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## THE RELEVANCE OF THEOLOGY IN THE 4<sup>th</sup> INDUSTRIAL REVOLUTION

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### ABSTRACT

In the advent of the 4<sup>th</sup> Industrial Revolution, there is what we call a more advance “digital revolution” compared to the 3<sup>rd</sup> Industrial Revolution. This phenomenon, just like the previous technologies but being more advance, brought lots of big changes in the way people live. Many human works will become irrelevant because of the developing artificial intelligence being created by humans in this digital revolution. The value of being a human is now more seriously endangered than ever. Machines may totally dominate humanity in the near future. In this context, “what is the relevance of Theology?” This paper argues that Christian Theology is always relevant owing to its nature. The problem is how to uncover the relevance of Christian Theology to the present challenges. This paper uncovers its relevance to the present challenges of the 4<sup>th</sup> Industrial Revolution which are primarily the “fusion of the physical, biological, and digital worlds” and the “emergence of the developing Artificial Intelligence.” The method that this paper used is “existential phenomenology.” The main relevance of Theology in the 4<sup>th</sup> Industrial Revolution that this paper emphasized are maintaining one’s Christian freedom and Christian humanity.

**Keywords:** Theology; 4<sup>th</sup> industrial revolution; artificial intelligence; spiritual intelligence; christian freedom; christian humanity.

### 1. INTRODUCTION

One of the big challenges of the subject “Theology” and the teaching of “Theology” in schools, specifically Catholic schools, is how to make it effective to the lives of students. It can be argued that in the past, the relevance of Theology was not a big issue. But with the changes that continuously happen in the world and one of them is the fast change that happens through technological progress, the big challenges that “Theology” faces are not only how to make it effective to students but more importantly, is its status, that is, if it is still important or if it is still

relevant in the present time. One of the biggest challenges to the importance or the relevance of Theology in the present time is the 4<sup>th</sup> Industrial Revolution and the possible futures because of this. Relatively, there are already many studies about Theology in the context of the 4<sup>th</sup> Industrial Revolution, but this paper focuses more on the relevance of Theology in the 4<sup>th</sup> Industrial Revolution. Before discussing the relevance of Theology in the 4<sup>th</sup> Industrial Revolution, it is very important to discuss first the nature of Theology which can be captured by the dream of Pope John XXIII about the Church, specifically the Catholic Christian Church.

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Pope John XXIII, in the advent of Vatican II (1962-1965), dreamt of a Church always living, always young, feeling the rhythm of the times and faithful to her origin in Jesus Christ. After Vatican II, the Church struggled to realize that dream. With the whole effort of the Catholic Church, one can say that there is a relative success in realizing that dream but the struggle is constantly there as new phenomena are always faced. An articulation of the nature of Theology can be done from that dream of Pope John XXIII. Broadly speaking, theology makes sense of life with God as the center, consciously or unconsciously. But human beings are religious beings. In making sense of life with God as the center although one may not call “God” as “God,” but rather as a higher being that one needs to have a relationship with, one forms codes of conduct and rituals to relate well with one another in the community with God. For most people, this community is what one may call “religion”. One always needs to situate it to a particular context to understand theology. In this paper, theology means “Christian theology,” particularly “Catholic theology.” In the dream of Pope John XXIII in the advent of Vatican II, Catholic theology is more on being faithful to the foundation of the Catholic religion which is Jesus Christ. The danger in this understanding of Catholic theology is that it may enclose itself in a worldview that does not speak to the contemporary person. In this understanding of Catholic theology, you may have a right and very good articulation of the message and person of Jesus Christ, but the contemporary person may not be able to relate. Because of this, a new articulation of the nature of “Catholic theology” is needed.

Theology is contrasted with Religious education as if they should be two separate disciplines. As stated by Maningas:

“The tension is commonly reflected in a university set-up. That is, on the one hand, some theologians consider religious education with insufficient cognitive reflection, which is a disruption of sound theologizing. On the other hand, religious education accuses theology of enclosing itself in the categories of a worldview that no longer speaks with relevance to modern man.” [1]

In this tension, Religious education, which is more focused on the learning process is at times seen as an inferior discipline compared to Theology which is more focused on the content. This kind of thinking is not only not helpful but wrong. Theology and

Religious education should be seen as one. Religious education is a form of theology. Theology should integrate Religious education in its nature. The nature of theology is the full dream of Pope John XXIII in the advent of Vatican II. Theology is not just a Catholic church being faithful to Jesus Christ but also a Catholic church which is always living, always young, and always feels the rhythm of the times. In this understanding of theology, the right question is not “Is theology still relevant in the challenges of the present times? Rather, the right question is “what is the relevance of theology in the challenges of the present times?”

One of the main challenges of the present times, if not the main challenge, and for the future years and even generations to come is the 4<sup>th</sup> Industrial Revolution. In this phenomenon, there is a more advanced digital revolution compared to the 3<sup>rd</sup> industrial revolution, which is continuously and rapidly developing that will dramatically impact the way one lives. Two of the main challenges that the 4<sup>th</sup> Industrial revolution brings to Theology are the “fusion of biological, physical, and digital worlds” and “the emergence of a developing Artificial Intelligence”. What is the relevance of theology in these challenges of the 4<sup>th</sup> Industrial Revolution? To answer this question, a discussion of the phenomenon of the 4<sup>th</sup> Industrial Revolution and its challenges to Theology will be articulated. Then this paper will advance the mission of Theology, which is its relevance to the 4<sup>th</sup> Industrial Revolution.

## 2. REVIEW OF LITERATURE

The nature of Theology can also be captured by the classic definition of Theology by St. Anselm of Canterbury which is “*fides quaerens intellectum*” meaning “faith seeking understanding.” Thomas Rausch in the book “Systematic Theology: A Roman Catholic Approach,” stated “What is important about Anselm’s definition is that it underlines that theology in the Christian tradition is always a critical reflection on the faith of the community, an effort to bring the faith-experience of God and God’s grace to expression, clarity, and deeper understanding” [2]. This implies that theology is not just having faith in God but equally important is using one’s reason, that is, by having a critical reflection on the essence of one’s faith and a critical reflection on what is happening in one’s community in the present time in the light of one’s faith.

Another important part of the nature of Theology aside from the critical reflection on one’s faith, is to evangelize in the present context. In this context, Stephen Cuyos in the book “Social Media and the

New Evangelization,” stated that Pope John Paul II once said in 1983 “the commemoration of the half millennium of evangelization will gain its full energy if it is a commitment, not to re-evangelize but to a New Evangelization, new in its ardor, methods and expression” [3]. Cuyos continued, “According to the late Pope, what makes New Evangelization new is not its content – because we have and will always preach the same Gospel of Jesus – but how it is to be done. For him, how we evangelize is as important as what we evangelize” [3]. Another way of putting this is what Leonard Sweet in the book “Viral: How Social Networking is Poised to Ignite Revival,” stated “One of the reasons so many churches function in digital and discipleship dead zones is that we have failed to make the distinction our ancestors did between the *res significata* (thing signified) and the way of signifying (*modus significandi*). The deposit of faith stays the same, but the deposition changes. The way the truth is presented can change (and needs to change) without the substance of truth varying” [4].

One of the challenges of evangelization in the 21<sup>st</sup> century context is the digital revolution. In relation to this, Teodoro Bacani in the book “Faith and the New Evangelization,” stated “A truly modern development which can favor the work of evangelization is the digital world, the world of computers, the internet, facebook, twitter, blogs and cell phones. The digital world has changed the world in a way comparable to the invention of the wheel or of the airplane” [5]. The digital revolution in the 4<sup>th</sup> Industrial Revolution is definitely one of the biggest challenges, if not the biggest challenge, of evangelization in the present time and most probably in the coming times. One of the questions that one may ask is “Is this phenomenon good or bad?” To answer this, Martine Rothblatt in the book “Virtually Human: The Promise and the Peril of Digital Immortality,” quoted Antoine De Saint-Exupery, “The machine does not isolate man from the great problems of nature but plunges him more deeply into them” [6]. This quote implies that technology like the digital revolution in the 4<sup>th</sup> Industrial Revolution is neither good nor bad but it can be used in a good or bad way. Also, although it is neither good nor bad, it has its own biases and based on that quote, the biases of technology are leaning more towards the bad.

In the book “Towards a Political Economy of Information: Studies on the Information Economy,” the author Roberto Verzola who had lots of experience on technology and is an expert on technology stated “From an advocate, I gradually turned into a skeptic and then a critic of the technology. I realized that I had been playing the same role as the missionaries of old. Despite their

good intentions, they in fact laid the groundwork for changing mindsets, prying open local markets, and paving the way for foreign investments.” [7] Although technology like the digital revolution in the 4<sup>th</sup> Industrial Revolution right now definitely has lots of good effects but it seems that it has more bad effects. For example, in relation to the issue of “Is information and communication technology a creator or destroyer of jobs?”, although powerful opposing arguments based on experience can be presented on that issue, Verzola stated “It is true that machines and computers may require new skills, and therefore create new jobs (computer operator, technician, Web page designer, Webmaster, Java programmer, etc). However, this job creation is an incidental part, while job elimination is the intentional part of the logic of computerization and automation” [7]. Will the vocation and at the same time the job of Theology in Catholic schools also be eliminated by the present or maybe the future Industrial Revolution? Versola also argued that the internet is a very poor educational environment. Some reasons that he advanced are “There are hundreds of thousands of educational and learning sites, that’s true. But there are probably even more sites with all manner of attractions, distractions and temptations for students – all within a few keypresses or mouse clicks,” “engaging the senses totally may also encourage passive reception of the data feed and discourage imaginative thinking and highly symbolic thought, raising questions about the computer’s educational value,” and “worse, it also exerts a powerful grip on the students’ psyche – in the same way that addictive drugs can” [7]. In this context, a mission of Theology is to lead people, specifically the students, to the right choice to live a full life in the 4<sup>th</sup> Industrial Revolution. As stated in Deuteronomy 30:19, “I have set before you life and death, the blessing and the curse. Choose life, then, that you and your descendants may live” [8].

### **3. METHODOLOGY**

This is qualitative research. This paper used the phenomenological method which is a type of research based on phenomenological philosophy, which is used to answer questions of meaning that has been changed over time and the object of study is the life-world (*Lebenswelt*) or lived experience, not contrived situations [9]. Specifically, the phenomenological method used here is existential phenomenology which is the study or analysis of one’s conscious experiences emphasizing their subjective (or personal) dimensions [10].

After a comprehensive analysis of the available literature and the experience of teaching Theology and the digital revolution in the 4<sup>th</sup> Industrial

Revolution, this paper discusses the phenomenon of the 4<sup>th</sup> Industrial Revolution and the challenges that it brings to Theology. After that, this paper discusses the mission of Theology in the 4<sup>th</sup> Industrial Revolution.

## **4. FINDINGS AND DISCUSSION**

### **4.1 The 4<sup>th</sup> Industrial Revolution and its Challenges to Theology**

There is already a digital revolution in the 3<sup>rd</sup> Industrial revolution which started in 1969. The digital revolution in the 3<sup>rd</sup> industrial revolution has been improved and is continuously being improved and the future of this is exciting for some but scary for others. The 4<sup>th</sup> Industrial revolution, which is rooted in digitalization, is unlike the previous industrial revolutions which are rooted in energy. "This digitalization enables us to build a new virtual world from which we can steer the physical world. The industry of today and tomorrow aim to connect all production means to enable their interaction in real-time" [11]. Like the previous technologies, the advanced technologies of the 4<sup>th</sup> Industrial revolution can be used to make human life much easier but at the same time, there are dangers. The dangers now compared to the previous technologies can be very scary. If the body and the mind were conquered by machines during the last technologies, even the soul can be destroyed this time. It is because devices may totally dominate humanity in the 4<sup>th</sup> industrial revolution symbolically and literally if human values are defeated in the coming machine world. This is one of the main challenges of the 4<sup>th</sup> Industrial revolution to theology.

One of the key concepts in the 4<sup>th</sup> Industrial revolution is the fusion of physical, biological, and digital domains. "The fusion of physical, digital and biological domains with various new kinds of technologies are now able to interact in an intelligent manner, and thereby generate new forms of intelligence" [12]. "New kinds of interactive experience will be possible as the immersive world of social media and new forms of virtual media and augmented devices increasingly blend the physical world and the overlay of virtual and augmented experiences as seen in emerging VR and AR technologies" [13]. Lots of big changes already happened and will continuously happen because of this phenomenon. It changes not only the way one lives but also one's deep-seated values as human beings. As articulated in the following words:

"These will not only change how physical, biological and enabling digital information processing can be connected, it will change the

nature of living in those domains as well as forms of non-human agents, such as robots that can move and manipulated manufacturing, services and transportation processes." [13]

"This time it involves changes to the nature of control and feedback that we are now able to exert on our planet, down to the local effects of crowd and material manipulation right down to the micro and nano scales... Complex systems relationships are forming when these physical, biological and digital domains entangle and converge." [13]

Reality is questioned in this fusion of physical, biological, and digital worlds. Is reality now still human, virtual, or both human and virtual? If virtual reality is part of human's conception of reality as a result of this fusion, some or all of the deep-seated human values may be challenged, like Christian freedom, Christian humility, and Christian service. It can also be argued that before the fusion of physical, biological, and digital worlds of the 4<sup>th</sup> Industrial revolution, a fusion already happened in the sense of many young people, especially Generation Z, having the sentiment of not being able to live life without technology, that is, smartphones, wifi, and virtual games. This time the fusion is not only symbolical because it can be very literal.

Another challenge of the 4<sup>th</sup> Industrial revolution is the emergence of Artificial Intelligence. Intelligence in the context of artificial intelligence can be defined as "doing the right things at the right time." So artificial intelligence is "an artifact we have constructed getting to do the right things at the right time" [14]. So artificial intelligence is a programmed machine with "in a sense human-like intelligence" in doing the rights things at the right time but without human feelings and with superhuman powers depending on the kind of program. There are smartphones, smart TV and maybe in the near future, there will be smart cars, smart environment, and maybe smart machine-like humans. Although this has made human life easier but many human works are in danger of being irrelevant. This already happened in the previous industrial revolutions but with great danger now that it may just be a matter of time when almost all, if not really all, human labor will be replaced by machine-labor only. This is another of the challenges of the 4<sup>th</sup> industrial revolution to the work of theology.

A complete machine-labor is a possibility if complete artificial intelligence will be possible. A complete artificial intelligence is a superintelligent being which has human and machine properties. It will be debatable if this new being can be called a human

being or still a machine or both a human being and a machine. Although this may be a fantasy for others now like what one can only see in fiction movies but reputable philosophers like David Chalmers are thinking that it is only a matter of time when this will happen in reality. A time magazine author even claimed that it will be around in the year 2045 when this will happen or even earlier. The development of complete AI will revolutionize all aspects of life on Earth - it will be second intelligent life form on the planet, simultaneous with humans [15]. A danger imagined by some authors like Nick Bostrom is that "if machine brains surpass human brains in general intelligence, then this new superintelligence could replace humans as the dominant lifeform on Earth. Sufficiently intelligent machines could improve their own capabilities faster than human computer scientists, and the outcome could be an existential catastrophe for humans" [14]. This possibility assumes that a complete AI with superintelligence will have freedom like human beings and this can be the end of pure human civilization and the start of a hybrid of human and machine beings. At present, we "have the ability to change our genes, to embed sensors into our body to connect and integrate into the social fabric of society. It seems to challenge what it means to be human in the future, what is individuality, and what kind of society do we want" [13]. These are challenges that the 4<sup>th</sup> industrial revolution brings to theology now and in the near future.

#### **4.2 The Mission of Theology in the 4<sup>th</sup> Industrial Revolution**

As stated in the introduction, owing to its nature, the discipline of theology won't be irrelevant. The problem is not the irrelevance of God at any time but the irrelevant thinking of human beings about God. One of the leading media that we should see the relevance of theology today is through Catholic educational institutions. One of the main purposes of Catholic educational institutions is to "maintain humanity while adapting Christian values in a materialistic world, and the products of Catholic schools should not only be better professionals and money-earners, but also better persons who live not for themselves but like Christ, for others" [1]. Today in the 4<sup>th</sup> industrial revolution, more than ever, the challenge of maintaining our Christian humanity has never been more accurate and more urgent. The three primary sources or ways on how God reveals himself in Christian faith are the Sacred Scripture, Sacred Tradition, and human experience. These three sources come from the same origin (God) and unite in one goal: the proclamation of revelation in Christ [16]. What do these sources of the Christian faith say about

the challenges that the 4<sup>th</sup> industrial revolution brings to theology?

One of the main challenges of fusing the physical, biological, and digital worlds in the 4<sup>th</sup> industrial revolution is Christian freedom. In the emerging highly programmed fusion of the physical, biological, and digital world, the choice is either program or be programmed. Unlike the previous technologies, computers and networks of this new world are "more than mere tools because they are like living things themselves" [17]. They have a certain form of intelligence depending on the kind of program created by humans, and they shape the world and how it works. Once the intelligence that these programs possess evolves in a sophisticated kind of intelligence like humans and even greater in more aspects, "it's the digital technologies themselves that will be shaping our world, both with and without our explicit cooperation" [17]. Freedom in this new world means external freedom or the freedom to do all that one can possibly do which is not the true freedom in the Christian faith. Also, unlike the previous technologies which conquered human bodies and mind, this new world also tries to conquer human souls. This digital age "not only copies our intellectual processes—our repeatable programs—but they also discourage our more complex processes—our higher-order cognition, contemplation, innovation, and meaning making that should be the reward of "outsourcing" our arithmetic to silicon chips in the first place" [17]. In this context, how can human souls be protected by reclaiming one's Christian freedom?

In Matthew 14:1-12, there is the difference between the external freedom of the digital world and the true Christian freedom and how to reclaim it. In this biblical passage, King Herod had all the freedom in the world to do anything he liked even against the law, like being with Herodias, the wife of his brother Philip. When John the Baptist told him that it is unlawful for him to have the wife of his brother Philip, he wanted to kill him, but he feared the people since they see him as a prophet. But he arrested him and put him in prison, limiting what he can do in his life. One day on the birthday of King Herod, he was so pleased with the dance of Herodias' daughter that he told her to give anything she likes. Herodias' daughter asked for the head of John the Baptist, and so, having the freedom for being a King, he had John beheaded. In this story, who is the one who is truly free, the one who was imprisoned and died fighting for justice or the king who can do anything he likes and is just concerned with retaining or increasing his power? Freedom in the digital age for many people especially, for Generation Z, is the freedom that King Herod enjoys in the story. It is about being able to do

anything one likes to increase one's power in the digital world, that is, in the social media, in the different technologies, and in the online games that one plays. Using one's freedom in this way, in the Christian perspective, is being a slave in sin and as a result not being free at all. True freedom in the Christian perspective is inner freedom which is "the freedom to be all that we can possibly be" [18]. To be all that one can possibly be is to respond to God's call in one's life to be the best that one can be. Everyone is called by God for a special mission that only he can do and no one else can since everyone is unique. It is one's freedom to listen and respond to God's call in one's life or not. If one does not listen and respond to God's call in one's life, then one is like King Herod who didn't listen to John the Baptist when he said that it is unlawful to be with the wife of his brother. If one listens and responds to God's call in one's life, then one is like John the Baptist who even if one may be imprisoned and killed because of fighting for truth and justice, then one is truly free in the Christian perspective. This is the kind of freedom that one needs in the digital world. Ultimately, the technologies in the digital world that the 4<sup>th</sup> industrial revolution brings are just tools although they are in a sense thinking tools. Even if one's inner freedom is very much in danger in this new world, one always has a degree of external freedom to either use them for the glory of God by living for truth and justice like John the Baptist or let them dominate one's life by just being concerned of oneself in increasing one's power in the digital world like King Herod. "Freedom—even in a digital age—means freedom to choose how and with whom you do your reflection, and not everything needs to be posted for the entire world with 'comments on' and 'copyright off'" [17]. Freedom in the digital age is also being aware of the biases or tendencies of the technologies that they offer and being able to use this awareness for the glory of God. When one is able to do this, that is, use one's external freedom in the digital world to attain inner freedom, then one is able to live a meaningful life and nourish one's soul.

Another phenomenon that the 4<sup>th</sup> industrial revolution brings which poses a significant challenge to theology is the emergence of Artificial Intelligence. One concern here is that many human works will be irrelevant because of artificial intelligence's emergence and dominance. Some human works are already gone because of thinking machines brought by artificial intelligence, and it may just be a matter of time when complete machine-labor will be possible replacing most, if not really all, human labor. So will the work of theology be replaced also by machine labor? As long as a human is being alive, the work of theology cannot be replaced by machines. It is

because what is at work in theology is not a human being but God. Divine work working in human beings won't be gone no matter what the situation is even in the most advance stage of the 4<sup>th</sup> industrial revolution.

The future of artificial intelligence brings a serious danger in maintaining our Christian humanity. A complete AI is a serious possibility in the near future that will revolutionize human life in all aspects, especially the importance and the existence of human beings. It is because a complete AI is an intelligent machine that has human properties but with super-human powers depending on the program created on it. If this intelligent being can have freedom, it may pose a great threat to the existence and the importance of human beings. This possible phenomenon challenges one to rethink how to be truly human. Can these possible beings in the future be called "humans"? Will human beings still be the most important creature in the future? If they will be a reality in the near future, can human beings co-exist peacefully with them? Will their emergence be the start of a new civilization without human beings? Although this phenomenon is just a possibility, these questions are important speculations. While this phenomenon is still a possibility and not a reality, it is important now to rethink the importance of our Christian humanity and why it is worth defending against its possible defeat and extinction in the advance stage of the 4<sup>th</sup> industrial revolution where complete AI's are already realities.

What makes man truly human in the Christian perspective? In Tagalog there is a saying, "Madaling maging tao pero mahirap magpakatao" (It is easy to be a human being but it is difficult to be truly human.). In the Aristotelean framework, to be a human being is to use one's reason but to be truly human is to use one's reason excellently or well. In using this framework, one can say that AI's are like human beings in the sense that they have reason but they will never be truly human in the sense that human beings use their common sense to reason excellently in their day to day life. To be truly human in the Christian perspective is to use one's reason excellently and this can be called spiritual intelligence. Spiritual intelligence can be defined as "a form of intelligence that works like an engine strategically employing every aspect of wisdom, knowledge, inspiration and application, resulting in the power to create hit after hit" [19]. When one uses one's reason well, that is use one's spiritual intelligence as human beings, then one can experience true happiness or joy in one's human life. This is what God wants for one's life. As Jesus said in John 10:10, "I came so that they might have life and have it more abundantly." Having an abundant life comes from

using one's reason well, which is one's spiritual intelligence, that gives one deep meaning in one's life that is being lost in a complex world especially in an increasingly more complex world that the 4<sup>th</sup> industrial revolution brings.

## **5. CONCLUSION**

This paper argued that Theology won't be irrelevant because it is in its nature the dream of Pope John XXIII at the start of Vatican II, that is, to be always living, always young, feels the rhythm of the times and faithful to her origin in Jesus Christ. The problem is not the irrelevant work of God in contemporary human lives but the irrelevant thinking of human beings about God in contemporary times. This paper articulated the relevance of theology in the main challenges that the 4<sup>th</sup> industrial revolution brings in the contemporary times which are the fusion of physical, biological, and digital worlds, and the emergence of Artificial Intelligence.

The relevance of theology in the fusion of physical, biological, and digital worlds in the 4<sup>th</sup> industrial revolution is maintaining one's Christian freedom which is one's true freedom as a human being. It is inner freedom which is the freedom to be all that one can possibly be. This happens when one uses one's external freedom in the digital world to live a meaningful life and nourish one's soul.

The relevance of theology in the emergence of Artificial Intelligence is maintaining one's Christian humanity which is being endangered especially in the advance stage of AI in the 4<sup>th</sup> industrial revolution where a complete AI is a possibility. To be truly human in the Christian perspective is to use one's reason well which is one's spiritual intelligence that makes one's life abundant, meaningful, and joyful which are being endangered in the emergence of complete AI's.

## **6. RECOMMENDATIONS/SUGGESTIONS FOR POLICY MAKERS**

This study recommends a new subject which is "Philosophy of Technology" to be included in the school curriculum, especially for Catholic Schools. This can be included in the elementary education of the school. The purpose of this is to make children aware of the nature of technology in their life so that they will be the one to use technology and not let technology use them, especially in the 4<sup>th</sup> Industrial Revolution where technology keeps on developing. The ultimate goal of this recommendation is to protect the Christian freedom of children while they are still young.

This study suggests to policy makers in a particular school, specifically a Catholic school, to create a good learning environment in their schools either in a face-to-face learning set-up or in a distance learning set-up. The environment plays a very important factor for real learning to happen in a school. The way to do this is to create a good balance between the laws that the school will implement and the freedom that the students will have either in the face-to-face set-up or in the distance learning set-up. And since the situation in every school is different, the policy makers should have the wisdom in creating that balance to protect the Christian freedom of students and for real learning to happen.

Lastly, this study recommends to make religion as the core of the curriculum in a Catholic school in the sense of integrating the Christian values of religion subject in all subjects being taught in school. The purpose of this recommendation is to protect the Christian humanity of students in an increasingly materialistic world, especially in the emergence of Artificial Intelligence in the 4<sup>th</sup> Industrial Revolution.

## **7. LIMITATIONS AND SCOPE FOR FURTHER RESEARCH**

This study is focused and limited on the general ideas on how "Theology" is relevant in the challenges that the 4<sup>th</sup> Industrial Revolution brings. The concrete applications of those general ideas in a particular context can be done in further research.

This study did not investigate the possibility of what can be called "the spiritual computer man." Based on the trends that are happening today in the 4<sup>th</sup> Industrial Revolution and the meaning of "spiritual intelligence," is it possible for the "possible complete AI" in the advance stage of the 4<sup>th</sup> Industrial Revolution to be also spiritual, and as a consequence, can also be called a human being in a different sense? This can be very interesting further research.

## **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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