

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

UKRAINIAN CATHOLIC UNIVERSITY
THEOLOGY AND PHILOSOPHY FACULTY

Department of Theology

Master's thesis

**THE CATHOLIC CHURCH'S RESPONSE TO THE
TECHNOCRATIC PARADIGM OF THE 20th-21st CENTURIES**

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Lviv 2022

Дякун А.І. Відповідь Католицької церкви на технократичну парадигму ХХ-ХХІ ст.: Магістерська робота: (041 «Богослов'я») / А.І. Дякун / Український католицький університет. Кафедра богослов'я; Наук. кер. Доктор богослов'я о. Пантелеймон Трофімов, ЧСВВ – Львів: УКУ, 2022. – 93 с.

Анотація. Фокусом роботи є питання сутності технології – інструменту, створеного людиною та покликаною служити їй. У дослідженні представлено соціокультурні зміни та виклики ХХ століття, включаючи Індустріалізацію та піднесення сцієнтизму. Проаналізовано реакцію Католицької Церкви на глобалізацію технократичної парадигми, що виникла в ХХ-ХХІ століттях. Зроблений синтез офіційної позиції Святого Престолу щодо феномену технократичної цивілізації.

Ключові слова: технократична парадигма, технократична цивілізація, технологія, сутність технології, технологічний розвиток, технологічна культура, технократія, соціальне вчення Католицької Церкви, соціальна доктрина Католицької Церкви, постмодернізм, прогрес, наука, науковий прогрес, науковий світогляд, сцієнтизм, антропоцентризм, «культура відходів».

Abstract: The paper focuses on the essence of technology and its purpose to be an instrument created by humans and meant to serve humankind. Socio-cultural changes and challenges of the 20th century, including Industrialization and the rise of scientism, are presented. The Catholic Church's response to the globalization of the technocratic paradigm that emerged in the 20th-21st centuries is analyzed. The official position of the Holy See on the technocratic civilization phenomenon is synthesized.

Keywords: technocratic paradigm, technocratic civilization, technology, the essence of technology, technological development, technological culture, technocracy, Catholic social teaching, the Social Doctrine of the Church, postmodernism, progress, science, scientific progress, scientific outlook, scientism, anthropocentrism, throwaway culture.

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LIST OF ABBREVIATIONS

BC – before Christ

CST – Catholic social teaching

e.g. – *exempli gratia* (for example)

etc. – *et cetera* (and so forth)

fr. – father

i.e. – *id est* (that is)

SJ – Society of Jesus (Jesuits)

St. – saint

UDHR – The Universal Declaration of Human Rights

Vatican I – The First Ecumenical Council of the Vatican

Vatican II – The Second Ecumenical Council of the Vatican

INTRODUCTION

What is the essence of technology? What is the purpose of it in the postmodern world we live in? An instrument that was meant to serve humankind suddenly occurred to be a weapon against its creator. The rise of science and technology created a globally connected world, changing economic, political, and cultural life for billions of people. Due to technological progress, we can travel, connect through social media, have less physical work, better health care systems, and provide mass production of goods. On the other hand, technological culture development caused a lot of ethical challenges and dilemmas, the main of which is the formation of a new thinking paradigm – a technocratic¹ one. Its danger lies in the instrumental view on human beings, recognizing the value of human life solely in terms of one's productivity and ability to respond to the requests of the industrialized and technologized society we all live in, rather than focusing on human dignity and our true calling to be the image of God.

The rise of science began approximately 600 BC when Greek philosophers were trying to understand the physical world and its processes by reasoning. Later Plato introduced new terms that became fundamental for the incipience of science – **ἐπιστήμη** (episteme, Greek term meaning *science* or *knowledge*) and **τέχνη** (technē, meaning *craft* or *skill*). Both intellectual virtues were later strongly distinguished by Aristotle, as also were terms **ποίησις** (poiēsis, meaning *making*) and **πρᾶξις** (praxis, meaning *doing*)², forming the basics of scientific reasoning. Aristotle's «Metaphysics» and «Physics» shaped Western philosophical thought, defining the criteria of sciences and culminating in the formation of natural philosophy³.

In the 15th century Nicolaus Copernicus, one of the most famous Renaissance scientists, introduced the idea of a heliocentric universe, which completely transformed the way people used science to understand the world. Some scholars recognize his work

¹ *Technocratic*, relating to or characterized by the government or control of society or industry by an elite of technical experts (Dictionary // lexico.com (10.08.2021)).

² Cf. PARRY R. *Episteme and Techne* [PDF] // ZALTA E. N. (ed.). *The Stanford Encyclopedia of Philosophy*. Stanford 2020, 2-3.

³ Cf. SUNTOLA T. *The Short History of Science – or the long path to the union of metaphysics and empiricism*. Helsinki 2018, 17.

as a starting point for the Scientific Revolution⁴. In 1616, the Catholic Church declared Copernicanism and the idea of a sun-centered universe heretical as it contradicted the Holy Book. Half of a century before that, at the council of Trent at the peak of Protestant Reformation, the Catholic Church forbade any private interpretation of the Bible, declaring that only the Church herself can interpret the Holy Book. This contributed to the controversy around Copernicanism and the Galileo Affair. Galileo (Galilei) was one of the most prominent figures in the Scientific Revolution. Considered by many as a father of the scientific method⁵, he had the tragic history of relationships with the Catholic Church – suspected of heresy, the astronomer was forced by the Inquisition of the Roman Catholic Church to recant his theory⁶. Thus, it took 359 years for the reconciliation – in 1992, Pope John Paul II officially declared that Galileo was right and apologized for the accusations of heresy. For centuries the Galileo case used to be a symbol of the conflict between science and faith – in the 20th century the disagreement was finally resolved.

Galileo's contemporaries, Francis Bacon, the founder of empiricism⁷, and rationalist⁸ René Descartes, famous for his statement «Cogito, ergo sum» (Latin phrase meaning *I think, therefore I am*), were insisting on developing the proper methods in the sciences to discover new truths, making science and reason be celebrated⁹ in the Enlightenment¹⁰. A century later, Isaak Newton introduced the three laws of motion and discovered the law of universal gravitation, giving rise to a new paradigm – a scientific one¹¹. In the 19th century, the term *science* was coined – philosophy and

⁴ *Scientific Revolution* took place from the sixteenth century through the seventeenth century and saw the formation of conceptual, methodological, and institutional approaches to the natural world that are recognizably like those of modern science. It should not be seen as a revolution in science but a revolution in thought and practice that brought about modern science (*Encyclopedia // encyclopedia.com* (10.10.2021).).

⁵ *Scientific method*, principles, and procedures for the systematic pursuit of knowledge involving the recognition and formulation of a problem, the collection of data through observation and experiment, and the formulation and testing of hypotheses (*Dictionary // merriam-webster.com* (10.09.2021).).

⁶ Cf. RUSSELL B. *The scientific outlook*. London 1919, 23-28.

⁷ *Empiricism*, the belief that people should rely on practical experience and experiments, rather than on theories, as a basis for knowledge (*Dictionary // collinsdictionary.com* (16.10.2021).).

⁸ *Rationalism*, the belief or principle that actions and opinions should be based on reason rather than on emotion or religion (*Dictionary // dictionary.cambridge.org* (16.10.2021).).

⁹ Cf. *The Short History of Science – or the long path to the union of metaphysics and empiricism*, 37-38.

¹⁰ *Enlightenment*, an European intellectual movement of the 17th and 18th centuries in which ideas concerning God, reason, nature, and humanity were synthesized into a worldview that gained wide assent in the West and that instigated revolutionary developments in art, philosophy, and politics (*Encyclopedia // britannica.com* (10.10.2021).).

¹¹ Cf. *The scientific outlook*, 36.

science were finally separated¹². Afterwards, Albert Einstein changed the way one thinks about the nature of science and the world forever when he developed the general theory of relativity, thus contributing to the establishment of modern physics.

Scientific discoveries, technological advances, and, most importantly, practical applications of steam engines, invented at the beginning of the 18th century, at the turn of the 19th century, led to the Industrial Revolution. Science and industry were developing so fast it was hard for the society to keep up – the transition to industrial society and modernity¹³ began.

In the 20th-21st centuries, with the rise of scientism¹⁴ and consumerism¹⁵, the meaning and purpose of human life have been distorted and changed. Christian values, on which the Western civilization was built¹⁶, were replaced by the hedonism¹⁷ and relativism¹⁸ philosophy; the emergence of netocracy¹⁹ caused the global spread of fake news and illegal misuse of personal data of millions of people for the sake of

¹² The history of philosophy is intertwined with the history of the natural sciences. Long before the 19th century, when the term *science* began to be used with its modern meaning, those who are now counted among the major figures in the history of Western philosophy were often equally famous for their contributions to *natural philosophy*, the bundle of inquiries now designated as *sciences* (*Encyclopedia // britannica.com* (10.10.2021)).

¹³ *Modernity*, the self-definition of a generation about its own technological innovation, governance, and socioeconomics. Modernity was associated with individual subjectivity, scientific explanation and rationalization, a decline in emphasis on religious worldviews, the emergence of bureaucracy, rapid urbanization, the rise of nation-states, and accelerated financial exchange and communication. There is little consensus as to when modernity began. In general, modernity was exemplified by the period subsequent to the onset of modern warfare, typified by two world wars and succeeded by postmodernism (*Encyclopedia // britannica.com* (10.09.2021)).

¹⁴ *Scientism*, the view that the scientific method has no (or few) limits and can successfully be applied to all (or virtually all) domains, thereby explaining everything (or everything knowable by humans). Methodological Scientism is the attempt to extend the methods of natural science to other disciplines (LERON SHULTS F. *Scientism: Science, Ethics and Religion // Ars Disputandi* 2 (2002) 43).

¹⁵ *Consumerism*, the belief that it is good for a society or an individual person to buy and use a large quantity of goods and services (*Dictionary // oxfordlearnersdictionaries.com* (27.10.2021)).

¹⁶ Cf. TAYLOR CH. *A Secular Age*. Cambridge 2007, 3.

¹⁷ The term *hedonism* derives its name from the Greek word *hedone*, meaning pleasure. It comes in three major versions: axiological hedonism, according to which pleasure is the only thing of intrinsic value; psychological hedonism, according to which every purposive act derives ultimately from the desire for pleasure; and ethical hedonism, according to which the moral rightness of an act is a function of the pleasure the act produces (TILLEY J. J. *Hedonism [PDF] // CHADWICK R. (ed.). Encyclopedia of Applied Ethics*. San Diego 2012, 73).

¹⁸ *Relativism*, the claim that views of truth and falsity, right and wrong, standards of reasoning are products of different frameworks of assessment and may vary across cultures, social groups, historical periods, or even individuals, and every effort to adjudicate them is bound to be futile (BAGHRAMIAN M. *Relativism*. London 2004, 92).

¹⁹ *Netocracy*, a theory that the internet creates a new global upper class that fights and destroys the old struggling power structures. Alexander Bard and Jan Söderqvist, in their book «Netocracy: The New Power Elite and Life After Capitalism», define netocracy as a new form of governance in which the main value is information. They describe a netocratic society as a society where people who control information and media form the new business and government elites. The authors state, people, whom they call netocrats, will be the ones in power in the nearest future (БАРД А. – ЗОДЕРКВИСТ Я. *Нетократия. Новая правящая элита и жизнь после капитализма*. Санкт-Петербург 2004, 79-81).

manipulation (e.g., Facebook-Cambridge Analytica case²⁰). Humanity went on the wrong path, full of existential risks and challenges, lost in continuous streams of unverified information. What is the response of the Catholic Church to the ethical challenges caused by technological development? What is the response of Christian theology to the technocratic paradigm and «culture of death» that follows it? The answer to this question is more relevant than ever.

Academic relevance of this study lies in the urgent need to rethink what is the true purpose of technology. Recent times have shown that technology, an instrument created to serve humanity, can be an enormous threat for man if it is misused. With the globalization of the technocratic paradigm, the synthesis of Catholic social thought on this matter can help find a way to humanize technology. The study's relevance is evidenced by the lack of literature on this topic, given the recent emergence of the above-mentioned cultural trends of technocentrism²¹.

Research focus: this study will focus on the question of the essence of technology and its purpose to be an instrument created by humans and meant to serve humankind. The author will try to demonstrate the Catholic Church's response to the socio-cultural phenomenon of the shift of collective consciousness to the technocratic paradigm that emerged in the 20th-21st centuries.

Research aim: to analyze and present the official position of the Holy See in the second half of the 20th-21st centuries on the technocratic civilization phenomenon.

²⁰ *Facebook – Cambridge Analytica data scandal*, illegal collection and misuse of millions of Facebook users' personal data, committed by the British company Cambridge Analytica with the assistance of Facebook. Cambridge Analytica was accused of interfering with numerous elections (including the 2016 presidential campaign of Donald Trump and the Brexit referendum) by stealing the personal data of potential voters on social media and manipulating their opinions with the help of information technology (CONFESSORE N. *Cambridge Analytica and Facebook: The Scandal and the Fallout So Far* // nytimes.com (16.09.2021)).

²¹ *Technocentrism*, a belief in the unending resourcefulness of humans and their ability to control the environment. Technocentrism states that technology will provide solutions to environmental problems even when human effects are pushing natural systems beyond their normal boundaries. The technocentrists believe in human ability to find technological solutions for all present-day challenges and deficits and see economic growth as a solution to most of the problems of the modern world. (RUTHERFORD J. – WILLIAMS G. *Environmental systems and societies*. Oxford 2015, 11-12).

Research objectives:

- 1) To outline socio-cultural changes and challenges of Industrialization²² in the 20th century and historical preconditions of the Second Vatican Council;
- 2) To compare the Church's assessment of technology with Martin Heidegger's phenomenological approach to it, introduced by the philosopher in one of his Bremen lectures, «The Question Concerning Technology»;
- 3) To highlight the assessment of scientific and technological progress in official documents of the Catholic Church issued during the pontificate of John XXIII and Paul VI, including the Second Vatican Council's documents;
- 4) To analyze Pope John Paul II and Pope Benedict XVI's social teaching legacy on the matters concerning technology and its progress in the contemporary world;
- 5) To highlight the Catholic Church's response to the technocratic civilization in the Magisterial documents and official speeches of Pope Francis;
- 6) To outline possible prospects for the development of Catholic social thought on the humanization of technology and the Church's cooperation with the scientific community to develop universal ethical principles of scientific and technological progress;

Research methods: 1) Method of textual analysis (official documents of the Catholic Church, speeches of the last five pontiffs); 2) Comparative analysis (will be used when analyzing the development of the Catholic social teaching on the stated issue, and the philosophical thought influence on the formation of the Catholic Church's position); 3) Synthesis (reflection on the Catholic Church's vision of socio-cultural transformations that occurred in the 20th-21st centuries due to the technological development and the rise of the technocratic paradigm); 4) Chronological method (will be used to describe the historical development of the Catholic social teaching on the

²² *Industrialization*, a historical succession of periods of pervasive adoption of clusters of technological and organizational innovations (e.g., the mechanization of labor, application of the scientific method, and the reliance upon inanimate sources of energy) that led to socio-economic societal transformations in which industry and science became dominant. The Industrial Revolution began as a process of structural change in 18th-century Great Britain, later spreading to other nations of western Europe and North America. These processes enabled vastly rising industrial output, productivity, and incomes, as well as reductions in the amount of time worked. Rising productivity and output in the industry have been the main drivers of economic growth (GRUBLER A. *Industrialization as a Historical Phenomenon*. Vienna 1995, 43-46).

subject); 5) Generalization (necessary to describe the positive and negative tendencies of technological development).

Research object: Scientific progress and technological development.

Research subject: The rise and globalization of the technocratic paradigm.

Scope of the study: 1) Time period: 20th-21st centuries; 2) Literature: Official documents of the Apostolic See from the pontificate of Pope John XXIII to the pontificate of the Holy Father Francis, with emphasis on the position of the latter.

Research Structure, in accordance with the research aim and objectives, consists of the introduction, three chapters, conclusion, list of references, and bibliography.

The first chapter of this thesis will be focused on the Catholic Church's response to challenges of industrialization, with the analyzes of the following documents: Pope John XXIII's encyclicals «Mater et Magistra»²³ and «Pacem in Terris»²⁴, and his «Address for Solemn Opening of the Second Vatican Council»²⁵; Vatican II's Pastoral Constitution on the Church in the Modern World «Gaudium et Spes»²⁶; Pope Paul VI's encyclical «Populorum Progressio»²⁷ and his «Address during the last general meeting of the Second Vatican Council»²⁸. The author will also try to compare the Church's assessment of the technology with Martin Heidegger's phenomenological approach to it, described in his work «The Question Concerning Technology»²⁹, while also considering philosopher's work «Being and Time»³⁰.

The second chapter of the paper will be dedicated to the analysis of Pope John Paul II and Pope Benedict XVI's reactions to the rise of scientism, man's estranged relationship with technology, and an instrumental approach towards everything, including nature and human himself. The author will analyze documents of both post-conciliar pontiffs, including John Paul II's encyclical letter «Redemptor Hominis»³¹,

²³ POPE JOHN XXIII. Encyclical *Mater et Magistra* [PDF]. Rome 1961.

²⁴ POPE JOHN XXIII. Encyclical *Pacem in Terris* [PDF]. Rome 1963.

²⁵ POPE JOHN XXIII. Address for Solemn Opening of the Second Vatican Council [PDF] // fwdioc.org (17.10.2021).

²⁶ Cf. SECOND VATICAN COUNCIL. The Pastoral Constitution on the Church in the Modern World *Gaudium et Spes* // vatican.va (10.08.2021).

²⁷ POPE PAUL VI. Encyclical *Populorum Progressio* [PDF]. Rome 1967.

²⁸ POPE PAUL VI. *Address during the last general meeting of the Second Vatican Council* [PDF]. Rome 1965.

²⁹ HEIDEGGER M. *The Question Concerning Technology and Other Essays*. New York – London 1977.

³⁰ HEIDEGGER M. *Being and Time*. Oxford 1978.

³¹ POPE JOHN PAUL II. Encyclical *Redemptor Hominis* [PDF]. Rome 1979.

«*Sollicitudo Rei Socialis*»³², «*Evangelium Vitae*»³³, «*Fides et Ratio*»³⁴ and his Apostolic Constitution «*Fidei Depositum*»³⁵; Benedict XVI's encyclical letter «*Caritas in Veritate*»³⁶ and his «Address to the Participants in the International Congress on Natural Moral Law»³⁷.

The third chapter will be concentrated on the Catholic Church's response to the globalization of the technocratic paradigm and the rise of the throwaway culture in the 21st century based on the analysis of Magisterial documents issued during the papacy of Pope Francis, which include encyclical letters «*Laudato Si*»³⁸ and «*Fratelli Tutti*»³⁹, Apostolic Exhortation «*Evangelii Gaudium*»⁴⁰, and also speeches of the Pontiff, including «Message to the G20 Interfaith Forum»⁴¹, Catechesis «Healing the world: Care of the common home and contemplative dimension»⁴², «Message for the Celebration of the 54th World Day of Peace»⁴³, «Message to participants at the International Conference Human Rights in the Contemporary World: Achievements, Omissions, Negations»⁴⁴ and others.

³² POPE JOHN PAUL II. Encyclical *Sollicitudo Rei Socialis* [PDF]. Rome 1987.

³³ POPE JOHN PAUL II. Encyclical *Evangelium Vitae* [PDF]. Rome 1995.

³⁴ POPE JOHN PAUL II. Encyclical *Fides et Ratio* [PDF]. Rome 1998.

³⁵ POPE JOHN PAUL II. Apostolic Constitution *Fidei Depositum* [PDF]. Rome 1992.

³⁶ POPE BENEDICT XVI. Encyclical *Caritas in Veritate* [PDF]. Rome 2009.

³⁷ POPE BENEDICT XVI. Address to the Participants in the International Congress on Natural Moral Law [PDF]. Vatican 2007.

³⁸ POPE FRANCIS. Encyclical *Laudato si'* [PDF]. Rome 2015.

³⁹ POPE FRANCIS. Encyclical *Fratelli tutti* [PDF]. Assisi 2020.

⁴⁰ POPE FRANCIS. Apostolic Exhortation *Evangelii Gaudium* [PDF]. Rome 2013.

⁴¹ POPE FRANCIS. Message to the G20 Interfaith Forum [PDF]. Vatican 2018.

⁴² POPE FRANCIS. Catechesis *Healing the world: Care of the common home and contemplative dimension* [PDF]. Vatican 2020.

⁴³ POPE FRANCIS. Message for the Celebration of the 54th World Day of Peace [PDF]. Vatican 2021.

⁴⁴ POPE FRANCIS. Message to participants at the International Conference Human Rights in the Contemporary World: Achievements, Omissions, Negations [PDF]. Rome 2018.

CHAPTER I

HUMANITY AND MODERNITY: THE CATHOLIC CHURCH'S RESPONSE TO CHALLENGES OF INDUSTRIALIZATION

1.1. SOCIO-CULTURAL CHANGES AND CHALLENGES OF THE 20TH CENTURY

In the 20th century, humanity stepped into a new era. The one full of rapid changes, innovations, social and cultural transformations, causing a global crisis of growth and radically changing human lifestyle and social order that were established for centuries. Industrialization, urbanization¹, the rise of democracy², cultural shifts and experiments in new art forms, the emergence of new thinking paradigms³ – the rise of technologies⁴ and scientific methods enable humanity to master reality in a new way. The 20th century was full of discoveries: from the microscope to telescope and space exploration; genetics, medicine, and health care systems development; Henry Ford's revolutionization of factory production causing mass-market distribution; the invention of airplanes and various communication tools; nuclear power and nuclear weapon development; and finally, the invention of computers and the Internet. Never in history has mankind experienced that amount of abundance in wealth, having economic and political freedom, and yet so many people were still suffering from hunger, political repression, and poverty in different parts of the world⁵. The 20th century brought

¹ *Urbanization*, the process by which more and more people leave the countryside to live in cities (*Dictionary // dictionary.cambridge.org* (10.09.2021)).

² *Democracy*, the belief in freedom and equality between people, or a system of government based on this belief, in which power is either held by elected representatives or directly by the people themselves (*Dictionary // dictionary.cambridge.org* (10.09.2021)).

³ *Paradigm*, a philosophical and theoretical framework of a scientific school or discipline within which theories, laws, and generalizations and the experiments performed in support of them are formulated (*Dictionary // merriam-webster.com* (30.07.2021)).

⁴ In this paper, the term *technology* is used to mean «the application of scientific knowledge to the practical aims of human life or, as it is sometimes phrased, to the change and manipulation of the human environment» (*Encyclopedia // britannica.com* (10.08.2021)).

⁵ Cf. *Gaudium et Spes*, §4.

women emancipation⁶, the end of the Apartheid⁷ system in South Africa and racial segregation⁸ in the United States, and at the same time, humanity experienced numerous genocides⁹ (e.g., the Holocaust, Holodomor, Cambodian genocide, and many others). The 20th century also gave rise to the second and third wave of democracy¹⁰, as well as to the international human rights movement¹¹ – on 10 December 1948, the Universal Declaration of Human Rights was adopted by the General Assembly of the United Nations, outlining 30 fundamental freedoms and rights of all human beings. And yet humanity experienced over 30 wars all over the world during this century, including the most tragic World War I and World War II, atomic bombings of Hiroshima and Nagasaki, Cold War, and many others causing suffering and death of millions¹².

The rise of science, rationalism and critical thinking¹³ helped people to distinguish religion from a magical view of the world, and as a result, many people came to an

⁶ *Women emancipation*, the achievement of complete economic, social, political and religious equality of women with men, an aspiration whose realization in the twentieth century has been gradual, varied and incomplete. The most crucial agent of women's emancipation has been the process of industrialization (*Dictionary // oxfordreference.com* (10.09.2021)).

⁷ *Apartheid*, a social policy that governed relations between South Africa's white minority and nonwhite majority for much of the latter half of the 20th century, sanctioning racial segregation and political and economic discrimination against nonwhites (*Encyclopedia // britannica.com* (10.09.2021)).

⁸ *Segregation*, separation or isolation of a race, class, or ethnic group by enforced or voluntary residence in a restricted area, by barriers to social intercourse, by separate educational facilities, or by other discriminatory means (*Dictionary // merriam-webster.com* (10.09.2021)).

⁹ *Genocide*, the deliberate and systematic destruction of a group of people because of their ethnicity, nationality, religion, or race (*Encyclopedia // britannica.com* (10.09.2021)).

¹⁰ Samuel P. Huntington in his book «The Third Wave: Democratization in the Late Twentieth Century» explains major surges of democracy as *democratic waves*. The first «long» wave of democratization began in the 1820s, with the widening of the suffrage to a large proportion of the male population in the United States, and continued for almost a century until 1926, bringing into being some 29 democracies. In 1922, however, the coming to power of Mussolini in Italy marked the beginning of a first «reverse wave» that by 1942 had reduced the number of democratic states in the world to 12. The triumph of the Allies in World War II initiated a second wave of democratization that reached its zenith in 1962 with 36 countries governed democratically, only to be followed by a second reverse wave (1960-1975) that brought the number of democracies back down to 30. Between 1974 and 1990, at least 30 countries made transitions to democracy, just about doubling the number of democratic governments in the world (HUNTINGTON S.P. *Democracy's Third Wave // Journal of Democracy*. Baltimore 1991, 12).

¹¹ *The international human rights movement* is made up of men and women who gather information on rights abuses, lawyers and others who advocate for the protection of rights, medical personnel who specialize in the treatment and care of victims, and the much larger number of persons who support these efforts financially and, often, by such means as circulating human rights information, writing letters, taking part in demonstrations, and forming, joining, and managing rights organizations. They are united by their commitment to promote fundamental human rights for all, everywhere (NEIER A. *The International Human Rights Movement: A History*. Princeton 2012, 2).

¹² Cf. LUNDESTAD G. – NJØLSTAD O. (eds.). *War and Peace in the 20th Century and Beyond: The Conflicts of the 20th Century and the Solutions for the 21st Century*. Oslo 2001, 28, 141-142.

¹³ *Critical thinking*, the objective analysis and evaluation of an issue to form a judgement (*Dictionary // lexico.com* (8.10.2021)).

understanding of God in a more vivid sense¹⁴. On the other hand, secularization processes¹⁵ caused many people to abandon religion in practice – various forms of modern atheism¹⁶ began to occur¹⁷. The global society went through a drastic change in its core, followed by traditional moral and spiritual values decay. Thus, in this chapter, we will try to synthesize the Catholic Church's response to the above-mentioned challenges and crises of the 20th century, focusing on the Church's assessment of the rapid development of science and technology in particular.

1.2. PHILOSOPHICAL REFLECTION ON THE RISE OF TECHNOLOGY: MARTIN HEIDEGGER'S UNDERSTANDING OF THE ESSENCE OF TECHNOLOGY

The rise of technology and rapid social and cultural changes caused by it required a certain philosophical reflection on the unprecedented phenomenon humanity was experiencing. Martin Heidegger, Hans Jonas, and Arnold Gehlen pioneered in the sphere as humanities philosophers of technology¹⁸. German philosopher Martin Heidegger, one of the most prominent thinkers of the 20th century, famous for his contribution to phenomenology¹⁹ and existentialism²⁰, became the most frequent

¹⁴ Cf. *Gaudium et Spes*, §7.

¹⁵ Charles Taylor in his work «A Secular Age» defines *secularity* in three different ways. The first understanding of it is in terms of public spaces that have been allegedly emptied of God or any reference to ultimate reality, including our economic, political, cultural, educational, professional spheres of life that do not refer to God or any religious beliefs anymore. Secularity in the second sense consists in the falling off of religious belief and practice, in people turning away from God, and no longer going to Church. In this sense, the countries of western Europe have mainly become secular. The third meaning of secularity is a matter of the whole context of understanding in which our moral, spiritual or religious experience and search take place. Whereas politics and other social practices at all levels of society in all pre-modern societies were connected to or based on faith in God and adherence to the Church, the modern Western world is free from this connection in the modern Western world (TAYLOR. *A Secular Age*, 1-3).

¹⁶ *Atheism*, a philosophical or religious position characterized by disbelief in the existence of a god or any gods hypotheses (*Dictionary* // merriam-webster.com (8.10.2021)).

¹⁷ Cf. *Gaudium et Spes*, §7.

¹⁸ *Philosophy of technology* is a rapidly growing branch of philosophy. Many philosophers now regard it as imperative to systematically inquire into the basis and consequences of innovation. This increasing interest in technology is primarily because artifacts, techniques, and technical systems have fundamentally changed the lives of human beings, the ways in which politics and science are carried out, and the pervasive ways that we conceptualize our near and long-term futures (*Encyclopedia* // oxfordbibliographies.com (10.10.2021)).

¹⁹ *Phenomenology*, the study of *phenomena* – appearances of things, or things as they appear in our experience, or the ways we experience things, thus the meanings things have in our experience. Phenomenology studies conscious experience as experienced from the subjective or first-person point of view. The historical movement of phenomenology is the philosophical tradition launched in the first half of the 20th century by Edmund Husserl, Martin Heidegger, Maurice Merleau-Ponty, Jean-Paul Sartre, etc. (*Encyclopedia* // plato.stanford.edu (10.10.2021)).

²⁰ *Existentialism*, a philosophical theory or approach which emphasizes the existence of the individual person as a free and responsible agent determining their development through acts of the will (*Dictionary* // lexico.com (2.08.2021)).

reference point in the contemporary philosophy of technology²¹ and, it is important to mention, vastly influenced the development of contemporary Christian theology²². Therefore, in order to compare the Church's assessment of technology with Martin Heidegger's phenomenological approach to it, it is important to understand the basic concepts and terms the philosopher coined to describe the true essence of technology and man's relationship with it.

In his book «Being and Time», published in the interwar period and declared by many as his *magnum opus*, he raises the question of the meaning of *Being (Sein)* – the question which, he states, has been neglected and forgotten by the Western philosophical tradition starting from Plato and onwards²³. In «Being and Time», he writes: «Basically, all ontology, no matter how rich and firmly compacted a system of categories it has at its disposal, remains blind and perverted from its ownmost aim, if it has not first adequately clarified the meaning of *Being*, and conceived this clarification as its fundamental task»²⁴. In his later writings, he argues that Western thought since the beginning of ancient philosophy was moving towards nihilism²⁵ and that the socio-cultural crisis of modernity had its origin in a descent into nihilism – humanity eventually came to the wrong attitude towards the question concerning *Being (Sein)*²⁶. According to Heidegger, philosophy, science, and technology stand for the advance of rationality and are not concerned with *being* itself but with beings as resources to be optimized and controlled. This mode of understanding, he argues, has led to the destruction of the earth caused by the nihilism of modern technological culture²⁷. Nevertheless, there is another mode of understanding nature and humans, he

²¹ Cf. VAN BRAKEL J. – MA L. *Out of the "Ge-stell"?* *The role of the East in Heidegger's "Das andere denken"* // *Philosophy East and West: A Quarterly of Comparative Philosophy* 64 (2014) 527.

²² Cf. WILLIAMS J. R. *Heidegger and the Theologians* // *The Heythrop Journal* 12 (1971) 258.

²³ Cf. *Being and Time*, 21.

²⁴ *Ibid.*, 31.

²⁵ *Nihilism*, according to Heidegger, has a very specific meaning. It refers to the forgetfulness of being. What remains unquestioned and forgotten in metaphysics is Being; hence, it is nihilistic (*Encyclopedia* // iep.utm.edu (10.10.2021)).

²⁶ Cf. PACELLI A. P. *Being and Intelligibility*. Eugene 2017, 7.

²⁷ *Technoculture*, a culture as informed or defined by its technological activity, especially a culture characterized by a high level of technological development; (also) the practices, attitudes, etc., characteristic of those proficient in the use of information technology (*Dictionary* // lexico.com (09.10.2021)).

states, reversal one, where humanity understands itself based on its belonging to the earth, and not the other way around²⁸.

In one of his Bremen lectures, «The Question Concerning Technology», published in 1954, he continues his reflection on the *openness of Being* but this time concerning technology. He uses a phenomenological approach to explain *the essence of technology* and its place in the modern world by putting it in the broader philosophical context. In this lecturer, the philosopher explains that technology and the essence of technology are not equivalent and that one, when concerning the question of technology, must be in a free relationship to it – it means opening our human existence (*Dasein*)²⁹ to the essence of technology³⁰. Answering the question concerning the essence of technology, he writes:

If we inquire step by step into what technology, represented as means, actually is, then we shall arrive at revealing. The possibility of all productive manufacturing lies in revealing. Technology is, therefore, no mere means. Technology is a way of revealing. If we give heed to this, then another whole realm for the essence of technology will open itself up to us. It is the realm of revealing, i.e., of truth³¹.

In other words, according to Heidegger, technology is a mode of revealing, the one which orders and therefore is not mere human doing. And this revealing is challenging for us as it «puts to nature the unreasonable demand that it supply energy which can be extracted and stored as such»³². Thus, energy concealed in nature is unlocked, then transformed, stored, and distributed – all of these, according to the philosopher, are ways of technological revealing³³.

Standing-reserve (Bestand) is a term introduced by Heidegger in «The Question Concerning Technology» that is essential for understanding his ideas on technology. It is the way technology reveals things to us – everything is considered to be a recourse that is «ordered to stand by»³⁴ and «to be immediately on hand»³⁵. Namely, everything

²⁸ Cf. PROTEVI J. (ed.). *The Edinburgh Dictionary of Continental Philosophy*. Edinburgh 2005, 278-280.

²⁹ *Dasein*, German word meaning *there-being*, Heidegger's label for the distinctive mode of *Being* realized by human beings (KIVERSTEIN J. – WHEELER M. (eds.). *Heidegger and Cognitive Science*. Basingstoke 2012, 178).

³⁰ Cf. *The Question Concerning Technology and Other Essays*, 3.

³¹ *Ibid.*, 12.

³² *Ibid.*, 14.

³³ Cf. *Ibid.*, 14.

³⁴ *Ibid.*, 17.

³⁵ *Ibid.*, 17.

«no longer stands over against us as object»³⁶ but is perceived as merely a means to an end³⁷. Thus, *Standing-reserve* became the real goal of modern technological culture. Modern technology is not an instrument anymore, it has become the way we perceive the world, a mode of human existence.

Another important term used by Heidegger with a new sense is *Gestell* (*enframing*). He explains the term as «the gathering together which belongs to that setting-upon which challenges man and puts him in position to reveal the real, in the mode of ordering, as standing-reserve»³⁸, stating that the essence of modern technology lies in *enframing*. Thus everything: nature, things, people, history, and even God became instrumentalized – everything and everyone started being considered for some technical use as if nothing has a value on its own. The greatest danger in this approach (technological) to the world is seeing things valuable only if they are useful and can be an instrument in perceiving one's goals. All of that, according to Heidegger, came as a result when people stopped concerning *Being*. Thereby man gradually loses his individuality and becomes part of the technology – one becomes a resource necessary to ensure further technological production³⁹.

According to Heidegger, technology itself is not a threat, rather human attitude towards it is as technology is not merely technical processes, machines, and mechanisms – technology is how all entities present themselves nowadays. Philosopher argues that humanity started perceiving nature and human beings only technologically as a pure resource that should be organized, stored, and exploited for technological purposes. Everything and everyone started being approached as a means to an end⁴⁰.

Martin Heidegger's philosophical legacy influenced the way we perceive technology nowadays. Namely, his philosophy of technology helped us to understand that the technological way of being is just one among many others. Heidegger, a Catholic himself, was studying at the Catholic seminary before switching his field of

³⁶ *Ibid.*, 17.

³⁷ Cf. *Ibid.*, 17.

³⁸ *Ibid.*, 20.

³⁹ Cf. *Ibid.*, 23.

⁴⁰ Cf. *Heidegger and Cognitive Science*, 142-144.

study to natural sciences and philosophy. Despite that, his influence on the development of Catholic theology of the 20th–21st century is undoubted. Precisely, his ideas and work had the deepest impact on theologians like Paul Tillich, Rudolf Bultmann, Dietrich Bonhoeffer, and Karl Rahner⁴¹, the last being one of the most influential Catholic theologians of the 20th century and an important contributor to a number of the Second Vatican Council documents, including «Gaudium et Spes» which will be discussed below⁴².

1.3. SCIENCE AND TECHNOLOGY IN THE SERVICE OF LIFE: POPE JOHN XXIII

The rise of technology transformed the world – it changed the social order, culture, and traditional values on which Western society was built. And with all the opportunities, breakthroughs, and achievements, a lot of social challenges became cropping out. The Church could not be silent, and newly elected Pope John XXIII announced the decision to celebrate an ecumenical council, opening a new epoch for the Church in the modern world. His decision, announced in 1959, undoubtedly, shocked the world. The previous ecumenical council, the Vatican I, was created almost 100 years ago, and in its «Pastor Aeternus» decree, the doctrine of papal infallibility was declared stating that the Bishop of Rome cannot err when speaking *ex cathedra* (from the chair of St. Peter's successor) on matters of faith and morals. Therefore, pope became a supreme teacher of faith in the Church, and many felt ecumenical councils were no longer required. Despite that, Pope John XXIII believed reconciliation and renewal were needed, so he decided to convene a new ecumenical council to meet the needs of the Church and its people and to prepare the Catholic Church for the new millennium⁴³. In his speech on the occasion of the solemn opening of the Second Vatican Council on 11 October 1962, he stated:

The Church has not attended indifferently to the admirable progress of the discoveries of human ingenuity, and it has never ceased to mean its just estimate: but, even following these developments, it does not stop warning men that, over and above sensitive things, turn your eyes to God, source of all wisdom and all beauty; and reminds them that, just as they were told to «settle the earth and subdue it», never forget that they were given the most serious precept:

⁴¹ Cf. *Heidegger and the Theologians*, 258-259.

⁴² Cf. O'MALLEY J. W. *What Happened at Vatican II*. Cambridge 2010, 258.

⁴³ Cf. *Ibid.*, 4-5.

«You shall worship the Lord your God and He shall only serve», whether it happens that the fascinating attraction of visible things prevents true progress⁴⁴.

In this speech, Pontiff emphasizes that the Church appreciates and admires the progress humanity has made till now, mastering nature and subduing it through numerous discoveries and breakthroughs as it is something man is called to do. However, still, he warns humankind not to place progress at the center of one's being and remember about man's ultimate Creator, who is the Source of all things, and whom one is called to serve in the first place⁴⁵. Pontiff asserts it is not the progress itself that concerns the Church but rather man's approach to it.

A little more than a year before Vatican II was opened, Pope John XXIII introduced his new encyclical letter «Mater et Magistra» that continued the tradition of «Rerum Novarum» and «Quadragesimo Anno»⁴⁶. Like his predecessors, John XXIII proposed a philosophical analysis of the moral purposes that are supposed to govern human affairs in the contemporary world, including the question of technological development, on both the interpersonal and international levels. His encyclical «Mater et Magistra» raised questions concerning social progress, scientific advances, and industrialization that occurred in the 20th century while exploring the social role of the Church in justice and the common good realization⁴⁷. In this document, Pontiff calls upon humanity to respect the true hierarchy of values stating that the Church is disturbed observing people being indifferent to these, especially in the economically developed countries. He describes this indifference as the situation where scientific and technological progress and economic development are pursued for their own sake, «as though material well-being were the be-all and end-all of life»⁴⁸, while many deny and ignore spiritual values⁴⁹. He underlines that technology and science are mere

⁴⁴ *Address for Solemn Opening of the Second Vatican Council*, 4.

⁴⁵ Cf. *Ibid.*, 4-5.

⁴⁶ «*Rerum Novarum*», an encyclical letter issued by Pope Leo XIII in 1891 and considered by many conservative Roman Catholics to be extremely progressive. It enunciated the late 19th-century Roman Catholic position on social justice, especially in relation to the problems created by the Industrial Revolution, and it emphasized the Church's right to make pronouncements on social issues as they related to moral questions. The Church's teaching on social issues was further elaborated by Pope Pius XI in his encyclical «*Quadragesimo Anno*» (*Encyclopedia // britannica.com* (17.10.2021)).

⁴⁷ Cf. HIMES K. R. (ed.) et al. *Modern Catholic Social Teaching: Commentaries and Interpretations*. Washington 2018, 104-105.

⁴⁸ *Mater et Magistra*, §176.

⁴⁹ Cf. *Ibid.*, §176.

instruments and cannot be superior to the true values, rather on the contrary – they should be in the service of life. Pontiff writes: «Scientific and technical progress, economic development and the betterment of living conditions, are certainly valuable elements in a civilization. But we must realize that they are essentially instrumental in character. They are not supreme values in themselves»⁵⁰. John XXIII explains the statement, referring to Jesus' words in the Gospel of Matthew: «What good will it be for a man if he gains the whole world, yet forfeits his soul? Or what can a man give in exchange for his soul?» (Mt 16:26)⁵¹.

There is always a risk that science and technology will be used as an instrument of ruin and death, threatening to extinguish humane life and nature. Therefore, according to the Pope, moral and spiritual values and man's respect for their hierarchy are crucial for scientific discoveries and technical inventions to be used as an instrument in the service of all humankind⁵². In the 20th century, humanity already experienced the horrors of what wrong values equipped with strong technological tools can do, including wars, genocides, atomic bombings, nuclear proliferation⁵³, and others. Pontiff writes that man can only be solved from these difficulties and dangers in the light of faith in God, who is the only true Ruler of man and the world – it is Him who should be the foundation of the moral order⁵⁴. Indeed, there still is a considerable risk for technology and science to be used as engines of destruction, so certain ethics and policies should be created and legal restrictions established and implemented

⁵⁰ *Ibid.*, §175.

⁵¹ Cf. *Ibid.*, §247.

⁵² Cf. *Ibid.*, §198, 210.

⁵³ *Nuclear proliferation*, the spread of nuclear weapons, nuclear weapons technology, or fissile material to countries that do not already possess them. During World War II the prospect of a nuclear-armed Nazi Germany led the United States to intensify its efforts to build a nuclear weapon. The U.S. program, known as the Manhattan Project, produced the first atomic bomb in July 1945. Only three weeks after the first test of an atomic bomb in the U.S. state of New Mexico, a uranium-based atomic bomb was dropped on Hiroshima, Japan; a second, plutonium-based bomb was dropped on Nagasaki three days later. The United States remained the sole nuclear power until 1949, when the Soviet Union tested its first atomic bomb, code-named First Lightning, in a remote area of Kazakhstan. The intense competition of those two countries during the Cold War led them to develop the more-powerful thermonuclear bomb (also known as the hydrogen bomb, or H-bomb) and to enlarge their stocks of nuclear weapons. At the height of this competition, the United States and the Soviet Union together possessed many thousands of nuclear warheads, enough to eradicate all life on Earth many times over (*Encyclopedia // britannica.com* (17.10.2021).).

⁵⁴ Cf. *Mater et Magistra*, §198, 209.

globally. But even more importantly, a new attitude towards technoscience⁵⁵ and its development needs to arise – as every science and every technology itself is a mere tool created by man to serve the needs of humans. Pope John XXIII outlines this theme at the end of his encyclical «Mater et Magistra», stating:

Certainly, the Church teaches – and has always taught – that scientific and technical progress and the resultant material well-being are good things and mark an important phase in human civilization. But the Church teaches, too, that goods of this kind must be valued according to their true nature: as instruments used by man for the better attainment of his end. They help to make him a better man, both in the natural and the supernatural order⁵⁶.

By saying this, Pope once again outlines that the Church herself finds scientific and technological progress as good and valuable, and this is something she has always believed and taught, as Pontiff states in the extract above from «Mater et Magistra». Thus, the Church confirms her position that faith and scientific progress are not mutually opposed.

In Pontiff's last encyclical, issued months before his death, «Pacem in Terris», when speaking on integral education, Pope wrote that it is essential for moral goodness to keep pace with scientific progress and continuous technological advancement and that the cultivation of religious values should be an important part of the instruction given to young generations⁵⁷. Nevertheless, it is not enough to be enlightened by faith, he writes, Christians must also «imbue civilization with right ideals and Christian principles»⁵⁸ by involving themselves in the public life, including working at institutions in social, economic, political, and scientific spheres and striving to influence these institutions' policies from within so the whole of humanity can benefit⁵⁹.

At the beginning of the above-mentioned encyclical John XXIII, speaking about the God-man-technology relationship, clearly and unconditionally asserts that «what emerges first and foremost from the progress of scientific knowledge and the

⁵⁵ *Technology and science* viewed as mutually interacting disciplines, or as two components of a single discipline; reliance on science for solving technical problems; the application of technological knowledge to solving scientific problems (*Dictionary // lexico.com* (2.08.2021).).

⁵⁶ *Ibid.*, §246.

⁵⁷ Cf. *Pacem in Terris*, §153.

⁵⁸ *Ibid.*, §147.

⁵⁹ Cf. *Ibid.*, §2-3.

inventions of technology is the infinite greatness of God Himself, who created both man and the universe»⁶⁰. He explains this thought stating it was God who made all things out of nothing, and it was He who filled them with the fullness of His goodness and wisdom – He is the true Reason and the only Source of everything and everyone. And the phenomenal order that predominates in the forces of nature and the life of all living beings is «the plain lesson which the progress of modern research and the discoveries of technology teach us»⁶¹. And man, created by God «in His image and likeness» (Cf. Gen 1:26), in his greatness can wonder and appreciate this marvelous order, finding the means to subdue these forces for his good since God made him to be a lord of creation⁶².

Though within Pope John XXIII's legacy, there are not many direct references to the question of technology, first attempts to outline the changes global society was experiencing due to the progress in sciences were already made by the Pontiff. John XXIII addressed scientific progress and technological development as undoubtedly valuable elements of the contemporary world, although he always urged that they are essentially instrumental in character. Pope's work and teachings explicitly influenced the questions raised by Vatican II and directed the spirit of further development in Catholic social teaching (CST), including matters concerning the rise of science and technology in the modern age.

1.4. THE QUESTION OF SCIENCE AND TECHNOLOGY IN THE SECOND VATICAN COUNCIL

On 11 October 1962, the Second Ecumenical Council of the Vatican was opened in St. Peter's Basilica in Rome to meet the pastoral needs of the Church and to respond to the cultural and ethical crisis of modernity. A lot of issues were to reconsider – it is not just the human society that needed the renewal to operate in a new world arising but

⁶⁰ *Ibid.*, §3.

⁶¹ *Ibid.*, §2.

⁶² Cf. *Ibid.*, §2-3.

the Church itself. In four years, 2 500 bishops and priests, thousands of theologians and auditors, including laypeople, and many observers from various Christian denominations were summoned to the Council to take steps towards reconciliation and renewal, creating needed reforms to bring the Church into the modern world⁶³. As Pope John Paul II, who participated in all Vatican II sessions and was part of the committee drafting «*Gaudium et Spes*»⁶⁴, will later state: «The Second Vatican Council was a providential event, whereby the Church began the more immediate preparation for the Jubilee of the Second Millennium»⁶⁵. The Council profoundly changed the direction the Catholic Church was taking through reforms and renewed theology: it gave an end to the thousand-year schism with the Greek Orthodox Church; started an ecumenical dialogue with other Christian denominations and interreligious dialogue with non-Christians; brought many changes in the liturgy of the Roman rite and gave permission to use vernacular languages at Mass; encouraged lay apostolate and spoke about the role of Christians and the Church in the modern world; and also recognized the rights of everyman to freedom of religion for the first time⁶⁶. The change was needed, and it was profound – in 1979, German theologian fr. Karl Rahner, SJ, spoke of the Council as opening the third epoch in Christian history⁶⁷. Vatican II resulted in nine decrees, three declarations, and four constitutions (one liturgical, two dogmatic, and one pastoral)⁶⁸, one of which is particularly important for this research as it is addressed not just to Catholics or even Christians but to the whole of humanity⁶⁹.

Pastoral Constitution on the Church in the Modern World «*Gaudium et Spes*» – the final and the most debated document issued by the Vatican II became one of the most important Catholic social teaching pieces, exposing the Catholic doctrine on the contemporary social reality, this way starting a dialogue with the global community. In the introductory statement of the constitution, the Council declares the following:

⁶³ Cf. RATZINGER J. *Theological Highlights of Vatican II*. Mahwah: Paulist Press 2009, 20-26.

⁶⁴ Cf. WEIGEL G. *Witness to Hope: The Biography of Pope John Paul II*. New York 2004, 146.

⁶⁵ JOHN PAUL II. Apostolic letter *Tertio Millennio Adveniente* [PDF]. Rome 1994, §18.

⁶⁶ Cf. *What Happened at Vatican II*.

⁶⁷ The first epoch in Christian history was the brief period of Jewish Christianity, which began to end as early as Paul's preaching to the Gentiles. The second epoch ran from that time until Vatican II, the period of Hellenism and the European church. The third period, the postcouncil present, is the period of the world church (*What Happened at Vatican II*, 13).

⁶⁸ Cf. *Ibid.*, 2.

⁶⁹ Cf. *Gaudium et Spes*, §2.

«The Church has always had the duty of scrutinizing the signs of the times and of interpreting them in the light of the Gospel. Thus, in language intelligible to each generation, she can respond to the perennial questions which men ask about this present life and the life to come, and about the relationship of the one to the other»⁷⁰. Above mentioned cultural and social transformations, caused by the rise of science and technology, provoked the shift in traditional values, way of thinking, perceiving reality and manner of acting towards the world and the others. Society started developing so fast it was hard to direct the dynamics of change, causing anxiety and uneasiness side by side with the hope to build a better world. Religion and faith in God were replaced with faith in human reason, creativity, and power to create a more peaceful, equal, and prosperous society through technological developments and breakthroughs. Still, many were struggling to adjust traditional ethical and moral principles to the new reality.

The Catholic Church in this uncertain time stepped into the global dialogue with the «*Gaudium et Spes*» stating that the humane society is entitled to be renewed and the Council wants «to shed light on the mystery of man and to cooperate in finding the solution to the outstanding problems of our time»⁷¹, focusing the presentation on the whole human, body and soul, recognizing his/her material and spiritual needs and strivings⁷². The document, besides the preface and introductory statement, consists of two main parts: the first one is dedicated to the theological perspective on life and dignity of a human person and the true calling of the Church and the man in the modern world; the second part is devoted to the five concrete problems of the contemporary society the Council finds of special urgency (these include marriage and family, development of culture, socio-economic and political life, peace and the community of nations). The constitution does not address the question of technology directly – there is no chapter focused on this matter. Despite that, the issue of technology is constantly raised in almost every section of the document regarding socio-cultural, economic, and political changes caused by the rapid development of industry, science, and technology.

⁷⁰ *Ibid.*, §4.

⁷¹ *Ibid.*, §10.

⁷² Cf. *Ibid.*, §3.

These changes, according to the Council, influence man's manner of thinking and acting, his decisions and desires not only on individual but on societal level leading to a true social and cultural transformation⁷³. At the very beginning of «Gaudium et Spes», in its introductory part, the Council points at this change in a mindset and attitude towards the world caused by the omnipresent application of technoscience:

Today's spiritual agitation and the changing conditions of life are part of a broader and deeper revolution. As a result of the latter, intellectual formation is ever increasingly based on the mathematical and natural sciences and on those dealing with man himself, while in the practical order the technology which stems from these sciences takes on mounting importance. This scientific spirit has a new kind of impact on the cultural sphere and modes of thought. Technology is now transforming the face of the earth and is already trying to master outer space. To a certain extent, the human intellect is also broadening its dominion over time: over the past by means of historical knowledge; over the future, by the art of projecting and by planning⁷⁴.

Humanity expands its power expeditiously, mastering nature and its resources through technology – more and more, we are transforming the world and ourselves on a way of tremendous growth. We use technology as an instrument for this growth and development, although not always we can subject this instrument for the common good and welfare⁷⁵. Unfortunately, we rarely stop to think about whether the direction of this kind of *growth* and *development* we have chosen for ourselves serves humanity and nature overall.

The scientific spirit that impacts the cultural sphere and modes of thought as mentioned above is also responsible for changing attitudes and accepted values that significantly impact young generations, causing anxiety, distress, and rebellion towards traditional thinking paradigms and norms of behavior. This kind of change in values affects one's spiritual and religious life at its core. More and more people deny the existence of God and thus abandon the religious practice and the Church. And many philosophers, artists, and scientists are voicing and encouraging this denial⁷⁶. The Constitution states: «For today it is not rare for such things (the denial of God or of religion, or the abandonment of them) to be presented as requirements of scientific

⁷³ Cf. *Ibid.*, §4.

⁷⁴ *Ibid.*, §5.

⁷⁵ Cf. *Ibid.*, §4.

⁷⁶ Cf. *Ibid.*, §7.

progress or of a certain new humanism⁷⁷»⁷⁸. This kind of fight against religion and desire for independence from God is rooted in the sense of power human experience in the modern age because of technical progress, and it gives birth to modern atheism⁷⁹.

The document considers atheism as one of the most severe issues of the modern age: many replace faith in God with faith in scientific progress and reasoning, and some even reject belief in the existence of absolute truth. Relying too much on discoveries, human creativity, and power, one appears in danger to think he is sufficient unto himself and stop searching for the highest meaning – feeling the longing for the truth, he will not search God, the ultimate Creator⁸⁰. This kind of attitude entails risk and is misleading, of which the Council warns humanity:

Indeed today's progress in science and technology can foster a certain exclusive emphasis on observable data and an agnosticism⁸¹ about everything else. The methods of investigation which these sciences use can be wrongly considered as the supreme rule of seeking the whole truth. By virtue of their methods, these sciences cannot penetrate to the intimate notion of things⁸².

The Council does not declare that technological development does not serve humanity, but on the contrary, it acknowledges positive results and values of it. It is stated that Christians must cooperate with all men to build a more human society by developing the earth and man himself and perfecting creation, and in this way manifesting God's desire about the purpose of human life. Humanity manages to respond to this God's call with the aid of technology which the Council considers to be a valuable tool if it serves the goal of building a more human world and cares about the common good. As «scientific study and fidelity toward truth in scientific inquiries», intersectoral and international cooperation and solidarity are creating a more precise and shared understanding of technology to be responsible for creating a more equal social order that is favorable for all⁸³. The Church appreciates numerous fruits of technological

⁷⁷ *Humanism*, a philosophy that usually rejects supernaturalism and stresses an individual's dignity and worth and capacity for self-realization through reason (*Dictionary // merriam-webster.com* (16.10.2021)).

⁷⁸ *Gaudium et Spes*, §7.

⁷⁹ Cf. *Ibid.*, §20.

⁸⁰ Cf. *Ibid.*, §57.

⁸¹ *Agnosticism*, the doctrine that humans cannot know of the existence of anything beyond the phenomena of their experience. The term has come to be equated in popular parlance with skepticism about religious questions in general and in particular with the rejection of traditional Christian beliefs under the impact of modern scientific thought (*Encyclopedia // britannica.com* (16.10.2021)).

⁸² *Gaudium et Spes*, §57.

⁸³ Cf. *Ibid.*, §57.

progress that are available for humankind, although she reminds us that the nowadays culture that arises from scientific progress should be subordinated to the needs of the human person and the global community⁸⁴. In section two, dedicated to the question of proper development of culture, the Sacred Synod affirms:

When a man gives himself to the various disciplines of philosophy, history and of mathematical and natural science, and when he cultivates the arts, he can do very much to elevate the human family to a more sublime understanding of truth, goodness, and beauty, and to the formation of considered opinions which have universal value. Thus, mankind may be more clearly enlightened by that marvelous Wisdom which was with God from all eternity, composing all things with him, rejoicing in the earth, delighting in the sons of men⁸⁵.

In other words, the Church does not claim herself as the only stakeholder⁸⁶ when it comes to the question of understanding the truth but rather is calling for mutual respect, cooperation and intersectoral dialogue⁸⁷. The Vatican II, referring to the First Vatican Council, declares in «Gaudium et Spes» that there are «two orders of knowledge»⁸⁸ that are distinct from each other – faith and reason. Human arts, studies and disciplines have their principles and methods, and the Church acknowledges their just liberty. Thus, the Council affirms the legitimate autonomy of science. And likewise, the Church acknowledges that culture cannot develop if it does not exercise its autonomy that is right for her to demand. Nevertheless, «Gaudium et Spes» states, this inviolability of culture and science is possible as long as they preserve the rights and freedoms of human beings⁸⁹. Thus, the Catholic Church feels the necessity of a dialogue between a new culture and the heritage of tradition, so she urges global society to create a new synthesis as «culture which arises from the enormous progress of science and technology must be harmonized with a culture nourished by classical studies according to various traditions»⁹⁰.

Thus, are, according to Catholic Church, faith and science mutually opposed? Many still have these habits of mind thinking one resists the other. The Council

⁸⁴ Cf. *Ibid.*, §59.

⁸⁵ *Ibid.*, §57.

⁸⁶ *Stakeholder*, a person, group of people or an organization that is involved in or affected by a course of action (*Dictionary // merriam-webster.com* (16.10.2021)).

⁸⁷ Under the term *intersectoral dialogue* the author means a dialogue in which more than one sector of society is involved, for example, a dialogue between state, business, NGO, and the Church.

⁸⁸ *Gaudium et Spes*, §59.

⁸⁹ Cf. *Ibid.*, §59.

⁹⁰ *Ibid.*, §56.

deplores this attitude, stating that science does not conflict with faith and should have its rightful independence if it does not contradict moral and ethical norms:

For by the very circumstance of their having been created, all things are endowed with their stability, truth, goodness, proper laws and order. Man must respect these as he isolates them by the appropriate methods of the individual sciences or arts. Therefore if methodical investigation within every branch of learning is carried out in a genuinely scientific manner and in accord with moral norms, it never truly conflicts with faith, for earthly matters and the concerns of faith derive from the same God⁹¹.

Thereby, the document reminds us that in the core of Christianity lies the belief that man's energy, creativity, talent, and therefore man's work and breakthroughs are signs of God's grace and His Providence⁹². Thus, it is crucial to remember that man himself and what he does to humanize social order for greater justice and the common good are much more valuable than technical advances⁹³. Man's *being* has greater worth than any kind of technical progress.

The Church herself made use of numerous scientific discoveries and methods as well as technical tools. The development of humanity always served the Church on her path to growth. The progress of science and culture helped her from the very beginning of Christianity formation. The early Church used philosophical ideas, concepts, and terminology to clarify the Revelation she received from God and accommodate the preaching of the revealed word to the cultural mentality of that time⁹⁴.

Summing up «Gaudium et Spes», it is important to mention that the document has at its core the call for the modern world that is a leading message in every section of the constitution. It is the profound understanding that human being is the purpose of all technological development, economic and social life. A human being is a source and the center of any progress, and all the growth and advances should aim to protect human dignity and serve the welfare of global society. Many do not respond to that call. Globally we are witnessing people being treated as mere production tools⁹⁵. The Council fathers point at a certain economic way of thinking, the rise of practical

⁹¹ *Ibid.*, §36.

⁹² Cf. *Ibid.*, §34.

⁹³ Cf. *Ibid.*, §35.

⁹⁴ Cf. *Ibid.*, §44.

⁹⁵ Cf. *Ibid.*, §66.

materialism⁹⁶, and a lack of economic and social balance that causes social inequalities⁹⁷. The constitution urges that technologies and scientific discoveries need to be further humanized. Also, scientific progress must serve humankind, and economic development must be controlled by man, not otherwise. Development should be wisely directed and coordinated not by a few men or certain more powerful nations, but on the contrary, all nations and as much as possible people should share the responsibility in this important question concerning all⁹⁸. Thus, the Council affirms:

Therefore, technical progress, an inventive spirit, an eagerness to create and to expand enterprises, the application of methods of production, and the strenuous efforts of all who engage in production—in a word, all the elements making for such development—must be promoted. The fundamental finality of this production is not the mere increase of products nor profit or control but rather the service of man, and indeed of the whole man with regard for the full range of his material needs and the demands of his intellectual, moral, spiritual, and religious life⁹⁹.

The Council fathers emphasize that this service of man applies to everyone and every community of man, despite their race or country, gender, or age, does not matter what part of the world they are from. Furthermore, when economic growth, technological development, social life, and scientific progress are carried on within the moral orders and on the service of the common good, it will mean that God's plan for humanity may be realized.

1.5. THE TRUE PURPOSE OF ECONOMICS AND TECHNOLOGY IN THE TEACHING OF POPE PAUL VI

The Second Vatican Council opened the Catholic Church to the modern world and the whole of human society. It lasted four years, from 11 October 1962 till 8 December 1965, besides the three years of preparations before the opening. While the preparation and the first session in 1962 were under the guidance and leadership of Pope John XXIII, three remaining sessions, completion of the Council, and further implementation of its decisions were executed under the guidance of Pope Paul VI,

⁹⁶ Cf. *Ibid.*, §10.

⁹⁷ Cf. *Ibid.*, §63.

⁹⁸ Cf. *Ibid.*, §65.

⁹⁹ *Ibid.*, §64.

elected to the papacy in 1963 after the death of his predecessor. The whole world was looking at the newly elected pope, hoping he would complete great works of Pope John XXIII about the Church renewal, especially concerning his vision of Christian unity. After taking over the direction of the Church and the Council, Paul VI managed to bring Vatican II to a successful conclusion and continued to make way for synodality and dialogue¹⁰⁰.

In his closing speech during the last general meeting of the Second Vatican Council on 7 December 1965, Pontiff explained that the Church of the Council was not just concerned with herself and her relationship of union with God but also focused on a modern man as he is nowadays: «man who makes himself not only the center of his every interest but dares to claim that he is the principle and explanation of all reality»¹⁰¹ and «man the narrow devotee of nothing but scientific reality»¹⁰², man the sinner and man the saint¹⁰³. In this speech, he pointed out that all the teachings of the Council were channeled in the direction of the service of humankind, stating that the idea of service was central in Vatican II. The Church, he said, entirely on the side of man and for man, declared herself as the servant of mankind, reaffirming the alliance and beginning the renewal between the Catholic religion and human life¹⁰⁴. Paul VI, appealing to new philosophies and mindsets arising, mentioned that «the modern mind, accustomed to assess everything in terms of usefulness, will readily admit that the Council's value is great if only because everything has been referred to human usefulness»¹⁰⁵. These thoughts of Pope concerning the modern human mind that approaches everything and everyone in terms of usefulness resonate with Heidegger's concept of *enframing* (*Gestell*) we already spoke of – everything is treated as material under human control and is to be enframed as a resource and as a means to an end. Ostensibly everything is

¹⁰⁰ *What Happened at Vatican II*, 2-10.

¹⁰¹ *Address during the last general meeting of the Second Vatican Council*, 4.

¹⁰² *Ibid.*, 4.

¹⁰³ *Cf. Ibid.*, 4.

¹⁰⁴ *Cf. Ibid.*, 5.

¹⁰⁵ *Ibid.*, 6.

useful and important only if it can be instrumentalized or technologized¹⁰⁶, and as if nothing is valued in itself.

The question concerning technology within the legacy of Paul VI can be mainly found risen in «*Populorum Progressio*», an encyclical on the development of peoples, issued on 26 March 1967. The document aims «to shed the light of the Gospel on contemporary social questions»¹⁰⁷, continuing the tradition of previous encyclicals and constitution that are part of Catholic social teaching foundational documents, including Pope Leo XIII's encyclical «*Rerum Novarum*» (1891), Pope Pius XI's encyclical «*Quadragesimo Anno*» (1931), Pope John XXIII's encyclicals «*Mater et Magistra*» (1961) and «*Pacem in Terris*» (1963), and Vatican II's Pastoral Constitution on the Church in the Modern World «*Gaudium et Spes*» (1965). Stating that the progressive development of peoples is an important object of concern to the Church, Paul VI in «*Populorum Progressio*» refers to John XXIII and Vatican II, as to all other pieces of CST mentioned above, to urge all people to concerted action for humanity's complete development¹⁰⁸.

In this encyclical, Pope describes signs of social unrest gradually spreading all over the world, especially in the countries that are now being industrialized, as the advanced techniques of modern industrialization often contradict traditional culture and values. This causes conflicts between generations: for the older generation, social structures of traditional culture are an essential mainstay of their life while the younger age groups are in search of new forms of social life and therefore regard traditional social order as useless obstacles in their way. Because of this conflict occurs a «tragic dilemma»¹⁰⁹, as Pope names it, explaining that by embracing foreign technologies and culture, people started to abandon the older moral, spiritual, and religious values – new culture does not offer any place for it in the new scheme of things¹¹⁰. Somehow the progress and the subsequent development of scientific modes of thought¹¹¹, as it is

¹⁰⁶ *Technologized*, being used, or adapted for modern technology, typically with electronic or digital equipment (*Dictionary // lexico.com* (24.10.2021)).

¹⁰⁷ *Populorum Progressio*, §2.

¹⁰⁸ Cf. *Ibid.*, §2, 3, 5.

¹⁰⁹ *Ibid.*, §10.

¹¹⁰ Cf. *Ibid.*, §9-10.

¹¹¹ Cf. *Gaudium et Spes*, §5.

named in «*Gaudium et Spes*», evoked social decay through the rejection of ancestral traditions and values with their wealth of humanism. In the document, Paul VI warns global society about the possible consequences of these new adjustments, saying: «Hasty industrialization can undermine vital institutions and produce social evils, causing a setback to true human values»¹¹². To prevent this, according to the Pontiff, balanced progress and reform, not revolution, are required¹¹³.

Regarding the question of work, St. Peter's successor states that «work is human only if it results from man's use of intellect and free will»¹¹⁴, and even though now work can be organized in a much more scientific and efficient way than it used to, man still can be enslaved by it, and his dignity can be threatened. Paul VI refers to John XXIII's encyclical «*Mater et Magistra*», where his predecessor stated that a worker's dignity urgently needs to be restored and every worker should be treated as a partner in the common task. Moreover, he stressed that the enterprise should be «indeed a true human community, concerned about the needs, the activities and the standing of each of its members»¹¹⁵. Paul VI continues the thought explaining that from a Christian point of view, work has an even loftier connotation as it is considered to be a way to establish a supernatural order on earth, where all people in unity will form perfect manhood «so that the body of Christ may be built up» (Eph 4:12)¹¹⁶.

These teachings are of great importance as industrialization, technological and scientific development in the 20th century gave rise to technological thinking, through which one perceives people and workers as pure numbers, resources whose value is questionable unless they are useful for technological goals. Around the mid-1980s, in the United States of America, one of the most developed and industrialized countries, a new term was coined, *human resource management*. In the Cambridge dictionary, the term *human resource* is defined as «people, when considered as an asset that is or can be employed and that is useful to a company, organization»¹¹⁷. Thus, human

¹¹² *Populorum Progressio*, §29.

¹¹³ Cf. *Ibid.*, §29-30.

¹¹⁴ *Ibid.*, §29.

¹¹⁵ *Mater et Magistra*, §91.

¹¹⁶ Cf. *Populorum Progressio*, §29.

¹¹⁷ *Dictionary* // dictionary.cambridge.org (25.10.2021).

became recognized as a resource, an asset that can be managed and used, an instrument to pursue economic and technological goals. A certain shift in the understanding of what human is has happened. Martin Heidegger explained it with the *standing-reserve* (*Bestand*) concept mentioned above, stating that technology made people approach things only for their future potential, which can be used in time. In the «Question concerning technology», the philosopher wrote: «Whatever stands by in the sense of standing-reserve no longer stands over against us as object»¹¹⁸. Apparently, not only nature, its resources, and living creatures started being approached by people with technological thinking as something that does not possess value or does not have any meaning in itself, but even human beings themselves became transformed into *standing-reserve*. Thereby, technological thinking instrumentalizes the human person and recognizes the value of one's existence solely upon his/her productivity and effectiveness in an enterprise or society overall. However, the Catholic Church brings about another vision on the subject.

Pope Paul VI in «*Populorum Progressio*» reminds humanity what is the true relationship between man and technology, affirming that «economics and technology are meaningless if they do not benefit man, for it is he they are to serve»¹¹⁹. Pontiff emphasizes that technology is an instrument that should serve humanity, and never vice versa. He continues stating man is the creator of his progress and is truly human «only if he is the master of his actions and the judge of their worth»¹²⁰. Pope uses the term *technocracy*¹²¹ for the first time, indicating the modern reign of technology and admonishing it can do a lot of harm to the world of tomorrow¹²². He proceeds with the idea of service and the development of peoples, writing:

Organized programs designed to increase productivity should have but one aim: to serve human nature. They should reduce inequities, eliminate discrimination¹²³, free men from the bonds of servitude, and thus give them the capacity, in the sphere of temporal realities, to improve their

¹¹⁸ *The Question Concerning Technology and Other Essays*, 17.

¹¹⁹ *Populorum Progressio*, §34.

¹²⁰ *Ibid.*, §34.

¹²¹ *Technocracy*, a group of scientists, engineers, and other experts who have political power as well as technical knowledge; a country or society that is controlled by scientists, engineers, and other experts (*Dictionary // collinsdictionary.com* (26.10.2021).).

¹²² *Populorum Progressio*, §34.

¹²³ *Discrimination*, the unjust or prejudicial treatment of different categories of people, especially on the grounds of ethnicity, age, sex, or disability (*Dictionary // lexico.com* (25.10.2021).).

lot, to further their moral growth and to develop their spiritual endowments. When we speak of development, we should mean social progress as well as economic growth¹²⁴.

Man's complete development and the development of all humankind should be societal goals concerning everyone, as stated at the beginning of the encyclical, and, according to Paul VI, to pursue these goals, people should turn to a full-bodied humanism. Pope distinguishes narrow humanism and full-bodied humanism, asserting the first one is «closed in on itself and not open to the values of the spirit and to God Who is their Source»¹²⁵. This kind of humanism can bring success and apparent growth when man subdues the earth and organizes terrestrial realities on his own, but this success or growth will never last. When explaining this, Pontiff refers to one of the most prominent Catholic theologians of the 20th century, Henri de Lubac, SJ, who believed that humanism, closed off from other realities and God Himself, will become inhuman and eventually turn out to be directed against man¹²⁶. Whereas true humanism, as Paul VI affirms, is not only open to other realities but points the way toward God, the ultimate Creator¹²⁷. Pope writes: «Man is not the ultimate measure of man»¹²⁸ as one can only become truly human by passing beyond himself. Moreover, as narrow humanism that is closed off from God and the Truth, in the long run, will end up being used against humanity; technological thinking and perception of the world, if it will still be closed in on itself, close off from God, moral values and humanity whom it should serve, will also turn out to be used against humans. One can even assume that narrow humanism, to a certain extent, brings forth the technocratic paradigm.

Regarding the question of technological development, Paul VI writes that «technical expertise is necessary, but it must be accompanied by concrete signs of genuine love»¹²⁹. The bishop of Rome believes that expert knowledge cannot have superiority in every sphere of life, nor can technological culture be regarded as the only culture and other cultures be considered with haughty disdain¹³⁰. He appeals for global

¹²⁴ *Populorum Progressio*, §34.

¹²⁵ *Ibid.*, §42.

¹²⁶ Cf. LUBAC H. *The Drama of Atheist Humanism*. London 1949, 7.

¹²⁷ Cf. *Populorum Progressio*, §42.

¹²⁸ *Ibid.*, §42.

¹²⁹ *Ibid.*, §72.

¹³⁰ Cf. *Ibid.*, §72.

dialogue on man between cultures and countries, where not just economic progress but human betterment and spiritual growth will be considered, saying:

Sincere dialogue between cultures, as between individuals, paves the way for ties of brotherhood. Plans proposed for man's betterment will unite all nations in the joint effort to be undertaken if every citizen – be he a government leader, a public official, or a simple workman – is motivated by brotherly love and is truly anxious to build one universal human civilization that spans the globe. Then we shall see the start of a dialogue on man rather than on the products of the soil or of technology¹³¹.

The main message of «*Populorum Progressio*» is that progress should be in service to the whole of humanity, not just a few nations or few people in power, and it cannot be obtained at the expense of others. Although Pope Paul VI raises the question of technological and economic development and its consequences only in this encyclical, the teaching made a profound impact on the further development of CST – in 1987 «*Sollicitudo Rei Socialis*», an encyclical letter by Pope John Paul II, was promulgated in commemoration of the twentieth anniversary of «*Populorum progression*». The legacy of Paul VI not only influenced the ideas of John Paul II on the difference between development and progress but also became a great inspiration for the magisterial teachings on the matter of the 266th Pope of the Catholic Church, Francis, whose teachings are the focus of our research.

The rise of technology in the 20th century tremendously transformed the world. With all the rapid inventions and innovations in the sciences, the socio-cultural phenomenon of the shift of collective consciousness to the technocratic paradigm began to occur. The rise of technologies enabled humanity to master reality in a totally new way, changing the traditional social orders, cultures, and values established for centuries. Therefore, with all the advances and breakthroughs of contemporary civilization, many new challenges began to appear, showing the global society how fragile peace and stability can be. Abuse of power and unethical usage of technological advancements that caused the tragic death of millions gave humanity a painful lesson – misguided usage of scientific discoveries and technological developments threatens humanity more than anything else. Human reason and progress, which were celebrated in the last century, occurred to be the biggest dangers for mankind if the development

¹³¹ *Ibid.*, §73.

of ethics and morals does not accompany them. The Catholic Church in the 20th century recognized an urgent need for societal renewal and appealed to the global society for concerted actions towards humanity's complete development, having all peoples in mind. Both Popes John XXIII and Paul VI called upon humanity to respect the true hierarchy of values and remember that culture that arises from scientific progress should be subordinated to the needs of the human person and the global community. Their wisdom heritage, especially on social matters, influenced the further development of Catholic social teaching and guided succeeding Pontiffs in their work.

CHAPTER II

POSTMODERNISM: POSITION OF THE HOLY SEE ON SCIENTISM AND THE TRUE PURPOSE OF PROGRESS

2.1. TECHNOLOGY AND SCIENCE IN THE SOCIAL TEACHING OF PAPA JOHN PAUL II

2.1.1. The question of technology and man's estranged relationship with it

John Paul II, called by many as the Pilgrim Pope¹, was a young bishop at the time the Second Vatican Council was convened in 1962. Born Karol Wojtyła, he will assume Peter's succession in 1978 after 33 days pontificate of his predecessor John Paul I. Cardinal Wojtyła participated in every session of Vatican II; however, his most recognized contribution was his involvement in the work of the committee drafting «Gaudium et Spes», the Pastoral Constitution on the Church in the Modern World². While being traditional in the Church's discipline, Wojtyła showed acceptance of Council's reforms and was seen as a compromise candidate for the divided into liberals and conservatives post-conciliar Church³. When elected to the papacy by the second papal conclave of 1978, Wojtyła decided to assume the name of his precursor – John Paul. For many, it signaled his aspirations to continue the work of two popes of the Second Vatican Council, John XXIII and Paul VI, and to fulfill the Council's teachings⁴. During his pontificate of more than 26 years, recognized by many as an era of effective pastoral leadership, he constantly referred to the Council, quoting its documents, including «Gaudium et Spes», on numerous occasions. He developed the notion of freedom that is tethered to truth and deepened the concept of new humanism encoded in «Gaudium et Spes»⁵. In 1992, on the 30th anniversary of the opening of Vatican II, he promulgated The Catechism of the Catholic Church that became an

¹ Cf. PEPINSTER C. *John Paul II: Reflections from The Tablet*. London 2005, 5.

² Cf. *Witness to Hope: The Biography of Pope John Paul II*, 146.

³ Cf. *John Paul II: Reflections from The Tablet*, 12.

⁴ Cf. SHOWALTER M. F. et al. *Vatican II Part 1: The Legacy of Popes John and Paul: Second Vatican Council II* faithmag.com (26.10.2021).

⁵ Cf. WEIGEL G. *Rescuing Gaudium et Spes: The New Humanism of John Paul II*. Washington 2010, 264.

embodiment of the Catholic Church teaching in the light of Council. In the Apostolic Constitution «Fidei Depositum» on the publication of the Catechism, he wrote: «This Catechism will make a very important contribution to that work of renewing the whole life of the Church, as desired and begun by the Second Vatican Council»⁶.

In 1969, almost ten years before his installation as Pontiff, «Person and Act and Related Essays», his major work in phenomenology, was published. In the text, the future Pope developed a phenomenological approach to technology, regarding it as a matter of serious philosophical reflection. Like many other scholars in the debate, the theologian considered technology carefully⁷. In his first encyclical, «Redemptor Hominis», issued in 1979 – less than five months after his papal inauguration, Pontiff continued his thoughts on the matter. In this document, which became a blueprint for his ministry⁸, Pope explains that his intention in this work is to adapt Vatican II teaching to the signs of the time and to the demands of the contemporary world that is continually changing. He addresses contemporary societal challenges and speaks about a redeemed man and his situation in the modern world. In the third chapter of the document, John Paul II refers to the question of technology and man's estranged relationship with it. He starts the section by stating that the main drama of modernity and present-day human existence in its universal dimension is the situation where man's activity often is subjected to *alienation* (in the sense that the result of a person's work is taken away from him) and, what is even worse, directed against him⁹. Pope writes: «The man of today seems ever to be under threat from what he produces, that is to say from the result of the work of his hands and, even more so, of the work of his intellect and the tendencies of his will»¹⁰. In an unforeseeable way, an activity that one produces often turns against man himself, and he, therefore, lives increasingly in fear, according to Pope, who continues his thought saying:

Man is afraid that what he produces – not all of it, of course, or even most of it, but part of it and precisely that part that contains a special share of his genius and initiative – can radically

⁶ *Fidei Depositum*, 2.

⁷ Cf. PERRY T. *The Legacy of John Paul II: An Evangelical Assessment*. Westmont 2007, 44.

⁸ Cf. *John Paul II: Reflections from The Tablet*, 17.

⁹ Cf. *Redemptor Hominis*, §15.

¹⁰ *Ibid.*, §15.

turn against himself; he is afraid that it can become the means and instrument for an unimaginable self-destruction, compared with which all the cataclysms and catastrophes of history known to us seem to fade away¹¹.

God, the Ultimate Creator, from the very beginning gave man the power to subdue the earth (Cf. Gen 1:28), so why is the power given to man to serve his good now is turning against him? The question that arises in the heart of man needs to be answered. The estranged and irresponsible relationship between human and his creation, technology in particular, makes not only what man produces be turned against humanity but also threatens to cause irrevocable damage to nature and the whole Earth. John Paul II, addressing man's instrumental view on nature and his estranged relationship with it, writes:

Exploitation of the earth not only for industrial but also for military purposes and the uncontrolled development of technology outside the framework of a long-range authentically humanistic plan often bring with them a threat to man's natural environment, alienate him in his relations with nature and remove him from nature¹².

Modern man's excessive concern with efficiency and usefulness, which gave rise to an instrumental approach towards everything, including humans, makes humanity see everything as a resource to pursue economic or technological goals that usually, as one thinks, need to be achieved immediately. This technologized understanding of the world Martin Heidegger explained with his term *enframing* reviewed by us in the first chapter. Everything started being considered for some technical use as if man is not concerned with the future consequences of his actions¹³. Speaking about human's obsession with immediate gratification and therefore irresponsible exploitation of the planet's resources, Pontiff insists on the proper understanding of man's relationship with nature. He claims that God created man and told him to «subdue the earth» and «have dominion over every living thing» (Cf. Gen 1:28) in the sense of being a *master* and *guardian* of it while man approach planet and its resources as an irresponsible «*exploiter* and *destroyer*»¹⁴. Pope refers to the Second Vatican Council and its teachings on God's first message to man about human-nature relationship, found in

¹¹ *Ibid.*, §15.

¹² *Ibid.*, §15.

¹³ Cf. *The Question Concerning Technology and Other Essays*, 23.

¹⁴ Cf. *Redemptor Hominis*, §15.

«Lumen Gentium», Dogmatic Constitution on the Church. He writes: «The essential meaning of this *kingship* and *dominion* of man over the visible world, which the Creator himself gave man for his task, consists in the priority of ethics over technology, in the primacy of the person over things, and in the superiority of spirit over matter»¹⁵. Thus, Pontiff refers to what John XXIII called the true hierarchy of values¹⁶, reminding that technology and science, essentially, are only instrumental in character and not supreme values in themselves, therefore cannot be prioritized over truth, morals, and ethics – they cannot be prioritized over human.

2.1.2. The true purpose of progress and development

As a contemporary civilization, where technology is prioritized over ethics, came into a moral crisis caused by the changes in the hierarchy of values¹⁷, John Paul II urges the global society to move forward to the proportional development of morals. Pontiff encourages humanity to think about the true purpose of progress and technological development and honestly answer the following questions: does progress make man, its creator and promoter, experience his life on earth in a *more human* way? Does humanity become truly better, more aware of the dignity of human life and human person due to progress? Does technological progress help people to mature spiritually, be more responsible and open to others? Indeed, Pope writes, in various aspects, it does¹⁸. The marvel of progress shows authentic signs of man's greatness, but still, «this progress cannot fail to give rise to disquiet on many counts»¹⁹. These signs of human greatness that is man's creative power that gave birth to progress and technoscientific revolution, Pope describes as «signs that in their creative seeds were revealed to us in the pages of the Book of Genesis»²⁰. At the same time, it was man's irresponsible use

¹⁵ *Ibid.*, §16.

¹⁶ Cf. *Mater et Magistra*, §176.

¹⁷ Cf. *Ibid.*, §176.

¹⁸ Cf. *Redemptor Hominis*, §15.

¹⁹ *Ibid.*, §15.

²⁰ *Ibid.*, §15.

of his creative power, given to him by God to be a master and guardian of the earth, that led to the situation in the modern world, where one should ask himself, is technological progress really progress for humanity, or maybe it became a threat. Undoubtedly, humanity is capable of creating marvelous things, but one must always be guided by ethical principles in its discoveries as man can not only be progressing but also regressing in his humanity if the development is not guided by morals. Pope John Paul II, assessing modern technocratic civilization and human's fascination with progress, especially when it comes to scientific and technological progress, writes: «The development of technology and the development of contemporary civilization, which is marked by the ascendancy of technology, demand a proportional development of morals and ethics. For the present, this last development seems unfortunately to be always left behind»²¹. This call to create universal ethics of technology and progress will later be continued by Pope Francis, culminating in Rome Call for AI ethics – *algor-ethics*, that will promote values and principles to regulate technology so it can benefit humanity and the environment²².

In 1987, Pope John Paul II issued the encyclical «*Sollicitudo Rei Socialis*» to celebrate the 20th anniversary of Pope Paul VI's «*Populorum Progressio*» and to pay homage to the Second Vatican Council. In this letter, he continued the direction of Paul VI's social teaching on the development of peoples, enriching and updating it to the contemporary social issues «to reaffirm the continuity of the social doctrine as well as its constant renewal»²³. John Paul II in his encyclical describes «*Populorum Progressio*» as an application of the Council's teachings, as the document makes continually reference to the texts of Vatican II, «has the same purpose in full fidelity to the inspiration of the Council»²⁴, and flows from the same concern that inspired the Pastoral Constitution «*Gaudium et Spes*»²⁵. Thus, Pontiff explains the connection between important documents of CST and characterizes the encyclical as a contribution

²¹ *Ibid.*, §15.

²² Cf. *Rome Call for AI Ethics* [PDF]. Rome 2020, 3.

²³ *Sollicitudo Rei Socialis*, §3.

²⁴ *Ibid.*, §6.

²⁵ Cf. *Ibid.*, §6.

«which, in keeping with the great tradition of the Church's social teaching, takes up again in a direct manner the new exposition and rich synthesis which the Council produced, notably in the Constitution "Gaudium et Spes"»²⁶.

In chapter IV of «Sollicitudo Rei Socialis», dedicated to the question of authentic human development, John Paul II distinguishes *development* and *progress* concepts. Pope writes that «development is not a straightforward process»²⁷, claiming the idea that humanity is able to progress rapidly to some sort of perfection is linked to «philosophical connotations deriving from the Enlightenment»²⁸. He continues by stating that the concept of *progress* is now seriously doubted by many as humanity has experienced the horrors of world wars, atomic bombings, and the destruction of millions in the 20th century that were possible due to the progress and rapid development of technologies. It became evident that *progress*, especially when it comes to technological progress, can be used against man its creator, causing suffering and deaths of many. Moreover, when its danger arose, «naive mechanistic optimism has been replaced by a well-founded anxiety for the fate of humanity»²⁹. Simultaneously the concept of *economic* linked to the word *development* started being reconsidered as well³⁰, the Pontiff states, explaining:

In fact there is a better understanding today that the mere accumulation of goods and services, even for the benefit of the majority, is not enough for the realization of human happiness. Nor, in consequence, does the availability of the many real benefits provided in recent times by science and technology, including the computer sciences, bring freedom from every form of slavery³¹.

Pope asserts that 20th-century experience has shown that unless progress, including technological progress with all the resources and potential at humanity's disposal, is guided with moral and ethical principles and oriented towards the service to humankind, it will always threaten man³². For this reason, as mentioned in footnote 50, the encyclical's author chose to use the word *development* rather than *progress* while

²⁶ *Ibid.*, §7.

²⁷ *Ibid.*, §27.

²⁸ *Ibid.*, §27.

²⁹ *Ibid.*, §27.

³⁰ Cf. *Ibid.*, §27.

³¹ *Ibid.*, §28.

³² Cf. *Ibid.*, §28.

also trying to explain the fullest meaning of the first term³³. Thus, the concept of progress is risen by the Pope only in the theological and soteriological context: faith in Christ the Redeemer, as stated, «illuminates from within the nature of development»³⁴ whereas humans' effort to raise up the human condition prepares humankind for «fullness of Him Who fills everything in every way» (Eph 1:22-23)³⁵. Hence, Pontiff rethinks the concept of progress, stating:

The dream of *unlimited progress* reappears, radically transformed by the new outlook created by Christian faith, assuring us that progress is possible only because God the Father has decided from the beginning to make man a sharer of his glory in Jesus Christ risen from the dead [...] In Him God wished to conquer sin and make it serve our greater good, which infinitely surpasses what progress could achieve³⁶.

John Paul II continues his thoughts on development, recognizing the difference between *underdevelopment* and *super-development*. The first term, *modern underdevelopment*, regards social conditions of developing countries³⁷ with not only economic but also cultural and political underdevelopment that appears, according to Pope, to be «the result of a too narrow idea of development, that is, a mainly economic one»³⁸. Whereas *super-development* refers to the «excessive availability of every kind of material goods for the benefit of certain social groups»³⁹ that often enslaves people with the idea of possession and makes them always be in a compulsive search of multiplication of goods and immediate gratification. Describing these circumstances, Pontiff uses the term *consumerism* to indicate what he calls a *civilization of consumption*⁴⁰, also known as a *consumer society*⁴¹. This super-development and consumerism culture, occurring mainly in the developed countries⁴², produces much waste and entails constant throwaway when people, as Pope states, see «no other

³³ Cf. *Ibid.*, footnote 50.

³⁴ *Ibid.*, §31.

³⁵ Cf. *Ibid.*, §31.

³⁶ *Ibid.*, §31.

³⁷ *Developing country*, a country with little industrial and economic activity and where people generally have low incomes (*Dictionary* // dictionary.cambridge.org (29.10.2021)).

³⁸ *Sollicitudo Rei Socialis*, §15.

³⁹ *Ibid.*, §28.

⁴⁰ Cf. *Ibid.*, §28.

⁴¹ *Consumer society*, a society in which people often buy new goods, especially goods that they do not need, and in which a high value is placed on owning many things (*Dictionary* // dictionary.cambridge.org (11.08.2021)).

⁴² *Developed country*, a country with a lot of industrial activity and where people generally have high incomes (*Dictionary* // dictionary.cambridge.org (29.10.2021)).

horizon than the multiplication or continual replacement of the things already owned with others still better»⁴³.

John Paul II develops his thought on a matter and refers to the encyclical of Paul VI «*Populorum Progressio*» and the Second Vatican Council teaching when clarifying the difference between *having* and *being*: «To *have* objects and goods does not in itself perfect the human subject, unless it contributes to the maturing and enrichment of that subject's *being*, that is to say unless it contributes to the realization of the human vocation as such»⁴⁴. Speaking about «one of the greatest injustices in the contemporary world»⁴⁵ – the fact that only a few people possess most of the world's resources while most of the population possess almost nothing, Pope explains that those who possess much do not succeed in *being* because of the constant obsession with *having* that ultimately changes the hierarchy of values in their life. While the others, poor and deprived, are left with not many chances to succeed in fulfilling their purpose and human vocation in life because of the lack of essential resources and goods. Pontiff points out that the development limited only to the economic dimension eventually turns against those whom it should be at service⁴⁶. Therefore, the full development, one that is *more human* – «development of the whole human being and of all people»⁴⁷, John Paul II writes quoting his predecessor Paul VI's teaching, is needed⁴⁸. He continues, stating:

Peoples or nations too have a right to their own full development, which while including – as already said – the economic and social aspects, should also include individual cultural identity and openness to the transcendent. Not even the need for development can be used as an excuse for imposing on others one's own way of life or own religious belief⁴⁹.

Pope insists that the development of the whole person and of every human being is an imperative which obliges all societies, nations, Churches, and other Ecclesial

⁴³ *Sollicitudo Rei Socialis*, §28.

⁴⁴ *Ibid.*, §28.

⁴⁵ *Ibid.*, §28.

⁴⁶ Cf. *Ibid.*, §28.

⁴⁷ *Populorum Progressio*, §14.

⁴⁸ Cf. *Sollicitudo Rei Socialis*, §30.

⁴⁹ *Ibid.*, §32.

Communities, as well as each and every man and woman, to collaborate in the pursuit of integral human development⁵⁰.

In the encyclical «*Evangelium Vitae*», promulgated in 1995 and dedicated to the question of the sanctity of human life, Pope John Paul II condemns the widespread of what he calls *the culture of death* and opposes it with *the culture of life* – both concepts introduced by him for the first time in the document. While Pope Paul VI, in his address during the last general meeting of the Vatican II on 7 December 1965, describes the modern mind as something «accustomed to assess everything in terms of usefulness»⁵¹, John Paul II goes even further. St. Peter's successor writes about the socio-cultural phenomenon of the shift of collective consciousness to the efficiency paradigm that denies solidarity and gives rise to the culture of death: «This culture is actively fostered by powerful cultural, economic and political currents which encourage an idea of society excessively concerned with efficiency»⁵². He describes this situation as «a war of the powerful against the weak»⁵³, where a life that requires more support, care, and acceptance, is considered as useless, as an intolerable burden that will eventually be rejected⁵⁴. Heidegger's standing-reserve concept⁵⁵, which we already mentioned in the first chapter of this paper, explains the attitude towards life that concerns Pontiff. Evidently, humans started being considered as a pure resource that can be used in time, as something that does not possess value or has no meaning in itself unless it is efficient and useful for economics and society – humans started being approached as standing-reserve. John Paul II describes this kind of approach towards one's being as a «conspiracy against life»⁵⁶, clarifying the thought: «A person who, because of illness, handicap or, more simply, just by existing, compromises the well-being or lifestyle of those who are more favoured tends to be looked upon as an enemy to be resisted or

⁵⁰ Cf. *Ibid.*, §32.

⁵¹ *Address during the last general meeting of the Second Vatican Council*, 6.

⁵² *Evangelium Vitae*, §12.

⁵³ *Ibid.*, §12.

⁵⁴ Cf. *Ibid.*, §12.

⁵⁵ Cf. *The Question Concerning Technology and Other Essays*, 17.

⁵⁶ *Evangelium Vitae*, §17.

eliminated»⁵⁷. He states that this conspiracy changes not only interpersonal and family relationships but goes far beyond – it is damaging and sometimes even ruining relationships between peoples and states on the international level⁵⁸. Pope John Paul II's teaching on the matter concerning the culture of death will also later influence Pope Francis, who will develop the concept of throwaway culture, the one he will repeatedly decry⁵⁹.

2.1.3. The rise of scientism and its consequences for the global community

Pope John Paul II criticized excessive societal concern with efficiency and progress that is not followed with moral development; he condemned the culture of death, which he believed arises from the instrumental attitude towards the world. Despite that, he praised human creativity and devotion to work if it is directed to full human development. In one of the papal documents, he wrote: «The Church cannot but set great value upon reason's drive to attain goals which render people's lives ever more worthy»⁶⁰. Pope did not think philosophy and science contradict faith. On the contrary, he believed faith and reason both are crucial for people to discover the truth and know God, so in 1998 he issued the encyclical «Fides et Ratio», devoted to the relationship between faith and reason.

Pontiff starts the encyclical letter with words of blessing, saying: «Faith and reason are like two wings on which the human spirit rises to the contemplation of truth»⁶¹. Some scholars point at Heidegger's influence on John Paul II's understanding of philosophy and its history. Though never explicitly mentioned, Heidegger's concept of the *history of being* (*Seinsgeschichte*)⁶² can be traced in many sections of the

⁵⁷ *Ibid.*, §12.

⁵⁸ Cf. *Ibid.*, §12.

⁵⁹ GABRIEL P. *A Throwaway Culture is a Culture of Death* // catholicoutlook.org (4.11.2020).

⁶⁰ *Fides et Ratio*, §5.

⁶¹ *Ibid.*, §1.

⁶² Heidegger's concept *Seinsgeschichte* indicates that *the history of being* is not an objective genitive, but rather a subjective genitive. The history of being does not tell the story of how people in some epoch or other understood being so that we can neatly pigeonhole and investigate this history. This would turn *being*, according to Heidegger, into an object of historiographical investigation and on top of that make the history of being linear. Being, or rather being itself, as the philosopher puts it, is at work *as* its history. Put differently, being with all its fissures *is* the history of histories,

encyclical⁶³. In the encyclical letter, Pope outlines the problems of modern human, which are that man, who is called to direct his steps towards what transcends him, neglected the search for ultimate truth, while modern thought is rather focused on man himself than on the transcendent reality. Pontiff continues, saying that modern philosophy abandoned the investigation of *being*, centering instead on human *knowing*, fostering the development of knowledge and culture. By neglecting the human capacity to search and know the truth, humanity gave rise to agnosticism and relativism, devaluing the truths that have been certain for centuries and making various doctrines more and more prominent. Thus, a plurality of positions, according to John Paul II, made way to an assumption that all positions are equally valid⁶⁴, giving rise to pluralism⁶⁵. Pope continues: «Sundered from that truth, individuals are at the mercy of caprice, and their state as person ends up being judged by pragmatic criteria based essentially upon experimental data, in the mistaken belief that technology must dominate all»⁶⁶. With the rise of pluralism and devaluation of traditional values and truths, another threat has occurred – *scientism*, which Pope explains explicitly:

This is the philosophical notion which refuses to admit the validity of forms of knowledge other than those of the positive sciences; and it relegates religious, theological, ethical and aesthetic knowledge to the realm of mere fantasy. In the past, the same idea emerged in positivism and neo-positivism, which considered metaphysical statements to be meaningless. Critical epistemology has discredited such a claim, but now we see it revived in the new guise of scientism, which dismisses values as mere products of the emotions and rejects the notion of being in order to clear the way for pure and simple facticity⁶⁷.

John Paul II argues the rejection of the notion of *being* and the existence of universal truth yields science to dominate in all dimensions of human life through technological progress, giving rise to what Pope calls the *scientific outlook* that is being globally

beyng occurs historically, *geschichtlich*, or *geschicklich*, as Heidegger sometimes names it. That means that beyng sends possibilities which humans respond to and these responses push back into beyng (NIEDERHAUSER J. A. *Heidegger on Death and Being: An Answer to the Seinsfrage*. Berlin 2020, 130).

⁶³ HEMMING L. P. *John Paul II's Call for a Renewed Theology of Being // John Paul II as Philosopher // Forum for European Philosophy*. London 2006, 3.

⁶⁴ Cf. *Fides et Ratio*, §5.

⁶⁵ *Pluralism*, an interpretation of social diversity. It can be rendered as a cultural, political, or philosophical stance. In any of these versions, pluralism offers an account of social interaction understood as an interplay of conflicting and competing positions that cannot be seamlessly reduced to one another, ranked in one single order permanently, or reduced to a single institutional arrangement (YUMATLE C. *Pluralism* [PDF] // GIBBONS M. T. (ed.). *The Encyclopedia of Political Thought*. Wiley-Blackwell 2014).

⁶⁶ *Fides et Ratio*, §5.

⁶⁷ *Ibid.*, §88.

propagated in the postmodern era. It is important to be noted, Pontiff continues, that scientism does not recognize there is any meaning in one's life, and it does not leave any space for critical ethical judgement⁶⁸. He writes: «The *scientistic mentality* has succeeded in leading many to think that if something is technically possible it is therefore morally admissible»⁶⁹. Thus, lack of development in ethics and morals, notable neglects of traditional values, and total rejection of the belief there is objective truth have led societies, predominantly industrialized and technologically developed, to nihilism.

There is an extensive discussion on nihilism in the encyclical letter «Fides et Ratio». Reflecting on the origin and later crisis of rationalism philosophy, Pope John Paul II goes further by critiquing «a philosophy of nothingness»⁷⁰, as he calls nihilism, the view that considers everything as provisional and fleeting and sees life solely as an occasion for sensations and experiences, creating the mentality of meaninglessness⁷¹. Though Friedrich Nietzsche, often taken as the father of postmodern philosophy⁷², is never explicitly mentioned in any section of the document, many commentators of the encyclical claim John Paul II attributes nihilism to postmodern philosophy with Nietzsche in mind⁷³. Horrific crimes and evil experienced by many in the 20th century made clear that technology and science, both products of man's activity and reason, can be turned against humanity and cause the death of millions. And it ensured the collapse of rationalist optimism, which, according to Pontiff, «viewed history as the triumphant progress of reason, the source of all happiness and freedom»⁷⁴. Terror, wars, genocides, and many other crimes against humanity not just disappointed people in reason and progress but also caused despair, leaving many feeling trauma, constant fear, and meaninglessness. Thus, rationalism yielded to nihilism. In spite of this, a

⁶⁸ Cf. *Ibid.*, §88.

⁶⁹ *Ibid.*, §88.

⁷⁰ *Ibid.*, §46.

⁷¹ Cf. *Ibid.*, §46.

⁷² Cf. LITOWITZ D. E. *Postmodern Philosophy and Legal Thought*. Ph.D. Dissertation, Loyola University Chicago 1997, 83.

⁷³ Cf. MANIMALA V. (ed.). *Faith and Reason Today: Fides Et Ratio in a Post-Modern Era*. Washington 2008, 56.

⁷⁴ *Fides et Ratio*, §91.

belief that due to scientific and technical progress «man and woman may live as a demiurge, single-handedly and completely taking charge of their destiny»⁷⁵ still remains well-received by many in the opinion of Pope John Paul II⁷⁶.

John Paul II praises man's progress in science and technology, although he urges human society to concentrate on the development of morals and ethics to humanize technology and use it according to its true purpose – to be an instrument of service for the full development of human being and the whole human society in general. He emphasizes on the priority of ethics over technology and appeals to the whole of humanity:

To use science and technology in a full and constructive way, while recognizing that the findings of science have always to be evaluated in the light of the centrality of the human person, of the common good and of the inner purpose of creation. Science may help us to correct the mistakes of the past, in order to enhance the spiritual and material well-being of the present and future generations⁷⁷.

It is important, as Pontiff mentions, to learn from the past and correct its mistakes and focus on sustainable development to build the world with a safe future for new generations. With this in mind, he urgently calls philosophers for cooperation to recover and protect «in the flow of an enduringly valid philosophical tradition, the range of authentic wisdom and truth – metaphysical truth included – which is proper to philosophical enquiry»⁷⁸. Pope encourages all people to strive for truth and be attentive to the good that it contains, for only due to this will we be able to formulate the genuine ethics contemporary society needs so urgently. Finally, Pope addresses the scientific community, showing his admiration and encouraging «these brave pioneers of scientific research, to whom humanity owes so much of its current development»⁷⁹ to move forward in their service. Yet, he urges scientists to always remember that science should serve human beings and not vice versa. He asks experts in science and technology to «continue their efforts without ever abandoning the sapiential horizon

⁷⁵ *Ibid.*, §91.

⁷⁶ Cf. *Ibid.*, §91.

⁷⁷ POPE JOHN PAUL II – ECUMENICAL PATRIARCH BARTHOLOMEW I OF CONSTANTINOPLE. *Common Declaration on Environmental Ethics* [PDF]. Rome – Venice 2002, §3.

⁷⁸ *Fides et Ratio*, §106.

⁷⁹ *Ibid.*, §106.

within which scientific and technological achievements are wedded to the philosophical and ethical values which are the distinctive and indelible mark of the human person»⁸⁰. Thus, Pontiff signalizes that technology can never be above ethics and never be prioritized over one's being. He appeals to modern man to search for the ultimate truth, one that transcendent him⁸¹.

Pope John Paul II became the second longest-serving pope. He wrote more books and documents, canonized more saints, and traveled to more countries than any other pope in the 2000-year history of the Catholic Church⁸². He also became the first Pope to ask forgiveness for the sins Christians had committed against human rights and for the Church's errors made in the past⁸³. Pontiff cared about social issues and dedicated himself to the development of the Catholic social doctrine body, continuing the tradition and his predecessors' work. For this purpose, he asked the Pontifical Council for Justice and Peace to consolidate and organize CST, which resulted in an important document – the Compendium of the Social Doctrine of the Church, published in 2004. Pontiff's teachings on scientific outlook, progress, man's alienation from nature, and his estranged relationship with technology inspired other St. Peter's successors and influenced their thoughts on the matter. Thus, John Paul II largely contributed for the Magisterial reflection and teaching on social matters of the contemporary world to be synthesized and presented to the global community as «an expression of the Church's constant commitment in fidelity to the grace of salvation wrought in Christ and in loving concern for humanity's destiny»⁸⁴.

2.2. THE TECHNOCRATIC IDEOLOGY ASSESSMENT BY POPE BENEDICT XVI

The very beloved by millions of people Pope John Paul II, who held the office for 26 years, died on 2 April 2005. During his long illness, cardinal Joseph Ratzinger, the

⁸⁰ *Ibid.*, §106.

⁸¹ Cf. *Ibid.*, §106.

⁸² Cf. MILL C. W. *Modern World Leaders: Pope Benedict XVI*. New York 2007, 13.

⁸³ *Witness to Hope: The Biography of Pope John Paul II*, 877.

⁸⁴ ПАПСЬКА РАДА СПРАВЕДЛИВОСТІ І МИРУ. *Компендіум соціальної доктрини Церкви*. Київ 2008, §8.

head of the Congregation for the Doctrine of the Faith and one of the closest allies of Pontiff, had taken over several administrative responsibilities and later, after the Pope's death, took over his funeral planning. John Paul II was an important and much-respected person on the world stage; thereby, it was clear for everyone, especially the cardinals, that the next elected Pontiff should be an experienced and well-known one. Thus, on 19 April, Cardinal Joseph Ratzinger, who also was a dean of the College of Cardinals, was elected as a new Pope. Ratzinger, a scholar at heart, chose the name of Benedict XVI to honor st. Benedict, the father of Western monasticism, and his teaching⁸⁵.

During the years of his papacy, when the Church was going through some turbulent period, acknowledged by many as one of the greatest crises in the history of the Catholic Church⁸⁶, Pope Benedict XVI was very much focused on the Church's pastoral leadership and crisis management regarding numerous scandals occurring in different parts of the world. Thus, concerning the challenges he was facing as the Head of the Church, he was not focused as much on the question of technology as did his predecessor. However, his primary thoughts on the matter can be found in his last encyclical letter, «Caritas in Veritate», promulgated in 2009.

Pope Benedict XVI starts the encyclical letter, stating that «Caritas in Veritate», translated as *love in truth*⁸⁷, is the key principle, the foundation of the Catholic social doctrine that takes on practical form in matters concerning man's moral action. He focuses on two particular criteria that govern human action, which he finds most relevant for «the commitment to development in an increasingly globalized society»⁸⁸. These are *justice* and the *common good*⁸⁹. Pope writes that *love in truth (caritas in veritate)* is a great challenge for the Church in the modern world, where progress, the

⁸⁵ Cf. *Modern World Leaders: Pope Benedict XVI*, 18-26.

⁸⁶ The author refers to the scandals surrounding numerous *cases of sexual abuse of minors* committed by the priests and religious of the Catholic Church. During his pontificate, Pope Benedict XVI dismissed some 400 priests and defined the canonical basis on which to prosecute bishops and cardinals who failed to comply with the corrective measures. During Pope Benedict XVI's pontificate, the Church also went through *the Vatileaks crisis* – the scandal concerning the leak of important Vatican documents, exposing corruption in the Church and other (Pope Emeritus Benedict XVI – Peter Seewald. *Last Testament: In His Own Words*. London 2017, 16-17).

⁸⁷ Cf. *Caritas in Veritate*, §9.

⁸⁸ *Ibid.*, §6.

⁸⁹ Cf. *Ibid.*, §6.

interdependence of people and, even more importantly, the interdependence of nations «is not matched by ethical interaction of consciences and minds that would give rise to truly human development»⁹⁰. Benedict XVI is referring to the social teaching of his predecessors, celebrating the encyclical letter «*Populorum Progressio*» and revisiting the teaching of Pope Paul VI on integral human development, that he illuminated in the document; as well as paying tribute to Pope John Paul II's encyclical «*Sollicitudo Rei Socialis*», that was issued to mark the 20th anniversary of the publication of «*Populorum Progressio*». Thereby, Benedict XVI refers to Paul VI's work as a new «*Rerum Novarum*» dedicated to the questions of the present age, shedding light on the path humanity ought to take towards unity and fraternity⁹¹. Thus, in the document, Pope Benedict XVI is developing the thoughts of his predecessors, primarily Paul VI and John Paul II, on the matter concerning modern social reality while contributing his ideas and creating a new synthesis.

Pope Benedict XVI refers to Paul VI's assessment of the technology that can be found in «*Populorum Progressio*»⁹², saying that the *dominant technocratic ideology* that is spreading around the world is a great danger for humanity. Pontiff warns that technology cannot be entrusted with the entire process of development, as it is often misguided and misused. He states that «technology, viewed in itself, is ambivalent»⁹³, and this is the reason nowadays we are witnessing two different kinds of views on technological progress, where some are inclined to entrust the entire process of development to technology, whereas the others deny «the very value of development, viewing it as radically anti-human and merely a source of degradation»⁹⁴. The last view rejects not only the harmful and distorted approach towards progress in sciences and technology but also neglects all the advances that scientific discoveries and progress itself can bring for humanity. Pontiff continues, stating that progress if it is wisely directed and well-used, could serve humanity on its path towards integral growth.

⁹⁰ *Ibid.*, §9.

⁹¹ Cf. *Ibid.*, §8.

⁹² Cf. *Populorum Progressio*, §34.

⁹³ *Caritas in Veritate*, §14.

⁹⁴ *Ibid.*, §14.

While the radical rejection of any kind of progress and the idea of a world without development can be a sign of man's lack of trust in God and himself accordingly⁹⁵. Both approaches towards technology and progress are incomplete and wrong, according to Pope, who states: «It is, therefore, a serious mistake to undervalue human capacity to exercise control over the deviations of development or to overlook the fact that man is constitutionally oriented towards *being more*. Idealizing technical progress or contemplating the utopia of a return to humanity's original natural state are two contrasting ways of detaching progress from its moral evaluation and hence from our responsibility»⁹⁶.

Pope Benedict XVI continues his thoughts on the true purpose of development, also considering some other documents⁹⁷ of Paul VI, that, even though they are not connected to the body of social doctrine, are, as he states, highly important for the proper understanding of *the fully human meaning of the development* that the Church proposes. Pontiff stresses: «Progress of a merely economic and technological kind is insufficient. Development needs above all to be true and integral»⁹⁸. Citing his predecessor, Pope writes that the essence of progress is foremost a *vocation*: «In the design of God, every man is called upon to develop and fulfill himself, for every life is a vocation»⁹⁹. Therefore, according to Benedict XVI, this makes the Church's involvement in the question concerning development legit, as it is concerned not only with technical aspects but with the meaning of human life and purpose¹⁰⁰. Pontiff writes: «To regard *development* as a *vocation* is to recognize, on the one hand, that it derives from a transcendent call, and on the other hand that it is incapable, on its own, of supplying its ultimate meaning»¹⁰¹. Thus, Benedict XVI asserts, the authentic integral human development lies in the advancement of all men and of the whole man

⁹⁵ Cf. *Ibid.*, §14.

⁹⁶ *Ibid.*, §14.

⁹⁷ Pope Benedict refers to Pope Paul VI's encyclical «*Humanae Vitae*» and the Apostolic Exhortation «*Evangelii Nuntiandi*» (*Populorum Progressio*, §15).

⁹⁸ *Ibid.*, §23.

⁹⁹ *Populorum Progressio*, §12.

¹⁰⁰ Cf. *Caritas in Veritate*, §16.

¹⁰¹ *Ibid.*, §16.

and «if it does not involve the whole man and every man, it is not true development»¹⁰². In the second chapter of the encyclical, Pontiff explains the Church's concerns about the phenomenon of technological society and its capacity to make good use of the instruments at its disposal, saying:

Profit is useful if it serves as a means towards an end that provides a sense both of how to produce it and how to make good use of it. Once profit becomes the exclusive goal, if it is produced by improper means and without the common good as its ultimate end, it risks destroying wealth and creating poverty¹⁰³.

Therefore, according to the teaching of Pope Benedict XVI, the true purpose of progress lies in the service of humanity. Pontiff asserts that development is not the goal in itself, it is a tool for humans to realize their God-given vocation in life¹⁰⁴. Thus, the reduction of cultures to the technological dimension, even for the sake of short-term advancements or profits, according to Pope, in the long term, impedes reciprocal enrichment, destructively influences human nature, and damages interpersonal relations¹⁰⁵. Developing the teaching of Vatican II about technological culture being harmonized with a culture nourished by classical studies, outlined in the «*Gaudium et Spes*»¹⁰⁶, Benedict XVI writes the following «Technologically advanced societies must not confuse their technological development with a presumed cultural superiority but must rather rediscover within themselves the oft-forgotten virtues which made it possible for them to flourish throughout their history»¹⁰⁷. He emphasizes the importance of being faithful to what is truly human in various traditions and not letting the mechanisms of a globalized technological civilization overlay its culture over authentic cultures and traditions¹⁰⁸.

However, Pope Benedict's full position regarding development and technology can be found mainly in the last chapter of the encyclical letter, entitled «The development of peoples and technology». In the sixth chapter of «*Caritas in Veritate*»,

¹⁰² *Ibid.*, §18.

¹⁰³ *Ibid.*, §12.

¹⁰⁴ Cf. *Ibid.*, §12.

¹⁰⁵ Cf. *Ibid.*, §32.

¹⁰⁶ Cf. *Gaudium et Spes*, §56.

¹⁰⁷ *Caritas in Veritate*, §59.

¹⁰⁸ Cf. *Ibid.*, §59.

Pontiff addresses the modern challenges of development concerning *technological progress*, as both are «closely linked»¹⁰⁹. Pope emphasizes that «technology [...] is a profoundly human reality, linked to the autonomy and freedom of man. In technology, we express and confirm the hegemony of the spirit over matter»¹¹⁰ as due to technology, man can exercise his dominion over matter. Pontiff appreciates all the advances and improvements in the conditions of life gained through technological development; therefore, he asserts technology helps one to realize the vocation of human labor. He continues his thought, referring to Pope John Paul II¹¹¹ when stating:

In technology, seen as the product of his genius, man recognizes himself and forges his humanity. Technology is the objective side of human action whose origin and *raison d'être* (purpose) is found in the subjective element: the worker himself. For this reason, technology is never merely technology. It reveals man and his aspirations towards development, it expresses the inner tension that impels him gradually to overcome material limitations¹¹².

Thus, technology, according to the Pope, is a human response to God's command that He has entrusted to humanity, *to till and to keep the earth* (cf. Gen 2:15), so its purpose is to «reinforce the covenant between human beings and the environment»¹¹³ and be the mirror of God's creative love¹¹⁴.

Pope Benedict XVI, as mentioned above, considers technology as ambivalent. He states it is easy for a man to fall into the false belief that technology is self-sufficient when one is more concerned with the *how* questions rather than concentrating on *why* questions when regarding the matters of human activity. He writes about the danger of such belief, saying: «Produced through human creativity as a *tool* of personal freedom, technology can be understood as a manifestation of absolute freedom, the freedom that seeks to prescind from the limits inherent in things»¹¹⁵. Citing Pope Paul VI¹¹⁶, Pope warns humanity not let technology to become an ideological power that will «hold us back from encountering being and truth»¹¹⁷. Because, according to Pope Benedict XVI,

¹⁰⁹ *Ibid.*, §68.

¹¹⁰ *Ibid.*, §69.

¹¹¹ Pope John Paul II. Encyclical *Laborem Exercens* [PDF]. Castel Gandolfo 1981, 6-7.

¹¹² *Caritas in Veritate*, §69.

¹¹³ *Ibid.*, §69.

¹¹⁴ Cf. *Ibid.*, §69.

¹¹⁵ *Ibid.*, §69.

¹¹⁶ Cf. Pope Paul VI. Apostolic letter *Octogesima Adveniens*. Vatican 1971, §29.

¹¹⁷ *Caritas in Veritate*, §69.

if it would happen, «we would all know, evaluate, and make decisions about our life situations from within a *technocratic cultural perspective* to which we would belong structurally, without ever being able to discover a meaning that is not of our own making»¹¹⁸. He shares his concerns about these cultural shifts, writing: «The *technical worldview* that follows from this vision is now so dominant that truth has come to be seen as coinciding with the possible»¹¹⁹. Pontiff asserts that efficiency and utility cannot be the sole criterion of truth as «true development does not consist primarily in *doing*»¹²⁰. Therefore, he states, there is a pressing need for developments in ethics to protect the truth and ensure the proper and responsible use of technology¹²¹.

In his message to the participants in the International Congress on Natural Moral Law on 12 February 2007, Pope Benedict XVI affirmed his position, stating that «not all that is scientifically possible is also ethically licit»¹²². He addressed the culture of human indifference to one another that arises from the technological worldview, saying:

Technology, when it reduces the human being to an object of experimentation, results in abandoning the weak subject to the arbitration of the stronger. To blindly entrust oneself to technology as the only guarantee of progress, without offering at the same time an ethical code that penetrates its roots in that same reality under study and development, would be equal to doing violence to human nature with devastating consequences for all¹²³.

Therefore, to respond to this crisis, Pontiff calls the scientific community to collaborate in finding the way to «understand the depth of our responsibility for man and nature entrusted to him»¹²⁴. Moreover, Pope Benedict XVI encourages all people, believers, and non-believers, and especially theologians, scientists, philosophers, and jurists, to join the global dialogue regarding the ethical bases of technological use with the following offer to legislation¹²⁵. Undoubtedly, Pontiff's critique of the *technical worldview* and his teaching on matters concerning technology will influence Pope

¹¹⁸ *Ibid.*, §69.

¹¹⁹ *Ibid.*, §69.

¹²⁰ *Ibid.*, §69.

¹²¹ Cf. *Ibid.*, §69.

¹²² Pope Benedict XVI. Address to the Participants in the International Congress on Natural Moral Law [PDF]. Vatican 2007, 3.

¹²³ *Ibid.*, 3.

¹²⁴ *Ibid.*, 3.

¹²⁵ *Ibid.*, 3-4.

Francis and his assessment of the globalization of what he calls the *technocratic paradigm*¹²⁶ that will be discussed in the following chapter.

On 10 February 2013, Pope Benedict XVI shocked the world when he announced his decision to renounce the ministry of Bishop of Rome, stating: «After having repeatedly examined my conscience before God, I have come to the certainty that my strengths, due to an advanced age, are no longer suited to an adequate exercise of the Petrine ministry [...] in today's world, subject to so many rapid changes»¹²⁷. It became the first time in over 600 years when a ruling Pontiff had stood down from the chair of St. Peter. This kind of event, although not unprecedented, still even a thousand years ago was an exception. Thus, the historic and revolutionary act fundamentally changed the papacy in the 21st century¹²⁸. Pope Benedict XVI, in his book, «The Light of the World», explained his decision, saying: «If a Pope clearly realizes that he is no longer physically, psychologically and spiritually capable of handling the duties of his office, then he has a right and, under some circumstances, also an obligation, to resign»¹²⁹. Pontiff, alongside Pope John Paul II, was at the forefront of the cultural, social, and political battle with the new philosophies, forms of power, and paradigms that were cropping out, enslaving and damaging humanity in all forms. Undoubtedly, Benedict XVI prepared the Church for a change, building a bridge to the new epoch. Thus, the Church's extraordinary and unexpected transition from Pope Benedict XVI to Francis began¹³⁰.

¹²⁶ Cf. *Laudato si'*, §106.

¹²⁷ Pope Benedict XVI. *Declaratio* [PDF]. Vatican 2013, 1.

¹²⁸ Cf. Pope Emeritus Benedict XVI – Peter Seewald. *Last Testament: In His Own Words*. London 2017, 15.

¹²⁹ Pope Emeritus Benedict XVI – Peter Seewald. *Light of the World: The Pope, The Church and the Signs of The Times*. San Francisco: Ignatius Press 2010, 29.

¹³⁰ Cf. Faggioli M. *Pope Francis: Tradition in Transition*. Mahwah: Paulist Press 2015, 7.

CHAPTER III

THE RISE OF TECHNOCRATIC PARADIGM AND ITS INFLUENCE ON THE GLOBAL SOCIETY: POPE FRANCIS’ APPROACH

3.1. THE GLOBALIZATION OF THE TECHNOCRATIC PARADIGM

On 13 March 2013, the papal conclave elected Cardinal Jorge Mario Bergoglio, a member of the Society of Jesus and Archbishop of Buenos Aires, who tendered his resignation from the position just a year before¹, to succeed Pope Benedict XVI and become the 266th head of the Catholic Church. Cardinal Bergoglio took the name Francis as a homage to St. Francis of Assisi, the poor friar who lived a life of humble service to the poor and was not afraid to criticize the luxuries of the Catholic Church during the Middle Ages – name containing an explicit message about the direction newly elected Pope will take in his pastoral leadership of the Catholic Church². Thus, from the very beginning of his pontificate, Francis has clearly shown he is starting a new phase for the Church, one of reform and spiritual renewal.

While John Paul II followed Paul VI, highlighting the great importance of the understanding and application of Catholic social teaching, Pope Francis has not addressed these matters regarding the status of CST in as much detail as did his Polish predecessor. However, he has done great work of offering his own distinctive guidance on discerning the shape and scope of one’s social obligations towards the whole of humanity³. In his message for the celebration of the 54th World Day of Peace on 1 January 2021, Pope stated that the principles of the Church’s social doctrine can serve

¹ Cardinal Jorge Mario Bergoglio submitted his offer of resignation from his assignment as Archbishop of Buenos Aires to the Pope on 17 December 2011, when he turned seventy-five. This letter of resignation was a matter of form; bishops were required to resign at the age of seventy-five, and the resignation might or might not be accepted. For the time being, Pope Benedict XVI did not accept Bergoglio’s resignation (GORMLEY B. *Pope Francis: The People’s Pope*. New York 2017, 211).

² Cf. PIQUÉ E. *Pope Francis: Life and Revolution: A Biography of Jorge Bergoglio*. Chicago 2014, 38, 43-53.

³ Cf. MASSARO T. *Social Welfare and Catholic Social Teaching: Foundational Theological Principles for Case Studies* // GLATZER M. – MANUEL P. C. (eds.). *Religions* 288 (2021) 11.

as a basis for the *culture of care*, which he has chosen to be the title of the year, saying: «This doctrine is offered to all people of good will as a precious patrimony of principles, criteria and proposals that can serve as a “grammar” of care: commitment to promoting the dignity of each human person, solidarity with the poor and vulnerable, the pursuit of the common good and concern for protection of creation»⁴. In this speech, Pontiff spoke about the culture of care as a path to peace and «as a way to combat the culture of indifference, waste, and confrontation so prevalent in our time»⁵, encouraging humanity to care for one another and build a more fraternal society⁶. During his pontificate, Francis promulgated three encyclical letters, though only two of them are the results of his papacy: «Laudato Si'», promulgated in 2015, and «Fratelli Tutti», issued in 2020.

In his social teaching, Pope Francis often appeals to the question of technoscience in the modern world. However, his main focus in matters concerning technology is the rise of what he calls a *technocratic paradigm* – an outlook that emerged from humanity's one-dimensional approach towards concepts of technology and progress. He addresses the phenomenon of technocratic civilization in most of his speeches and letters. Still, his full teaching on the subject can be mainly found in the encyclical letter «Laudato Si'», which became the first time ever for the Catholic Church to dedicate the subject of a document to the epochal environmental crisis⁷. In its third chapter, entitled «The Human Roots of the Ecological Crisis», Pontiff critiques the techno-economic paradigm and forms of power derived from technology that tremendously changed contemporary society. He calls humanity for a change in international policies and leadership approaches, culture, and lifestyle. At the beginning of the document, Francis emphasizes that this teaching is addressed to every living person on Earth. Thus, Pontiff encourages all the peoples to step into the global dialogue about

⁴ *Message for the Celebration of the 54th World Day of Peace*, §6.

⁵ *Ibid.*, §1.

⁶ Cf. *Ibid.*, §1.

⁷ SACHS W. *The Sustainable Development Goals and Laudato si': varieties of Post-Development? // Third World Quarterly* 38 (2017) 2582.

postmodernity's ethical, cultural, and spiritual crisis and its consequences to the Sister Earth, our «common home», as Pope often calls it.

At the beginning of the third chapter of «*Laudato si'*», Pope Francis claims that the way mankind perceives the place of human beings and human action in the world has gone awry due to the dominant technocratic paradigm, causing a global crisis – the one we have never experienced before⁸. He continues his thought, stating that technoscience has given humanity an enormous power that can be used for sustainable development and tremendous improvement in the quality of human life. However, if managed in the wrong way, it can cause environmental deterioration, human degradation, and social decay. Possibilities that are provided to us by the technological development «have given those with the knowledge, and especially the economic resources to use them, an impressive dominance over the whole of humanity and the entire world»⁹ – never in history has mankind possessed so much power over itself and nature. And «yet nothing ensures that it will be used wisely, particularly when we consider how it is currently being used»¹⁰. Thus, Pontiff claims it is not the technology itself that is so dangerous for the planet and humanity, it is the human approach to it we are witnessing now that is so dangerous. As all the immense developments in science and technology so far have «not been accompanied by a development in human responsibility, values, and conscience»¹¹.

Pope continues the direction of thought concerning technology of his predecessors, saying: «It is right to rejoice in these (technological) advances and to be excited by the immense possibilities which they continue to open up before us»¹². He refers to the words of John Paul II to state that science and technology are the results of God-given human creativity and greatness¹³. Therefore, Pontiff expresses his appreciation to all the scientists and engineers who are serving humanity and working towards the goals of sustainable development, particularly in the fields of medicine,

⁸ Cf. *Laudato si'*, §101.

⁹ *Ibid.*, §104.

¹⁰ *Ibid.*, §104.

¹¹ *Ibid.*, §105.

¹² *Ibid.*, §102.

¹³ Cf. JOHN PAUL II. Address to Scientists and Representatives of the United Nations University. Hiroshima 1981, §3.

communication, and engineering¹⁴. Fr. Lucio Ruiz, the Secretary of the Dicastery for Communication, in his interview for the Vatican News said: «As a matter of fact, the Pope conceives technology as a very useful tool, as a great fruit of human creativity that we have received as a gift from God, and that we have the responsibility to develop»¹⁵. Pope Francis himself states the following in the encyclical: «Human creativity cannot be suppressed. If an artist cannot be stopped from using his or her creativity, neither should those who possess particular gifts for the advancement of science and technology be prevented from using their God-given talents for the service of others»¹⁶. However, Pope, following his predecessors, insists on the need to constantly rethink the true purpose and overall context of these advancements, and to set ethical limits for this human activity, «which is a form of power involving considerable risks»¹⁷. Pope Francis calls John Paul II's teaching about technology as a «balanced position»¹⁸ he will be developing throughout the encyclical letter, numerous citing both of his predecessors – John Paul II and Benedict XVI.

It is not technology or its rapid development that concerns the Pope, but rather a lack of capable leadership to create and implement globally sound ethics and legal framework to ensure safety for nature, the poorest and most vulnerable, and protect the rights of future generations¹⁹. Pontiff explains his concerns about contemporary issues, stating the following:

The basic problem goes even deeper: it is the way that humanity has taken up technology and its development according to an undifferentiated and *one-dimensional paradigm*. This paradigm exalts the concept of a subject who, using logical and rational procedures, progressively approaches and gains control over an external object. This subject makes every effort to establish the scientific and experimental method, which in itself is already a technique of possession, mastery and transformation²⁰.

Pope Francis critiques this new paradigm emerging as well as forms of power derived from technology. Undoubtedly, his teaching is largely influenced by John Paul II and

¹⁴ *Laudato si'*, §102.

¹⁵ DIONISI D. *Msgr. Ruiz: «Technology not something neutral in the Pope's eyes»* // vaticannews.va (30.07.2021).

¹⁶ *Laudato si'*, §131.

¹⁷ *Ibid.*, §131.

¹⁸ *Ibid.*, §131.

¹⁹ *Ibid.*, §53.

²⁰ *Ibid.*, §106.

his view on what he called a *scientific outlook*²¹. But it was not just his predecessor who inspired Pontiff's position on the stated phenomenon, it was two modern philosophers who largely affected his vision on the subject – Martin Heidegger and Romano Guardini, one implicitly and the other explicitly.

Pope Francis describes the technocratic paradigm as a one-sided way of viewing the world – an instrumental one, where man approaches everything as an object over which he needs to gain control. He continues, saying:

We have to accept that technological products are not neutral, for they create a framework which ends up conditioning lifestyles and shaping social possibilities along the lines dictated by the interests of certain powerful groups. Decisions which may seem purely instrumental are in reality decisions about the kind of society we want to build²².

Undoubtedly, in Pontiff's thoughts on the matter, one can find traces of Martin Heidegger's phenomenological approach to technology²³, introduced by the philosopher in one of his Bremen lectures, «The Question Concerning Technology», which we discussed in the first chapter of the paper. Although the German philosopher is never mentioned in the encyclical, the connections between Pope's view on the technocratic paradigm that reveals the world and everything in it to humanity as a pure resource correlates with Heidegger's *enframing* (*Gestell*) concept. Notably, Heidegger used the term *Gestell* (the German word for *frame*) to describe a metaphysical concept that is equivalent to the *technocratic paradigm* term coined by Francis in his encyclical «Laudato si'». According to Heidegger, the world started being *enframed*, approached by the man of technology as a *standing-reserve* (*Bestand*), as a recourse that is «ordered to stand by»²⁴ and «to be immediately on hand»²⁵. However, it is not only nature and its resources that are being *enframed* in the contemporary world, but also humans. Thus, man, who created the tools and invented technology to respond to his own needs, since the Industrial Revolution reversed places with the products of his hands and became a *standing-reserve* for technological goals. That is to say, technology now

²¹ *Fides et Ratio*, §88.

²² *Laudato si'*, §108.

²³ Cf. WHALON P.W. *Heidegger and Pope Francis* [PDF]. Paris 2019, 1.

²⁴ *The Question Concerning Technology and Other Essays*, 17.

²⁵ *Ibid.*, 17.

controls us, not vice versa. According to this paradigm, nature and humans are simply *there* as a *standing-reserve* to be exploited with no regard to the outcomes either for the environment or humanity²⁶. The *technocratic paradigm* is a cultural and intellectual *Gestell*, which *enframed* our reality and the way we think and perceive everything around us. Thus, Francis uses a language reminiscent of Heidegger's key concepts to characterize the technological mindset as the one that enframes everything as a resource waiting to be shaped to human ends²⁷.

Besides Heidegger's ideas, Pope Francis enriched his encyclical with the thoughts of fr. Romano Guardini, a German Catholic theologian and philosopher who also critiqued the technological view on the world. The scholar, who used to be a colleague of Heidegger for some time, in turn, was influenced by his ideas on technology²⁸. Guardini's influence on the encyclical's teaching and Francis' conceptualization of the problem concerning modern technology is explicit as the philosopher is quoted six times in two of the encyclical's chapters. Fr. Romano Guardini caught the imagination of both Pontiffs, Benedict XVI and Francis. Pope Emeritus even met the philosopher personally several times, while Pope Francis was planning to write his doctoral dissertation regarding Guardini's work, although the plan never materialized²⁹. Despite that, fr. Romano is still one of Pope Francis' favorite intellectual masters³⁰. Pontiff repeatedly refers to his famous work «The End of the Modern World», published in 1950, in which Guardini describes the human roots of the ecological crisis and states that humanity stepped into a postmodern era that is dominated by technoscience and *technological mind*³¹. In the book, the philosopher argues that progress that arises from technology and is attempting to harness the environment for the sake of utility and profit becomes blind, threatening, and destructive, and unavoidably will lead to a global spread of compulsive consumerism and decline of culture. However, Guardini

²⁶ Cf. Heidegger and Pope Francis, 2.

²⁷ Cf. SIDERIS L. *Techno-Science, Integral Thought, and the Reality of Limits in Laudato Si' // The Trumpeter* 34 (2018) 18.

²⁸ Cf. *Ibid.*, 18.

²⁹ Cf. DE GAÁL E. *Laudato Si' and Pope Francis' Hero, Romano Guardini // Rocznik Teologii Katolickiej* 18 (2019) 7.

³⁰ Cf. KUREETHADAM J. *The Ten Green Commandments of Laudato Si'*. Collegeville 2019, 95.

³¹ Cf. GUARDINI R. – KUEHN H. R. (eds.). *The Essential Guardini: An Anthology of the Writings of Romano Guardini*. Chicago 1997, 17.

is not against technology. He is rather urging humanity to use it wisely so no harm can be done to the creation and humans' dignity³². These thoughts of the philosopher can be traced in the third chapter of «Laudato si'», where Pontiff cites Guardini's words, writing about the common for the postmodern man belief that «every increase in power means an increase of *progress* itself, an advance in security, usefulness, welfare, and vigour; an assimilation of new values into the stream of culture»³³. As if all the goodness and truth, Pope continues, can be only a result of technological and economic powers as such³⁴. Paraphrasing Guardini, Francis stresses there is a huge lack of balanced guidance and ethical control over modern technological development and progress. He emphasizes that technical progress should always be accompanied by a development in morals, values, and responsibility, this way continuing the teachings on the matter of his predecessors.

Thereby, we can conclude that Pope Francis' assessment of the socio-cultural phenomenon of the shift of collective consciousness to the technocratic paradigm that emerged in the 20th-21st centuries was largely influenced by his predecessor, John Paul II, and his *scientific outlook* concept³⁵, as well as Martin Heidegger's concepts of *Gestell* and *Bestand*³⁶, and fr. Romano Guardini's understanding of the *technological mind*³⁷.

Pope Francis critiques the dominant technocratic paradigm through which one approaches technology not as an instrument but rather as a framework, the way to perceive the world – as if technology became a mode of human existence. Therefore, the whole «Laudato Si'» work is an urgent call from the Church to the world for a common response to this phenomenon. In the encyclical letter, Pontiff does not decry technology but rather appeals to restore a proper relation towards it, according to which it will be in service to the whole creation and the common good³⁸. Pope urges the global

³² Cf. GUARDINI R. *The End of the Modern World*. Wilmington 1998, 63-72.

³³ *Laudato Si'*, 82.

³⁴ Cf. *Ibid.*, §105.

³⁵ Cf. *Fides et Ratio*, §88.

³⁶ Cf. *The Question Concerning Technology and Other Essays*, 17-23.

³⁷ Cf. HOLLOWELL A. *Ratio in Relatione: The Function of Structural Paradigms and Their Influence on Rational Choice and the Search for Truth*. Eugene 2020, 85-86.

³⁸ Cf. *Laudato Si'*, §82.

society to create distinctive social paradigms³⁹, a more balanced level of production, and a new attitude to consumption, employing technology as a mere instrument – it should not lordship overall⁴⁰. However, the global society does not move on the path of integral human development⁴¹, social inclusion⁴², and better distribution of wealth, but rather is focused on maximizing profits and working towards market growth⁴³. Thus, Pope Francis expresses his concerns about the present situation, saying: «The technocratic paradigm tends to dominate economic and political life. The economy accepts every advance in technology with a view to profit, without concern for its potentially negative impact on human beings»⁴⁴. World leaders tend to turn to scientists, economists, and engineers when facing a global challenge. Nevertheless, is not it mandatory for scientists to cooperate with the philosophers, theologians, and social ethics experts when they make a decision that will shape the future of humanity and the whole planet? Therefore, Pontiff appeals to the whole of humankind to consolidate the efforts in order to humanize technology and progress by creating a culture of encounter and dialogue, where the voice of the Church and her social teaching, as well as other voices, will be heard and considered. He expresses his thoughts on a matter, saying:

Faced with a world in which a technocratic development paradigm is affirmed and consolidated, with its logic of domination and control of reality in favour of economic and profit interests, I think that religions have a great role to play, especially due to that new outlook on the human being, which comes from faith in God, creator of man and the universe. Any attempt to seek authentic economic, social or technological development must take into account the dignity of the human being; the importance of looking at each person in the eyes and not as a number or a cold statistic⁴⁵.

³⁹ *Dominant social paradigm*, the view that humans are superior to other all other species, the Earth provides unlimited resources for humans, and that progress is an inherent part of human history. Opposes new environmental paradigm (*Dictionary // oxfordreference.com* (30.07.2021).).

⁴⁰ Cf. *Laudato Si'*, §108.

⁴¹ *Integral Human Development*, a concept found in the Catholic social teaching that promotes the good of every person and the whole person; it is cultural, economic, political, social and spiritual (HEINRIC G. – MILLER C. *A User's Guide to Integral Human Development (IHD)*. Baltimore 2008, 2).

⁴² *Social inclusion*, the process of improving the terms of participation in society for people who are disadvantaged on the basis of age, sex, disability, race, ethnicity, origin, religion, or economic or other status, through enhanced opportunities, access to resources, voice and respect for rights (*Leaving No One Behind: Humanitarian Effectiveness in the Age of the Sustainable Development Goals // un.org* (02.09.2021).).

⁴³ *Market growth*, an increase in the number of people who buy a particular product or service, or the number of products, etc. that are sold (*Dictionary // dictionary.cambridge.org* (30.07.2021).).

⁴⁴ *Laudato si'*, §109.

⁴⁵ *Message to the G20 Interfaith Forum*, 2.

Indeed, certain legal boundaries and ethical horizons should be set to ensure the protection of ecosystems and maintain the dignity of human life. Meanwhile, according to Pope Francis, «life gradually becomes a surrender to situations conditioned by technology, itself viewed as the principal key to the meaning of existence»⁴⁶, and the price we pay for it, Pontiff continues, is «environmental degradation, anxiety, a loss of the purpose of life and of community living»⁴⁷.

Humanity has always been trying to intervene in the natural processes, but it has not caused so much damage to our environment as it does nowadays. It was as a man was in a friendly relationship with nature, taking and processing what it was giving, but not destroying or changing the nature of things. However, nowadays, we are witnessing how men and women satisfy their immediate needs without thinking of the consequences of their actions, taking advantage of privileged positions, and exploiting natural resources that belong to everyone⁴⁸. Humanity, driven by this twisted vision of so-called “progress” and “growth”, is trying to extract everything possible from nature, provoking the modern ecological crisis. And, according to Pope, particularly this vision is the one to blame for the environmental deterioration. Pontiff continues the thought, writing: «This (vision) has made it easy to accept the idea of infinite or unlimited growth, which proves so attractive to economists, financiers and experts in technology. It is based on the lie that there is an infinite supply of the earth’s goods, and this leads to the planet being squeezed dry beyond every limit»⁴⁹. Indeed, the cause of this current crisis lies in the dominance of the one-dimensional view of the world as a pool of resources and instruments to be used for one’s interests and needs. Describing the globalization of the technocratic paradigm, Pope Francis explains that most of the challenges the world is facing now are man-made and «stem from the tendency, at times unconscious, to make the method and aims of science and technology an epistemological paradigm which shapes the lives of individuals and the workings of

⁴⁶ *Laudato si'*, §110.

⁴⁷ *Ibid.*, §110.

⁴⁸ Cf. *Ibid.*, §23, 71, 106.

⁴⁹ *Ibid.*, §106.

society»⁵⁰. Allegedly, everything is being technologized and instrumentalized by man in his perception of the world.

Indeed, the rise of technologies brought us an enormous number of possibilities. We are the beneficiaries of two centuries of enormous progress and change, resulting in abundance, innovations, and immense opportunities for a large part of the world population. Nevertheless, technological advances in the 21st century brought new challenges and threats, such as distribution of child pornography⁵¹, misuse of personal data and later effect of it on the election processes in numerous countries⁵², malicious cyber activity⁵³, human genome editing⁵⁴, the global spread of fake news and crowd manipulation⁵⁵ as a few examples. Thus, regarding the question of ethical use of scientific discoveries and technological innovations, one must be aware that technology is an instrument that can be used either for the common good or the benefit of certain privileged groups sacrificing the needs and rights of others. Technological products and technology itself are never neutral⁵⁶.

⁵⁰ *Ibid.*, §107.

⁵¹ The volume of *child abuse* materials circulating on the Internet has increased dramatically during the COVID-19 pandemic [...] Enabled by digital technologies, child sex offenders have tapped into opportunities that were previously unavailable to communicate freely and directly with each other and with children, creating online communities where they share their crimes. Today, they can reach children via webcams, connected devices and chat rooms in social media and video games, while remaining anonymous thanks to technologies such as cloud computing, the dark web, end-to-end encryption, and streaming. There has been a rise in grooming and sextortion incidents (EUROPEAN PARLIAMENTARY RESEARCH SERVICE. *Curbing the Surge in Online Child Abuse: The Dual Role of Digital Technology in Fighting and Facilitating its Proliferation* [PDF]. Brussels 2020, 1).

⁵² The author refers to *Facebook-Cambridge Analytica case* mentioned in the first chapter.

⁵³ In the USA *malicious cyber activity* defines as activities, other than those authorized by or in accordance with U.S. law, that seek to compromise or impair the confidentiality, integrity, or availability of computers, information or communications systems, networks, physical or virtual infrastructure controlled by computers or information systems, or information resident thereon (*Glossary, Information Technology Laboratory, Computer Security Resource Center // csrc.nist.gov* (16.09.2021)).

⁵⁴ *He Jiankui affair*, a scientific, legal, and bioethical controversy concerning an experiment in which He Jiankui, a Chinese scientist, edited the genomes of human embryos leading to the birth of twin girls with edited genomes in 2018. The controversy resulted in the indictment of He and two of his collaborators, Zhang Renli and Qin Jinzhou. In 2019 the Court sentenced He Jiankui to three years in prison, while his collaborators received a two-year prison sentence for the crime of conducting gene-editing experiments on human embryos (Cf. GREELY H. T. *CRISPR 'd Babies: Human Germline Genome Editing in the He Jiankui Affair // Journal of Law and the Biosciences* 6 (2019) 111-113).

⁵⁵ The author refers to *The Facebook Files case*, a Wall Street Journal investigation published in September 2021, as an example. The WS Journal news reports included leaked internal documents from Facebook Company (now Meta Platforms) showing evidence that Facebook was aware of the harm and negative impact certain algorithms of their platforms do (e.g., harmful effects on teenage users of Instagram; promotion of violence via anger-provoking posts in developing countries on Facebook social media, etc.). However, the company still used the algorithms to make more profit. It provoked Frances Haugen, an American data engineer, scientist, and Facebook's ex-employee, to disclose thousands of Facebook's internal documents to the Securities and Exchange Commission and The Wall Street Journal in 2021 (*The Facebook Files // wsj.com* (17.11.2021)).

⁵⁶ Cf. *Laudato si'*, §107.

We cannot stop a technological development, nor should we. However, certain limits, ethics, and new cultural approaches to it should be created and set for the sake of our planet and the generations to come. In the first chapter of «Laudato Si'», in the section concerning, as Pope Francis puts it, humanity's *weak responses* to the modern crisis, he states the establishment of a legal framework followed with globally sound ethics regarding the use of technology is a global issue to discuss, the one of great importance⁵⁷. Thus, he urges everyone, not only those in power, to join the dialogue, «otherwise the new power structures based on the techno-economic paradigm may overwhelm not only our politics but also freedom and justice»⁵⁸. Pontiff continues his thought, calling humans for the *liberation* from the dominant technocratic paradigm, asserting that humanity has «the freedom needed to limit and direct technology»⁵⁹ and «put it at the service of another type of progress, one which is healthier, more human, more social, more integral»⁶⁰. St. Peter's successor states that liberation from the technocratic paradigm does, in fact, happens sometimes when companies are adopting less polluting means of production or when groups of people or even whole communities choose to live a non-consumerist way of life. Although, Pope Francis states, the true liberation will, indeed, happen when technology will be directed to serve humankind, primarily resolving man's specific problems and helping people, especially the poorest and most vulnerable, to lead a life with more dignity and less suffering⁶¹. He writes: «An authentic humanity, calling for a new synthesis, seems to dwell in the midst of our technological culture, almost unnoticed, like a mist seeping gently beneath a closed door. Will the promise last, in spite of everything, with all that is authentic rising up in stubborn resistance?»⁶² It is for us, humans, everyone, and all together, to answer that question.

⁵⁷ Cf. *Ibid.*, §105.

⁵⁸ *Ibid.*, §53.

⁵⁹ *Ibid.*, §112.

⁶⁰ *Ibid.*, §112.

⁶¹ Cf. *Ibid.*, §112.

⁶² *Ibid.*, §112.

3.2. MISGUIDED ANTHROPOCENTRISM, PRACTICAL RELATIVISM, AND THEIR EFFECT ON GLOBAL DECISION-MAKING PROCESSES

The present cultural and ethical crisis of modernity, according to Pope Francis, is a straightforward consequence not only of the technocratic paradigm but *modern anthropocentrism*⁶³ and *practical relativism* philosophies that are deeply rooted in the culture of technocratic civilization of the 21st century. In the third chapter of his encyclical letter «Laudato Si'», in the section named «The Crisis and Effects of Modern Anthropocentrism», Pontiff writes: «Modern anthropocentrism has paradoxically ended up prizing technical thought over reality, since the technological mind sees nature as [...] as a cold body of facts, as a mere *given*, as raw material to be hammered into useful shape»⁶⁴. When distinguishing the current, misconceived view on the human-nature relationship from the true understanding of it, revealed to man by God, Pope Francis cites both fr. Romano Guardini and John Paul II.

Pope Francis, following his predecessor, writes that an inadequate presentation of Christian anthropology gave rise to the instrumental view of the world, which, apparently, is wrong and harmful for the environment⁶⁵. It is a common belief, though, of many researchers and ethical experts⁶⁶ that anthropocentrism philosophy takes its roots from the Story of Creation in the Book of Genesis where one can read that: «Then God said, “Let us make humankind in our image, according to our likeness; and let them have *dominion* over the fish of the sea, and over the birds of the air, and over the

⁶³ *Anthropocentrism*, philosophical viewpoint arguing that human beings are the central or most significant entities in the world. This is a basic belief embedded in many Western religions and philosophies. Anthropocentrism regards humans as separate from and superior to nature and holds that human life has intrinsic value while other entities (including animals, plants, mineral resources, and so on) are resources that may justifiably be exploited for the benefit of humankind (*Encyclopedia // britannica.com* (02.08.2021)).

⁶⁴ *Laudato si'*, §115.

⁶⁵ Cf. *Ibid.*, §117.

⁶⁶ Lynn White, American historian and academic, in his seminal essay of 1967 critiqued the impact of the Judeo-Christian tradition on the environment. He laid the foundation of his argument on Genesis 1, where humans are commanded to exercise dominion over all of nature, which God gave to them for their benefit. According to White, “no item in the physical creation had any purpose save to serve man’s purposes”. He argued that this anthropocentric worldview of the biblical tradition, inherited by Christianity, placed humans at the center of creation and separated humans from nature. Because of this worldview, White singled out Christianity as “the most anthropocentric religion the world has ever seen” and claimed that it is Christian anthropocentrism that provided the conditions for human exploitation of the environment. White’s essay has had an enormous influence on framing the relationship between religion and the environment and on formulating environmental ethics. His arguments have been widely accepted by academics (SIMKINS R. A. *Anthropocentrism and the Place of Humans in the Biblical Tradition // Journal of Religion & Society* 9 (2013) 16).

cattle, and overall the wild animals of the earth, and over every creeping thing that creeps upon the earth”» (Gen 1:26) and «God blessed them, and God said to them, “Be fruitful and multiply, and fill the earth and *subdue* it; and *have dominion* over the fish of the sea and over the birds of the air and *over every living thing that moves upon the earth*”» (Gen 1:28). These passages, experts state, caused the development of philosophical and theological thought about the interpretation of the human-nature relationship as a humanity’s superiority to nature and dominance over all living creatures and became a condoning argument for an instrumental view of the world. So, Pope Francis follows the steps of Pope John Paul II and, when referring to the Bible passage mentioned above, explains that the creation accounts in the Book of Genesis tell us «in their own symbolic and narrative language»⁶⁷ that the purpose and the center of human existence lie in three fundamental, close relationships: with the Creator, our neighbor and the earth itself⁶⁸. Pope continues explaining, referring to the Holy Book, that these harmonic and vital for man relationships were broken when humanity wanted to take the place of God and declared its independence from Him. Thus, the harmony between God, man, and creation as a whole has been disrupted. Humankind refused to acknowledge its ultimate limits of nature and this, Pontiff writes, in turn, «distorted our mandate *to have dominion* over the earth (cf. Gen 1:28), *to till it and keep it* (Gen 2:15)»⁶⁹. Thereby, originally harmonious relationships, once closely intertwined, were disrupted by sin and became conflictual – not only the humanity’s relationships with God but with every living creature and nature overall (Cf. Gen 3:17-19)⁷⁰.

Responding to the charge that Judeo-Christian tradition based on the foregoing understanding of the passages from the Book of Genesis encouraged anthropocentric and consumer approach towards nature, and in this way caused environmental deterioration, Pope Francis states that the mentioned passages were interpreted in the

⁶⁷ *Laudato si'*, §66.

⁶⁸ Cf. *Ibid.*, §66.

⁶⁹ *Ibid.*, §66.

⁷⁰ Cf. *Ibid.*, §66.

wrong light and this understanding differs from the way the Church sees the account today⁷¹. He states the following on the issue:

Although it is true that we Christians have at times incorrectly interpreted the Scriptures, nowadays we must forcefully reject the notion that our being created in God's image and given dominion over the earth justifies absolute domination over other creatures. The biblical texts are to be read in their context, with an appropriate hermeneutic, recognizing that they tell us to *till and keep* the garden of the world (cf. Gen 2:15)⁷².

Pontiff continues by explaining the meaning of the above-mentioned words and how this interpretation changes the perspective of human-nature relationships. He states that the term *tilling* means working, cultivating, and ploughing; while *keeping* refers to protecting, caring, overseeing, and preserving⁷³. According to Pope Francis, this approach requires mutual responsibility, when man's calling is not only to use natural resources for a living but also to take care of them, to protect and ensure the prosperity of it for the future generations that are to come. He writes: «An inadequate presentation of Christian anthropology gave rise to a wrong understanding of the relationship between human beings and the world»⁷⁴, so there is an urgent need for a new understanding of these relationships with the sense of «responsible stewardship»⁷⁵ between man and the world. Furthermore, when referring to this matter, Pontiff clearly is trying to engage other Abrahamic religions (Judaism and Islam) to develop this renewed understanding of reality⁷⁶.

In the catechesis «Healing the world: Care of the common home and contemplative dimension» given on the General Audience on 16 September 2020, Pope Francis continued his thoughts and expressed an explicit position of the Catholic Church on the matter, saying:

Without contemplation, it is easy to fall prey to an unbalanced and arrogant anthropocentrism, the "I" at the centre of everything, which overinflates our role as human beings, positioning us as absolute rulers of all other creatures. A distorted interpretation of biblical texts on creation has contributed to this misinterpretation, which leads to the exploitation of the earth to the point of suffocating it. Exploiting creation: this is the sin. We believe we are at the centre, claiming

⁷¹ Cf. *Ibid.*, §67.

⁷² *Ibid.*, §67.

⁷³ Cf. *Ibid.*, §67.

⁷⁴ *Ibid.*, §116.

⁷⁵ Cf. *Ibid.*, §116.

⁷⁶ Cf. MILLER V. J. (ed.). *The Theological and Ecological Vision of Laudato Si': Everything is Connected*. London 2017, 14.

to occupy God's place and so we ruin the harmony of creation, the harmony of God's plan. We become predators, forgetting our vocation as custodians of life. Of course, we can and must work the earth so as to live and to develop. But work is not synonymous with exploitation, and it is always accompanied by care: ploughing and protecting, working and caring [...] This is our mission (cf. Gen 2:15)⁷⁷.

This kind of approach towards the world, anthropocentric one, affects not only the way we approach the environment and other living creatures, but it also exerts influence on the way we treat the poorest and most vulnerable parts of the human society – those whose voices are not heard, whose dignity is not recognized, whose suffering we are unlikely to witness. Pope Francis expressed his concerns about this humans' indifference to one another that is threatening the future of all humanity, stating that there cannot be any healing in our relationships with Mother Earth until interpersonal relations with each other are restored⁷⁸. Pontiff develops the teaching of John Paul II about the culture of death and culture of life⁷⁹ to the concept of the culture of care as a path to reconciliation, saying:

When we fail to acknowledge as part of reality the worth of a poor person, a human embryo, a person with disabilities – to offer just a few examples – it becomes difficult to hear the cry of nature itself; everything is connected. Once the human being declares independence from reality and behaves with absolute dominion, the very foundations of our life begin to crumble⁸⁰.

Therefore, according to Pontiff, modern misguided anthropocentrism is dialectically connected with the modern mechanistic vision of not only the natural world but the human being himself, leading to depreciation and abuse of the environment and instrumentalization of human beings⁸¹.

Pope Francis refers to the first encyclical letter of John Paul II, where his predecessor stated that human beings often seem «to see no other meaning in his natural environment than what serves for immediate use and consumption»⁸². Thus, Francis continues his reflection on the modern culture, stating that *misguided anthropocentrism* keeps pace with *practical relativism*, and both are leading man and society in general to a misguided lifestyle with its chaotic short-sighted decisions. With a certain logic

⁷⁷ *Healing the world: Care of the common home and contemplative dimension*, 2.

⁷⁸ Cf. *Laudato si'*, §117.

⁷⁹ Cf. *Evangelium Vitae*, §12, 19, 21, 28.

⁸⁰ *Laudato si'*, §117.

⁸¹ Cf. *The Ten Green Commandments of Laudato Si'*, 102.

⁸² *Redemptor Hominis*, §15.

not always seen, these different approaches feed on one another, according to Pope, causing the depletion of natural resources and resulting in huge damage to the social environment⁸³ on the global level⁸⁴. He writes: «Hence we should not be surprised to find, in conjunction with the omnipresent technocratic paradigm and the cult of unlimited human power, the rise of a relativism which sees everything as irrelevant unless it serves one's own immediate interests»⁸⁵. Apparently, man see no other meaning in other human beings as well, unless they serve his goals. When the “*I*” has the biggest value and is a starting point for every action or reaction, when “*my*” interests and immediate convenience are most important, having absolute priority over anything else, when “*my being*” is always placed at the center, then everything and, most importantly, everyone else becomes relative and even irrelevant⁸⁶.

In the Apostolic Exhortation «*Evangelii Gaudium*», Pope Francis states that practical relativism is «even more dangerous than doctrinal relativism»⁸⁷ as it influences the daily decisions we make and the world we build nowadays, leading many people to fall into a lifestyle where financial prosperity, fame, desire for power, and constant consume of goods are gained at all costs. Pontiff describes this relativistic view on the world as the way of humans acting «as if God did not exist, making decisions as if the poor did not exist, setting goals as if others did not exist, working as if people who have not received the Gospel did not exist»⁸⁸. Moreover, the consequence of this attitude is that three fundamental relationships in human life: with God, Mother Earth, and our neighbor suffer, causing a destructive power of wars, abandonment of the most vulnerable, global environmental deterioration, and social decay. Everything external from the “*I*”, either objects, natural resources, or living creatures and humans, is treated as an instrument to be used to gain a preferred outcome and meet one's needs. The whole idea that there are no indisputable truths, everything is relative and arguable,

⁸³ *Social environment*, the environment developed by humans as contrasted with the natural environment; society as a whole, especially in its relation to the individual (*Dictionary // collinsdictionary.com* (16.09.2021)).

⁸⁴ Cf. *Laudato si'*, §122, 123.

⁸⁵ *Ibid.*, §122.

⁸⁶ Cf. *Ibid.*, §122.

⁸⁷ *Evangelii Gaudium*, §80.

⁸⁸ *Laudato si'*, §80.

and humans may do anything they wish with their limitless freedom threatens to end with irreversible damage for all of humanity. Thus, addressing the modern crisis of contemporary society where «the culture itself is corrupt and universally valid principles are no longer upheld»⁸⁹, Pope Francis notes that the culture of relativism, ultimately, is «the same disorder which drives one person to take advantage of another, to treat others as mere objects, imposing forced labor on them or enslaving them to pay their debts»⁹⁰. Pope Francis condemns this relativistic mindset and the horrific consequences of its logic, naming some of them when writing:

The same kind of thinking leads to the sexual exploitation of children and abandonment of the elderly who no longer serve our interests. It is also the mindset of those who say: Let us allow the invisible forces of the market to regulate the economy and consider their impact on society and nature as collateral damage. In the absence of objective truths or sound principles other than the satisfaction of our own desires and immediate needs, what limits can be placed on human trafficking, organized crime, the drug trade, commerce in blood diamonds and the fur of endangered species? Is it not the same relativistic logic which justifies buying the organs of the poor for resale or use in experimentation, or eliminating children because they are not what their parents wanted? This same *use and throwaway* logic generates so much waste, because of the disordered desire to consume more than what is really necessary⁹¹.

Technological culture development caused a lot of ethical challenges and dilemmas. And one of its biggest dangers lies in the instrumental view on nature and human beings, in recognizing the value of human life exclusively regarding one's work, effectiveness, and ability to respond to the requests of consumer society, rather than focusing on human dignity and our true calling to be the image of God. Humankind has rejected God's call to be a co-creator of life and instead wants to take the place of the Creator in the nature of things, making the decisions none of us are eligible to make – who is worth living and who is not, when is the right time for a person to die or whose lives we can sacrifice for the “good” of others as a few examples. Neither nature, its resources, and living creatures, nor humans are to be used merely as a means to an end. This kind of exploitation should be prohibited at the legal level, and new ethical concepts protecting and ensuring safety for nature and all people's dignity are supposed to arise. It is a matter of great importance where moral theology, philosophy, and

⁸⁹ *Ibid.*, §123.

⁹⁰ *Ibid.*, §123.

⁹¹ *Ibid.*, §123.

Catholic social teaching should play a significant part, and the Catholic Church has already taken the first steps to confront and address this modern crisis.

Pope Francis continues his critique of excessive anthropocentrism, technological and relativistic mindset when speaking about the 21st-century phenomenon of *technocracy*. He is quite harsh in his words when describing the consequences of this dominant for today's world paradigm and the harm it does to humanity, saying: «This situation has led to a constant schizophrenia, wherein a technocracy which sees no intrinsic value in lesser beings coexists with the other extreme, which sees no special value in human beings»⁹². Pope states: «One cannot prescind from humanity»⁹³; therefore, «there can be no renewal of our relationship with nature without a renewal of humanity itself; there can be no ecology without an adequate anthropology». He is referring to the Message for the 2010 World Day of Peace of Pope Benedict XVI to strengthen his position on the stated issue, writing the following:

When the human person is considered as simply one being among others, the “product of chance or physical determinism, then our overall sense of responsibility wanes”⁹⁴. A misguided anthropocentrism need not necessarily yield to biocentrism⁹⁵, for that would entail adding yet another imbalance, failing to solve present problems and adding new ones. Human beings cannot be expected to feel responsibility for the world unless, at the same time, their unique capacities of knowledge, will, freedom and responsibility are recognized and valued⁹⁶.

Therefore, *integral ecology* is, undoubtedly, the central theme of «Laudato si'». Pope Francis develops a new understanding of the concept throughout the whole body of work. He uses the term to describe that everything in the world is *connected* and *closely interrelated*, thus stating that the proper treatment of integral ecology has an urgent need for «a vision capable of taking into account every aspect of the global crisis»⁹⁷ that will include both human and social dimensions. The integral ecology concept serves the Pope as the foundation of his analysis of the contemporary ecological crisis and is the basis for his ideas on how humanity should respond to it⁹⁸.

⁹² *Ibid.*, §118.

⁹³ *Ibid.*, §118.

⁹⁴ POPE BENEDICT XVI. Message for the 2010 World Day of Peace [PDF]. Vatican 2009, §2.

⁹⁵ *Biocentrism*, the view or belief that the rights and needs of humans are not more important than those of other living things (*Dictionary // lexico.com* (09.08.2021)).

⁹⁶ *Laudato si'*, §118.

⁹⁷ *Ibid.*, §137.

⁹⁸ Cf. *The Theological and Ecological Vision of Laudato Si': Everything is Connected*, 11-12.

Human needs human. As mentioned above, human fulfillment depends on the three fundamental relationships: with God, neighbor, and nature itself. Interpersonal relations with each other are something that makes us human. So, these relationships need to be renewed and healed as well as our relationships with nature. The horrors of the last two centuries towards humanity and the environment have shown us how incapable people are in taking care of each other, ready to disgrace human dignity, searching for one's interests, using technology as a weapon towards human beings, its creator. No man or woman should be treated this way, and this is our duty to ensure the past crimes will never be repeated. Thus, Pope Francis urges the global society to create a new synthesis and develop new cultural paradigms to ensure the protection of human dignity, especially of the poorest and most vulnerable and of those who were abandoned before⁹⁹. Moreover, Christianity has a role to play in the new ethics arising, according to Pope, who writes: «Christian thought sees human beings as possessing a particular dignity above other creatures; it thus inculcates esteem for each person and respect for others. Our openness to others, each of whom is a “*thou*” capable of knowing, loving, and entering into dialogue, remains the source of our nobility as human persons»¹⁰⁰. He continues by saying that our relationship with nature and the environment cannot be isolated from our relationship with other human beings and God Himself. Therefore, if we will not issue the crisis in interpersonal relations, addressing the environmental crisis «would be nothing more than romantic individualism dressed up in ecological garb, locking us into a stifling immanence»¹⁰¹.

3.3. HUMAN FRATERNITY IN A THROWAWAY WORLD

In Christ, all human beings are brothers and sisters, created for love, compassion, and deep connections with one another and the Creator Himself, for «as a body is one though it has many parts, and all the parts of the body, though many, are one body, so

⁹⁹ Cf. *Laudato si'*, §121.

¹⁰⁰ *Ibid.*, §119.

¹⁰¹ *Ibid.*, §119.

also Christ. For in one Spirit we were all baptized into one body, whether Jews or Greeks, slaves or free persons, and we were all given to drink of one Spirit» (1 Cor 12:12-13). All of us are called to safeguard the entire universe and support each other on our life paths, especially the poorest, disadvantaged, and most vulnerable. It is our duty to acknowledge and protect the dignity of every human being, to rediscover and express the values of human fraternity, nurturing a culture of mutual respect and understanding. In this spirit of dialogue and partnership on the 4 February 2019 important document «Human Fraternity for World Peace and Living Together» was signed by His Holiness Pope Francis and the Grand Imam of Al-Azhar Ahamad al-Tayyib, where «the adoption of a culture of dialogue as the path; mutual cooperation as the code of conduct; reciprocal understanding as the method and standard»¹⁰² were declared. In this declaration, both sides stated:

God who has created all human beings equal in rights, duties and dignity, and who has called them to live together as brothers and sisters, to fill the earth and make known the values of goodness, love and peace [...] commanded us to help the poor, the destitute, the marginalized and those most in need as a duty required of all persons, especially the wealthy and of means¹⁰³.

But declaring universal human rights is not sufficient. Recent years with its crises have shown us our false securities. Our inability to cooperate and build a global society of trust became clear. Even though The Universal Declaration of Human Rights (UDHR) was proclaimed by the United Nations General Assembly in Paris on 10 December 1948, millions of people today are deprived of freedom – their dignity is taken away, they are treated as an object or as a means to an end¹⁰⁴. Trafficking in persons, abuse of minors and vulnerable adults, sexual harassment, emaciation from hunger, selling organs of the kidnapped people, and other crimes are all modern forms of enslavement¹⁰⁵. And now, when we are more capable than ever to put an end to the suffering and injustice, possessing needed knowledge, experience, having proper instruments, and technologies, we have forgotten the very essence and purpose of the

¹⁰² POPE FRANCIS – AL-TAYYEB A. *Human fraternity for world peace and living together* [PDF]. Abu Dhabi 2019, 3.

¹⁰³ *Ibid.*, 2.

¹⁰⁴ Cf. THE UNITED NATIONS GENERAL ASSEMBLY. *The Universal Declaration of Human Rights* [PDF]. United Nations 2015, 6.

¹⁰⁵ Cf. *Fratelli tutti*, §24.

path we have once started – the path dedicated to community service, mutual care, and support, especially for the poorest and those in need. What has started as the goal to serve the most vulnerable and proclaim equality turned into making a profit and satisfying one's needs. So now there is an urgent need for humanity to pause and think what is the core of the problem: maybe it is the attitude, instrumentalized approach to one another, the relativistic vision of the human rights and dignity that has been proclaimed in the 20th century and, as it sometimes seems, now has been forgotten? Addressing the question of human rights and their recognition in the 21st century, Pope Francis, in his speech to the participants at the international conference on human rights, asserted:

Indeed, by closely observing our contemporary societies, one observes numerous contradictions that lead one to wonder whether the equal dignity of all human beings, solemnly proclaimed 70 years ago, is truly recognized, respected, protected and promoted in every circumstance. In the world today numerous forms of injustice persist, fed by reductive anthropological visions and by a profit-based economic model, which does not hesitate to exploit, discard and even kill human beings. While one part of humanity lives in opulence, another part sees its own dignity denied, scorned or trampled upon, and its fundamental rights disregarded or violated¹⁰⁶.

We dreamt to use technological development «to give people the power to build community and bring the world closer together»¹⁰⁷, be able to freely share ideas and connect with each other, «achieve a better and more sustainable future for all»¹⁰⁸. But the reality has shown that by connecting people through technology and its algorithms¹⁰⁹, we have divided them. We have achieved in providing neither sustainability nor protection for all, and the Covid-19 pandemic has revealed this to us.

Social networks and the Internet overall have provided us with numerous opportunities, creating possibilities to be in touch with one another, but we must be aware of the fact «there are huge economic interests operating in the digital world, capable of exercising forms of control as subtle as they are invasive, creating

¹⁰⁶ *Message to participants at the International Conference Human Rights in the Contemporary World: Achievements, Omissions, Negations*, 2.

¹⁰⁷ The author refers to Facebook's mission. Facebook is a social networking service company, and the largest social media site in the world (*About Facebook* // facebook.com (08.09.2021).).

¹⁰⁸ The author refers to The UN Sustainable Development Goals: THE UNITED NATIONS ASSEMBLY. *Transforming Our World: The 2030 Agenda for Sustainable Development* [PDF]. New York 2015, 5.

¹⁰⁹ *Algorithm*, a set of mathematical instructions or rules that, especially if given to a computer, will help to calculate an answer to a problem (*Dictionary* // dictionary.cambridge.org (09.09.2021).).

mechanisms of manipulation of consciences and of the democratic process»¹¹⁰. Digital technologies¹¹¹ work with the logic of favoring encounters between those who are like-minded, creating so-called *filter bubbles*¹¹² that insulate us from persons whose opinions and experience distinguish from ours. The XV Ordinary General Assembly of the Synod of Bishops explained it as the following: «These closed circuits facilitate the spread of fake news and false information, fomenting prejudice and hate. The proliferation of fake news is the expression of a culture that has lost its sense of truth and bends the facts to suit particular interests»¹¹³. Once again, man-created technologies work against us all – an instrument meant to serve the common good is used as a weapon against its creator. The human fraternity concept is fading when the anthropocentric approach is the one that divides humanity in its core: politicians depend on economic powers that use marketing tools to operate with the principle of «divide and conquer»¹¹⁴. Pope Francis, in his encyclical letter «Fratelli Tutti», promulgated in 2020, stated the following:

Today, in many countries, hyperbole, extremism and polarization have become political tools. Employing a strategy of ridicule, suspicion and relentless criticism, in a variety of ways one denies the right of others to exist or to have an opinion. Their share of the truth and their values are rejected and, as a result, the life of society is impoverished and subjected to the hubris of the powerful. Political life no longer has to do with healthy debates about long-term plans to improve people's lives and to advance the common good, but only with slick marketing techniques primarily aimed at discrediting others. In this craven exchange of charges and counter-charges, debate degenerates into a permanent state of disagreement and confrontation¹¹⁵.

Indeed, modern society operates in a way where some people are to be sacrificed in order for others to make money and live a carefree life. Suddenly the respect for human life was replaced by cruel indifference and selfishness, and it has granted permission for the weak and vulnerable to be exploited. Humans have started approaching other

¹¹⁰ SYNOD OF BISHOPS. XV Ordinary General Assembly *Young People, the Faith, and Vocational Discernment* // vatican.va (02.09.2021), §24.

¹¹¹ *Digital technologies*, electronic tools, systems, devices, and resources that generate, store or process data. Well known examples include social media, online games, multimedia, and mobile phones (*Education and Training. Victoria State Government, Australia* // education.vic.gov.au (09.09.2021).).

¹¹² *Filter bubbles*, a situation in which an Internet user encounters only information and opinions that conform to and reinforce their own beliefs, caused by algorithms that personalize an individual's online experience (*Dictionary* // lexico.com (02.09.2021).).

¹¹³ *Young People, the Faith, and Vocational Discernment*, §24.

¹¹⁴ *Fratelli tutti*, §12.

¹¹⁵ *Ibid.*, §15.

humans as a pure statistic, as an instrument that should be effective to make a profit, and that can be manipulated and used in political schemes. And if certain people are neither useful nor effective, they are treated as having no value, like those that can be thrown away, considered not worthy to be part of the society. Pope Francis refers to the culture of death concept proposed by Pope John Paul II when addressing a new culture arising, *a culture of waste*, as he calls it. He writes:

This *culture of waste* tends to become a common mentality that infects everyone. Human life, the person, are no longer seen as a primary value to be respected and safeguarded, especially if they are poor or disabled, if they are not yet useful – like the unborn child – or are no longer of any use – like the elderly person¹¹⁶.

In this indifferent world, there is no place for the disabled, old, orphaned, and unwanted unborn, according to the way our societies operate, it is like these people have no right to exist. As well as the poor, migrants, disadvantaged, abandoned, and sick are not allowed to have an opinion of their own – their voices are not heard, they have no influence on the policy-making process. On another occasion, Pontiff continues his thoughts on the matter, saying: «Unfortunately, what is thrown away is not only food and dispensable objects, but often human beings themselves, who are discarded as *unnecessary*»¹¹⁷. Thus, in so many places, the elderly is cruelly abandoned, left without no food, medicine, or proper care. So often they are treated as an object, as a problem to be solved or the issue to be resolved without disturbing others, more privileged or yet still effective for the market growth. In the apostolic exhortation «*Evangelii Gaudium*», Pope Francis raises the question concerning the culture of waste, stating:

We have created a *throwaway culture* which is now spreading. It is no longer simply about exploitation and oppression, but something new. Exclusion ultimately has to do with what it means to be a part of the society in which we live; those excluded are no longer society's underside or its fringes or its disenfranchised – they are no longer even a part of it. The excluded are not the “exploited” but the outcast, the “leftovers”¹¹⁸.

We were never as alone as we are now in the digital, globalized world, communicating with each other through social media but not being able to truly connect. As Pontiff in one of his speeches puts it: «We gorged ourselves on networking and lost the taste of

¹¹⁶ POPE FRANCIS. *General Audience on Wednesday, 5 June 2013* // vatican.va (16.09.2021).

¹¹⁷ POPE FRANCIS. *To the members of the diplomatic corps accredited to the Holy See* // vatican.va (16.09.2021).

¹¹⁸ *Evangelii Gaudium*, §53.

fraternity. We looked for quick and safe results, only to find ourselves overwhelmed by impatience and anxiety. Prisoners of virtual reality¹¹⁹, we lost the taste and flavour of the truly real»¹²⁰. It is not a technological solution that is needed for sustainable development but rather a change of hearts and attitude towards three fundamental aspects of human life: our relationship with God, Mother Earth, and one another are to be healed. We need to reconnect with each other, return to the communitarian dimension of life, promote fraternity and service. We need to change our lifestyle, rethink modern social paradigms, change global and local policies, and, most importantly, implement them in a sufficient, fruitful way. The policy that promotes human fraternity and integral ecology needs to be executed, otherwise, according to Pope Francis, «political propaganda, the media and the shapers of public opinion will continue to promote an individualistic and uncritical culture subservient to unregulated economic interests and societal institutions at the service of those who already enjoy too much power»¹²¹. In his third encyclical letter, Pontiff explicitly explains that it is not the technology that is a problem but rather our approach to it. He states:

My criticism of the technocratic paradigm involves more than simply thinking that if we control its excesses everything will be fine. The bigger risk does not come from specific objects, material realities or institutions, but from the way that they are used. It has to do with human weakness, the proclivity to selfishness that is part of what the Christian tradition refers to as “concupiscence”: the human inclination to be concerned only with myself, my group, my own petty interests. Concupiscence is not a flaw limited to our own day. It has been present from the beginning of humanity, and has simply changed and taken on different forms down the ages, using whatever means each moment of history can provide. Concupiscence, however, can be overcome with the help of God¹²².

Modern technocratic civilization is characterized by the huge influence of technoscience experts on the global decision-making process, modern technologies change our life experience so quickly at it was never before. And even though technological advance does play a huge role in contemporary society, technology does

¹¹⁹ *Virtual reality*, an artificial environment which is experienced through sensory stimuli (such as sights and sounds) provided by a computer and in which one's actions partially determine what happens in the environment (*Dictionary // merriam-webster.com* (16.09.2021)).

¹²⁰ POPE FRANCIS. *Apostolic Journey to North Macedonia: Holy Mass // vatican.va* (16.09.2021).

¹²¹ *Fratelli tutti*, §166.

¹²² *Ibid.*, §166.

not define human neither now nor in the future, it cannot shape the essence and purpose of what does it mean to be a human.

The rise of technologies pushed the development of new philosophies to help people make sense of their life in the age of secularism and techno enhancements. And now the Catholic Church responds to these philosophies and approaches, creating a new kind of ethics – *algor-ethics* that «would have as its aim ensuring a competent and shared review of the processes by which we integrate relationships between human beings and today's technology»¹²³. And the Church's social teaching can be the one to contribute to the cross-disciplinary dialogue that works towards the rise of new ethical horizons protecting the dignity of the person, human rights, ensuring inclusion, justice, and solidarity in the technocratic and digital world with so many challenges we already are facing and those that are to come.

¹²³ POPE FRANCIS. Address to the Participants in the PAV General Assembly 2020 // vatican.va (16.09.2021).

CONCLUSION

The 21st century is full of change and challenges. The rapid development of technoscience and globalization of the technocratic paradigm not only gave humanity numerous advances, breakthroughs, and innovations, helping to build a more prosperous society with a strong economy and political power. It also transformed the way people perceive the world and one another. Humanity went through a dramatic cultural shift and change in values due to the rise of technology. Efficiency and utility became the most praised virtues, overshadowing human dignity and rights. As if human life does not possess any value on its own unless one meets the requirements and needs of the contemporary consumer technologized society. The modern technocratic paradigm instrumentalizes everything on its way, including the environment and even human beings. Moreover, if something cannot be instrumentalized, cannot serve technological and economic goals – it will be thrown away regarded as a *waste*: a waste of one's time, energy, or resources.

The subject of this research – the rise and globalization of the technocratic paradigm – is not just an academic topic to discuss between theologians and philosophers, nor is it just a field of research to the debate on within the walls of some university. It is the reality every human experiences nowadays in his/her daily life. The technological worldview influences the decision-making processes on the interpersonal and international levels, changing policies and the direction of the numerous countries' development. It poses a significant threat to the dignity and security of one's life, the future of the whole of humanity and nature, our common home. Therefore, there is an urgent need to analyze the role of technology and forms of power that derives from it, to respond to the modern crisis of morals and prevent humanity from disaster.

The recent cultural, intellectual, and spiritual transformation human society went through – the shift of collective consciousness to the technocratic paradigm that emerged in the 20th-21st centuries is a recent socio-cultural phenomenon. We, as a human race, are experiencing epochal transition. Furthermore, we do not know much about the results of these transformations we are going through, nor the true nature of

these changes. However, what we do know is that the meaning and purpose of human life have been distorted and changed. And we are to find new cultural codes, new ethics, and morals to meet the contemporary crisis of values and to respond to the dominant technocratic paradigm. Therefore, it is not the technology itself that was the main focus of the research, but rather a modern approach to it – from the instrument that was supposed to serve humankind, technology became the goal in itself, the master of human, its creator, assessing everything as a recourse to be used for its goals. However, the Catholic Church brings about another vision on the subject – this particular vision was the main focus of the paper.

Pope Francis, the People's Pope¹, as many call him, in his encyclical «*Laudato Si'*», which became the first time for the Catholic Church to dedicate the subject of a document to the epochal environmental crisis, calls humanity to the ecological conversation to respond to the *cry of the earth* and the *cry of the poor*², as «a true ecological approach always becomes a social approach»³. Furthermore, he states that the contemporary ecological crisis has its origin in the ethical, cultural, and spiritual crisis of modernity. Thus, in the third chapter of his encyclical entitled «The Human Roots of the Ecological Crisis», he presents his teaching on the *technocratic civilization phenomenon* and proposes the response to what he calls *the globalization of the technocratic paradigm*. He urges human society to rethink what is the true purpose of technology and progress and the overall context of the last two centuries' advancements. Moreover, he asserts that modern social paradigms and, therefore, global and local policies should be changed to lead to the *integral ecology* and authentic *integral human development* of every human being and humanity as a whole, as «if it does not involve the whole man and every man, it is not true development»⁴. And, most importantly, Pontiff urges the need to develop morals and ethics *to humanize technology* – technology should never be prioritized over ethics or, moreover, humanity and the environment.

¹ *Pope Francis: The People's Pope*.

² Cf. *Laudato si'*, §49.

³ *Ibid.*, §49.

⁴ *Caritas in Veritate*, §16.

It is not the technology itself or its rapid development that concerns the Pope, but rather a lack of capable leadership to create and implement globally sound ethics and legal framework to ensure safety for nature, the poorest and most vulnerable, and protect the rights of future generations. He critiques *the technological view on the world* and human beings, *excessive anthropocentrism*, the technological and *relativistic mindset* with the following *rise of technocracy* and *throwaway culture*, that regards planet's resources and humans as something that can be used if it is valuable and then just thrown away as something unnecessary, as a *waste*. In his recent book, «Let Us Dream: The Path to a Better Future», Pontiff describes this change in mentality, writing: «A humanity impatient with the limits that nature teaches is a humanity that has failed to master the power of technology. In other words, technology has ceased to be our instrument and has become our overlord. It has changed our mindset»⁵.

Undoubtedly, Pope Francis's vision on the stated matter was primarily influenced by the ideas of his predecessors. In his works, he numerously refers to Pope John XXIII, Pope Paul VI, Pope John Paul II, and Pope Benedict XVI, developing their social teaching on the stated subject. His main themes and concepts regarding the rise of the technocratic paradigm were influenced mainly by John Paul II and Benedict XVI. Pope Francis followed John Paul II, developing his thoughts on *the rise of scientism*, *man's estranged relationship with technology*, and citing his predecessor regarding the *inadequate presentation of Christian anthropology* on the human-nature relations based on the Book of Genesis. He also develops the concepts of *the culture of care* and *the throwaway culture* based on John Paul II's thoughts about what he called *the culture of life* and *the culture of death*. Francis' assessment of the technocratic civilization derived from the teaching on the *dominant technocratic ideology* and *technical worldview* of Benedict XVI, while also being shaped by the thoughts of philosophers of technology, precisely Martin Heidegger and fr. Romano Guardini. Although Pontiff does not often quote Pope Paul VI, his encyclical letter «*Populorum Progressio*» on *the true purpose of development* shaped the direction of

⁵ POPE FRANCIS – IVEREIGH A. *Let Us Dream: The Path to a Better Future*. New York 2020, 28.

the Catholic social teaching and, therefore, was an essential basis for Francis' synthesis of the contemporary cultural shifts. However, none of these breakthroughs in the CST could happen if it would not be Pope John XXIII, who convened the Second Vatican Council and called for the reform and renewal, preparing the Catholic Church to meet the needs of the modern world. Thus, continuing the tradition of Vatican II's Pastoral Constitution on the Church in the Modern World «*Gaudium et Spes*», Pope Francis in his teaching addresses the whole of humanity, encouraging the global society to create a culture of encounter and dialogue to respond to the cultural and ethical crisis of modernity.

The focus of the research was to demonstrate the Catholic Church's response to the socio-cultural phenomenon of the shift of collective consciousness to the technocratic paradigm that emerged in the 20th-21st centuries. As there is no synthesis of the Catholic social teaching concerning primarily the question of technology and cultural trends of technocentrism, given the recent emergence of these phenomena, the research in this field is crucial. The relevance of the study is evidenced by the lack of literature and research on the stated subject. Whereas the synthesis of CST on this matter can help find a way to humanize technology, exposing the Catholic doctrine on the contemporary social reality, this way starting a dialogue with the global community, contributing to the international policymaking processes and, thus, shaping the future of our world.

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