University stakeholders aware of the emerging GRIN technology. This is crucial to make the 4IR public lest no one is forced to live with the decisions made by others in the name of implementing new digital technologies.

*Caveat:* This paper leaned more on GRIN Technologies on the human enhancement /transhumanism philosophy that is contrary to the Judeo-Christian Religion. However, if the creators of the GRIN technologies provide the technology while the users of the GRIN technology use it according to its intended use. Then GRIN technology can be fully adopted and adapted.

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