INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 13, Issue 5, (2023) E-ISSN: 2222-6990

Civilisation Sciences: The Theological and Historical Perspectives

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To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v13-i5/16840 DOI:10.6007/IJARBSS/v13-i5/16840

Published Date: 07 May 2023

Abstract

In postgraduate academic studies, understanding science and civilisation is essential as a rationale for history and theology to avoid misunderstandings and clashes. Aims research to explain the role of science in supporting the civilisation that occurred, to know the history of the philosophy of science in the development of civilisation, and to know the differences in theological views on science in civilisation. This research uses qualitative methods with a literature study approach by optimising the sources of books, journals, and research reports related to the philosophy of science, history, and religion. This study's results explain that science's existence should not be considered a final thing. It needs to be criticised and studied and not be weakened and placed in the correct position to avoid absolute or consider science as scientific truth and develop in the formation of human civilisation. Philosophy 20th century is the peak of the history of the philosophy of science. The differentiation of scientific disciplines and philosophy is radicalising rationality. Reasoning moves from the problem unconscious to human science existence. The differences between civilisations and the development of science and knowledge not accurate are still fundamental. Where is religion makes differences between the social structure of humans and God, individuals, and groups so that they do not have to give birth to a conflict called the clash of civilisations. The implications as academics understand the philosophy of science requires understanding history and theology to unite science and civilisation.

Keywords: Philosophy, Science, Civilization, Historical, Theological

Introduction

Philosophy of Science is a compulsory course for postgraduate programs in tertiary institutions. The Philosophy of Science is an integral part of learning for first-semester

students at postgraduate levels in tertiary institutions as a foundation for knowing, understanding, and exploring the particular field of knowledge being studied. Philosophy of Science, as a particular branch of philosophy, has a function and role to become a basis for providing an ontological, epistemological, and axiological framework for existing and developing science today.

All challenges must be faced with knowledge of life's processes and stages. The importance of knowledge becomes the foundation in seeking, understanding and contemplating to get the expected solution as a human being in studying science to discover progress. The development of science can be realised through various research activities carried out by scientists or philosophers (Affandi, 2019). The human universe's presence shows its existence; Descartes' expression of "cogito ergo sum" provides a fundamental change in thinking and acting (Descartes, 2012).

The subject matter of science that has been the centre of attention throughout the history of the development of science is how to achieve scientific truth, in what way scientific truth can be tested and ascertained, and how scientific knowledge can be said to have universal recognition or legitimacy. Can the scientific method be trusted and accounted for to obtain correct knowledge or the truth of knowledge? Is the truth of knowledge absolute or relative? In the history of science and civilisation, there are several phases, namely: first, how to cultivate crops or agriculture was discovered; second, some people live in one place; third, activities that do not produce food; fourth, become a small village community; fifth, come up with writing; sixth, intercultural interaction is formed; seventh, a religious system was introduced and eighth, economic and political institutions were formed so that the entire civilisation that had been passed was in harmony with science and knowledge (Sulaiman, 2016). Then, in a comparative approach to intercultural diversity, the history of civilisation is divided into six early civilisations, including Mesopotamia, ancient Egypt, Harappan (Indus Valley/India), China/China, Meso America, and South America (Guo, 2021). All phases of civilisation in early civilisations have shown that science can create civilisation according to human needs, regardless of political and economic interests.

It shows a tangible manifestation of the role of living things in building the benefits of mutual dependence or symbiosis mutualism. Humans demonstrate the caliphate in the universe with the ability of their knowledge to carry out life's institutions. It has outlined in the Holy Qur'an, among others in the letter (QS. Hud: 61), who is responsible for realising prosperity on earth. At (Q.S. Al-Maidah: 16) by realising safety and happiness on earth, (QS. Ar-Ra'd: 29) by believing and doing good deeds, and (QS Al-Asr: 1-3) which cooperating in upholding the truth and strengthening in patience.

The development of civilisation is presented with more severe and stricter challenges than before. Humans will depend on human unity to prevent indications of the destruction of civilisation and take mutual benefits along with the development of scientific progress (Aaserud, 2005). In maintaining and avoiding the destruction of the universe's life, science is needed to collect and manage inseparable experiences obtained in the struggles carried out since our ancestors. It can lift humanity at this time among other creatures on earth. Along with the development of civilisation which leads to complex forms, some worlds are progressing slowly but surely; on the other hand, the development of ancient civilisations began to interact in terms of trade, education, religion, and military (Fajrin, 2019).

The difference between humans and other creatures on earth is how to understand and apply the knowledge they learn and encounter. Science means knowledge but not just any knowledge with particular characteristics systematically arranged to become an explanation

or explanation (Widyawati, 2013). The relationship between science, humans, and civilisation resulting from science centres on the possibility that humans effectively develop entire organisations in their capacity to absorb and apply science, knowledge, and technology. The emergence of pedagogical understanding in science education has the basic foundation of establishing and solving problems and teaching by re-evaluating between theory and experience and between history and its foundations (Pisano, 2013).

Social and political influences include the development of civilisation on science and produced by analysing scientific works. It will provide a different view of a period used to understand science's development. This condition cannot adequately understand the specific results of certain scientists. Bussoti's view explains that this kind of analysis risks partly becoming an a priori attitude, meaning that it can be blamed on other periods. The scientific work presented will lead to severe misunderstandings about how scientists present their results (Bussotti, 2013).

Early evidence of scientific activity shows that Anatolian society employed scientists. In contrast, the term "scientist" as a profession was first used in the 19th century, when priests and monks carried out scientific studies and taught scientific knowledge in temples and monasteries. Nevertheless, unfortunately, when civilisation developed, the relationship between science and religion weakened. Science became a domain of philosophy that tended to strengthen to distance religion and form secularism so that the difference between science and religion did not develop until the 18th century.

The religious view of science in civilisation identifies no civilisation without religious activities. It confirms that the transformation of science, culture, religion, and humans cannot be separated from history and the view of civilisation itself. Debates on the differences between monistic civilisations always mark some religious views in every civilisation. They believe in the existence of one God and claim one God, such as Islamic and polytheistic civilisations that believe in many gods engage in ancestor worship. They also believe in superstition, so most civilisations recognise more than one God (polytheistic). Regardless of differences in religious views, civilisation will continue to be the centre of human life because it provides answers to questions about life, the universe, Etc (Guo, 2021).

The above paragraph provides a fundamental view that religion is the world's light, and human progress, achievement, and happiness result from obedience to the laws in the scriptures of all religions. It provides evidence that human civilisation is both physically and spiritually in life. Religion makes the most substantial structure, can survive, maintain for as long as in the world, guarantee spiritual perfection, and create and protect human civilisation (Bahá, 1983).

The phenomenon passed the classical phase has moved to the peak civilisation through the literature of Thomas Aquinas from Latin Christian elements, Al-Ashari from Islam, Shankara from Pan-India, or Neo-Confucianism from Chu-Hsi. They called by paradigm incarnation Amenemhet III (Pharaoh) argued in Egypt and the Buddhist-Pali Dhammazedi in India's Pali-Buddhist civilisation (Theravada). It adds to the turning point of the development of civilisation (Krejci, 1982). Classical civilisations could interpret different religions' spiritual life to date or seek new sources of belief. As churches reproduce, the part of civilisation disintegrates civilisation proletariat (Kondratiev & Saykina, 2020).

The role and understanding of the churches become the highest human being with the institutional embodiment of higher religions. In this concept, civilisation acquires an 'antithesis and subordinate role' in which conflicts are placed on lesser importance. They are subject to the repeated rhythms of rising and falling cycles. At the same time, religion follows

a nonlinear line from the development of later civilisations. The goal of the history of civilisation is to anticipate the fall of selfless religious insight by embracing the separation of higher religions such as Buddhism, Christianity, and Islam (Toynbee, 1965). Concerning Judaism, Zoroastrianism and Hinduism are treated as nothing more than complementary components of religion in the culture of one civilisation.

When civilisation is the highest form of culture in human life, the community groups produce different identities in other objective factors such as history and religion (Nafis, 2020). The presence of religion as a mission in human life has shaped the characteristics of its civilisation. It can cause a clash of civilisations or a clash of civilisations between groups from various civilisations. It is believed to be a necessity with modernity that results in secularisation as the trigger (Syarifuddin, 2014).

The opinions and thoughts above provide us with insight that it is undeniable that the development of science and knowledge does not necessarily maintain the existing civilisation. Philosophically and historically, harmony with the development of civilisation shows that human existence is sometimes incapable of controlling the needs and interests of human being desire, so the emergence of lust dominates. However, the theological view provides enlightenment and limits when the presence of religion can provide control over the development of civilisation. On the other hand, it is easy to destroy a civilisation when religion becomes a partial interest or mission for theological egoism.

Fundamental questions arise from the paragraph above, namely whether the existence of developing science and knowledge will destroy civilisation itself. What if the history of science that developed in civilisation has not proven that science is in line with civilisation? How big is the hope that theology is present to prove the existence of science and civilisation are firmly bound together? Is it true that theology is a source of great potential for destroying civilisation?

The development of thought and civilisation are related to one another. The development of thought gives birth to civilisation, and vice versa; the development of civilisation can give birth to thoughts. Studying the philosophy of science is helpful to students as aspiring scientists to study the scientific method and conduct scientific research. By studying philosophy, it is hoped that they will have a complete understanding of science and be able to use this knowledge as a basis for learning and scientific research.

The research aims to explain the role of science in supporting the civilisation that occurred, to know the history of the philosophy of science in the development of civilisation, and to know the differences in theological views on science in civilisation.

Research Methods

This study uses a qualitative approach based on a literature review by reviewing several studies from research journals, books, research reports, and other scientific writings. The literature study focused on this research is a form of research in articles that follow the research objectives. According to Arikunto (2012), the *literature study* is a type of research that has a descriptive nature by elaborating the data obtained in the form of literature, including concepts and thoughts resulting from debates about stigmatisation.

Results and Discussion

1. History of Sciences

In the history of science and knowledge, it is necessary to build synchronisation between the fundamental goals of science itself so that it can explain a directed and logical way or flow of

thinking. The basic understanding of science or science is systematic knowledge about nature obtained through repeated observations and experiments to discover the legal structure and regulate natural phenomena (Singer, 1995). The legal basis and natural phenomena indicate that life phases occur gradually and repeatedly. A systematic evaluation can be conducted to find new formulations or ways to discover and develop previous knowledge. Another opinion explains that science is exact, organised of knowledge based on the truth, and neatly arranged (Suaedi, 2016). The categories are based on science and phenomena, with hypotheses, theories, and legal or rational arguments.

The historical aspect of science became a human activity before developing the first civilisation in 3000 BC. The excavations indicated Catal Hüyük in Anatolia when the Turkeys had begun developing advanced skills by accurate measurement and mapping methods since 6200 BC. The existence of excavation and measurement methods aims to conduct investigations to find and encourage scientific studies on early civilisations. It has an ontology stage researching, epistemic, and axiology (Biyanto, 2015).

From the aspect of ontological practices, it shows and directs the form of questions that need to be answered. Such as what I am, what gender I am, the difference between me and others, how I was created, and how I can change. The study from an epistemological aspect puts a theory or concept by formulating questions. Such as how I came to the world, what elements of myself I am, how I can grow and develop, and whether I can end. They studied from the axiological aspect that uses explanations, among others, why I was created, why I think, why I live like this, what I live for and why I can grow and develop.

The presence of humans raises many questions, such as how and what benefits humans live by reflecting on life. Then humans depend on various activities, including religion, science, political economy, ideology, etc. Human vulnerability life is ontologically and epistemologically in all fields.

Let us begin by taking a brief systematic review of the possible historical functions of science, beginning by distinguishing functions that exist between functions within and outside science. In other words, the existence of differences in internal and external views on the history of science has received much debate among historians. The existence of logical differences helps us understand the internals of a particular community. The internal view becomes a science based on the level of trust accepted without doubt about the success and coherence in building the fundamental beliefs of science that change or construct hypotheses, rules of reasoning, and subsequent goals. The difference between internal-external conditions is forged in the process of natural phenomena. It determines what is considered scientific or not.

Finally, the outer side tends to be more emphasised in history to understand science as a social and cultural phenomenon. The obsession outside academia is more on science as a driver of technological development. So, we hope that a better understanding of the history of science will help us use and control science more wisely and support it more effectively.

By paying attention to and focusing on the historical functions of science that are internal to science, the question is whether the study of past science can help us improve current scientific knowledge. There are many ways in which knowledge of the history of science can enhance scientific knowledge. To conceptualise, Chang (2017) distinguishes between orthodox and complementary functions of history science. Historical knowledge can help us better understand currently accepted scientific knowledge. In dealing with complexities, how to increase scientific knowledge with a more solid understanding of the concept and

justification of the results that may be accepted only as gospel truths? The orthodox function of the history of science is to teach about the scientific method of scientific training regularly. If we think science works well, we must work to make it work well, and scientists need to be trained in scientific methods. It happens to specialise in learning by doing, but it is not enough that we take a historical perspective. It can be helpful and instrumental to study the scientific method by going back to history without having to master the formidable technical details of contemporary science.

The existence of science should not be seen as a final thing, so it needs to be criticised and studied and not be weakened and placed in the correct position. It can help avoid absolute knowledge and regard science as scientific truth in addition to seeing science become integrated with other fields and then develop in the formation of human civilisation. While knowledge is the truth of knowledge in human life, there are four types: shared knowledge, scientific knowledge, philosophical knowledge, and religious knowledge (Susanto, 2011). Then the four types of knowledge are explained: shared knowledge, scientific knowledge, philosophical knowledge, and religious knowledge (Salam, 2000). Knowing knowledge is necessary to know well, so knowledge is always to know in awareness. It indicates that knowledge is always presented as a subject of awareness to know something he wants to know (Rusmini, 2014).

Science involves six components, namely problems, attitudes, methods, activities, conclusions, and influences (Adib, 2010). The knowledge gained, and the testimonies of others are also directly accepted as accurate. All the reasons, evidence, and testing are entrusted to the person who testifies, in the sense that whether that person's knowledge results from careful thought, research, or investigation so that the truth can be believed. More than that, his honesty is also an important issue. Because if lies are preached, this will surely endanger human life itself.

Thus, science is born from developing a problem that becomes a source of anxiety, theoretical questions, and a call to the heart to provide alternative solutions. Based on the problems that arise, scientists' attitude to build methods and activities to make a case settlement or conclusions in the form of theories and provide effects. The guideline ecology and humans as a practical realm so that science and knowledge become a function of life.

Civilisation requires people to develop capabilities and be responsible for daily life activities. However, different civilisations often occur in cultural, spiritual, and artistic achievements. Developing excellent artistic skills does not necessarily produce a civilisation (Adib, 2010).

a. Prehistoric Period

Talking about prehistoric science may seem like a contradiction in terms. Prehistory seems to imply "barbarism" or destructive nature, while science is the product of civilisation. Science in prehistory implies the following: first, the gathering of knowledge through observation; second, the classification of such knowledge; and third, through this classification, the elaboration of general ideas or principles (Williams & Williams, 2013).

It must be understood that the knowledge of primitive man in prehistory, as we will describe. We cannot trace the development principles, much less can we say who discovered them. Some are a human inheritance from ancestors from among humans or other than humans as astral beings. He can only grasp others after he reaches a relatively high stage of human development. However, the principles listed have been part of the knowledge of our primitive ancestors, especially in the early Egyptian and Babylonian civilisations, which are an introduction to the so-called prehistoric period.

b. Ancient Greek Period

Ancient Greece is a historical place where a nation has a civilisation because it is synonymous with philosophy, the mother of science. Philosophy had developed long before the classical Greek philosophers pursued and developed in a superficial sense. It is precious for the development of science in subsequent generations by opening the doors of various disciplines whose influence is felt until now (Karim, 2014). Therefore, the period of development of Greek philosophy is an entry point to enter a new civilisation of humanity (Bakhtiar, 2013).

Here are some ancient Greek philosophers who have given a touch of civilisation at the beginning, among others

1. Thales (625-545 BC) argued that the essential ingredient of this world is water which can permeate all objects in the universe and perform calculations on the occurrence of eclipses by calculating the height of the pyramid calculating its shadow (Djaja, 2012).
2. Pythagoras (± 500 BC) According to him, the basics of the Pythagorean theorem as the hypothetical square of a right triangle is equal to the sum of the squares of its legs or the sides of the right angles (Mahfud & Patsun, 2019).
3. Socrates (469-399 BC), a very learned and intellectual high known for his knowledge and wisdom, is very high. His students explained a lot about Socrates because he did not leave much writing (Aizid, 2018).
4. Plato (427-347 BC) explains the degree to of human beings are raised when working with his character for the happiness of life (Sondarika, 2021). According to him, God is understood as the soul of the universe, meaning His teachings are the primary source of all movements occurring in the universe. Where the moon, sun, and stars regulate the movement of all celestial bodies in their respective orbits (Weismann, 2005).
5. Aristotle's (384-322 BC) famous work is the classification of Flora and Fauna in the Greek Aegean Islands. Then, in state administration, he argues that a sound government system prioritises the people's happiness, not the contrary; the people suffer because of greedy rulers (Roswantoro, 2015).

c. Islamic Period

I interpreted the word civilisation with the basic word *adab*, which contains the meaning of character, behaviour, or character manifested by Muslims in all activities (Shirazi et al., 2010). The development of civilisation in the Islamic period includes the support of leaders, government stability, the interaction between Muslim and non-Muslim communities, the rise of writing books, and the development of paper raw material products (Yunus, 2010).

For this reason, the caliph supported this thought in developing civilisation, shown by loving science and knowledge, maximum funding, and good political and economic stability. It is in line with the high enthusiasm of Muslim scholars and intellectuals in carrying out the development of religious sciences, humanities, and exact sciences through research, translation, and writing of scientific works in various scientific fields as well as their work in the field of civilisation artefacts (Zakariya, 2020).

In history, the Islamic development in three periods, namely the classical period, experienced progress in all fields or called the golden age, but this did not last long because, between 650-1250, AD experienced a setback in the form of division. Then the middle period experienced a significant decline in 1250-1800, and the modern period after 1800 AD to the present. All

phases have different dimensions because they are influenced by social, political, religious, and cultural conditions. This classical Islamic period has different nuances from others (Gunawan, 2019).

1. Classical Age (650-1250 AD)

   The classical period lasted from 650-1250 AD. It can be divided into two: first, the period of the progress of Islam I, the period the progress of Islam I began in 650-1000 AD. The progress of Islam I is recorded in the history of the struggle of the Prophet Muhammad from 570 - 632 AD. Khulafaur Rashidin from 632-661 AD, Umayyad from 661-750 AD, Bani Abbas from 750-1250 AD And. Second, the period of disintegration is 1000-1250 AD (Zarkasyi, 2015).

2. Middle Period (1250-1800 AD)

   In the middle of 1250-1800 AD, Baghdad's fallen city was under Spain's handle. After the Abbasid Caliphate collapsed due to the Mongol army's attack, the troops' political Islam declined.

   In this study, this historical event is positioned as an essential foundation of Islamic civilisation, which Khalil (2005) relates to two things, namely the transmission of a worldview in belief (*al-naqlah al-tashawwuriyyah al-i'tiqadiyyah*) and the transmission of knowledge (*alnaqlah al-ma'rifiyyah*).

   In 1500-1800 AD, the political situation of Muslims re-developed after the emergence and development of three major empires, namely the Ottoman Empire in Turkey, the Syafavid Sultanate in Persia, and the Mughal Sultanate in India. Meanwhile, in 1700-1800 AD, there was a decline in the three kingdoms. Furthermore, in the middle period, which lasted from 1250-1800 AD, and in modern times, the idea of renewal in Islam emerged, so generally using periodisation. Used by Harun Nasution in dividing period of Muslim history can be divided into two periods, namely the period of decline that occurred in 1250-1500 AD. This period shows that the disintegration between Sunnis-Shiah and Arabs-Persians struck. Persian culture took an international form and included the sphere of Arab culture (Hakim et al., 2000).

3. Modern Age (1800-present)

   At the beginning of this period, the condition of the Islamic world was politically under the penetration of colonialism. Then in the mid-20th century, the Islamic world rose to liberate its country from Western colonialism. This period was indeed the revival of Islam after the decline in the middle period, wherein reform ideas began to emerge in Islam (Nasution, 1986).

   The renewal movement caused the emergence of awareness among scholars that many foreigners entered and accepted Islamic teachings. The West dominated the world in politics and civilisation. Hence, they tried to rise by imitating the West in political and civilisational affairs to create a balance of power.

   The modern period of 1800 AD onwards is the era of Muslim revival. The fall of Egypt in the hands of the West convinced the Muslim world of its weakness. It made Muslims aware that a new, higher civilisation had emerged in the West and threatened Islam. The kings and Islamic leaders began to think about how to increase the quality and strength of Muslims again.

d. Renaissance or Modern Period

The Renaissance period in the 16-17 centuries was a golden age in the history of Western civilisation. This era is a transitional phase that bridges the dark ages with the Enlightenment Age. With the birth of the Renaissance, a glimmer of light of Western civilisation began to glow. Without the Renaissance, Europe probably would not have entered the modern century so quickly (Suhelmi, 2007).

First, at this time, humans achieved brilliant achievements in various fields of art, philosophy, literature, science, politics, education, religion, trade, and others. Second, the Renaissance revived the ideals, nature of thought, and philosophy of life. The modern structure world includes optimism, hedonism, naturalism, and individualism. Third, there is a revival of deep interest in the rich heritage of Ancient Greece and Rome. Fourth, there was a revival of secular humanism, which shifted the orientation of human thinking from theocentric to anthropocentric. Fifth, a rebellion against the church emerged, forming intellectual and religious freedom. In this case, it has been declared that humans rule everything that exists, not the Church or the Bible (Tjahjadi, 2004).

The Renaissance was marked by the emergence of several scientists and philosophers who opposed church doctrines, especially about earth science. They assume that the centre of the world is no longer God but humans. Humans can determine their future and not give in to destiny. As intelligent beings, humans should be able to conquer the world and its contents. European inventors and movements related to the Renaissance process. It led Europeans to explore the world and open trading colonies across the continents of Asia, Africa, and America (Asy'ari, 2018).

e. Contemporary Period

This era began in the 20th century AD and is still ongoing, marked by advanced technologies. The specialisation of sciences is getting sharper and more profound. At this time, the field of physics occupies the highest position. It is widely discussed by philosophers in science and technology applications in the 21st century resulting from the 20th century. Now, scientists who stand out and are widely discussed are physicists. The field of physics became the centre point of the development of science at this time. The most famous physicist in the 20th century was Albert Einstein, a physicist. He put forward the theory of relativity and contributed a lot to developing quantum mechanics, statistical mechanics, and cosmology (Surajiyo, 2008).

Philosophy of the 20th century is the culmination of 2500 years, marked by the differentiation of scientific disciplines and philosophical education and the process of radicalisation critique. The radicalisation of intellectual criticism moves from the question of the unconscious to human existence and language to society and science. The radicalisation process was driven by several humanitarian disasters that befell humanity in the early twentieth century: two world wars, the Holocaust, and the atomic bombing in Hiroshima. In this context, modernity is built on the throne of innovative technological, social and scientific achievements. However, it is also characterised by various kinds of destructive phenomena. So, twentieth-century philosophy can also be read as a radical critique of modernity. Therefore, talk of 20th-century or contemporary philosophy presupposes understanding modernity (Müller, 2011).

The existence of paradigms of critical reflection at the beginning of the 20th century, which were very specific and often contradictory to each other, will be productively combined and perfected today and in the future. These philosophical paradigms are constructive

without making it a dogma that must be adhered to new forms of human life. Shared praxis can be thought of on an inter and transcultural level. It can open new horizons for our abilities and possibilities despite the limitations and human contingencies that must be accepted (Kádár & Tóth, 2013).

Science and Civilization: Theological Perspective

Civilisations' differences create different views on the development of science and knowledge. However, they are not real but are still fundamental, where civilisation is distinguished by history, language, culture, tradition, and religion. When religious differences in viewing the social structure of humans with God. With individuals and groups, freedom, and no conflict, even though it is not in violence, have differences that have led to the most violent and prolonged conflicts (Fitria, 2009).

Islam views both from the aspect of religion or civilisation as an inseparable part of the reality of human life. Its presence frees humans from ignorance, deviations, and moral or moral damage. The critical indicator in science is based on the high activity of general science and religion. Supporting activities include the preparation of scientific books and literacy for translation. Scientific progress in religion and general science includes interpretation, hadith, medicine, fiqh, philosophy, astronomy, mathematics, and geography (Suwarno, 2019).

Knowledge in Greek, Indian, and Persian can be translated into Arabic with translation activities. A character is Muhammad bin Ibrahim al Fasasi (the first astronomer), commissioned by Caliph al Mansur, who translated the book Sindahind, which contains astronomy. From India into Arabic (Faqihuddin, 2019).

The character of Muslim scientists has an ontology that follows the needs that are the goals of Sharia. The Qur'an is an inspiration and is studied scientifically and has the motivation to develop scientific knowledge, which includes daily needs, including clothing -board food as a sharia requirement. Imam Al Khawarizimi developed algebra to make inheritance law more accurate (Amhar et al., 2018). In the view of Islamic civilisation, science and civilisation will be balanced and implemented by uniting the interests of the world and the hereafter, material and religious and not mutually exclusive.

Modern philosophy's development began with philosophers' thought in the 17th century; its reflection was the beginning of radical thinking with a rational basis, giving rise to the birth of modern thought. A radical view is essential in the paradigm of modern thinking that has grown in Europe since the 14th to 17th centuries (Lok, 2018).

With this paradigm shift, the traditional and hierarchical realities of the medieval and premodern centuries will slowly collapse. In the view of science, the paradigm gives birth to quantitative mathematical methods that serve as objects of research and social engineering for the benefit of humans. It provides a change in the belief that each individual can find his answer in making decisions so that he can take responsibility and minimise the doubts that arise.

Separating empirical law from normative law has led to modern science being called neutral and value-free. Normative law regulates the relationship between creatures and their creators. For empiricists, normative law is seen as only related to humans. Rousseau sees it as a social contract, so it has nothing to do with religion (Soelaiman, 2019).

Changes in belief in science and knowledge in the modern period shifted the mystical and transcendent dimensions. They then shifted to modern science by prioritising empiricism to material normatively applied. In other words, science in the modern period separated the

empirical and normative frameworks of thought, which treated the universe. Modern science was able to explain the material or physical causes of the laws of the cosmos.

The emergence of a renaissance or modernisation movement in the 20th century is supported by the theory of secularisation of science and religion, which has the potential to cause debate and cannot develop anymore. In Karl Max, Durkheim, and Weber's view, the period of religion will pass. The more modern society, the more complex their lives, the more rational and individual, the less religious they will be. It has happened in this European period, where most European countries have become secular. However, this condition is improper because religion is still developing in Europe, as research conducted in the 21st century (Riesebrodt, 2014).

However, unfortunately in this modern period, the conflict between religion and science has become a great battle which cancels each other out or is increasingly tenuous, where modern science, which is built on empirical and rational foundations, is increasingly leaving religion an intuitive nature so that this condition affects religious views, especially Christians, who become the majority in the West. However, it influences the development of existing knowledge in Christian theology, namely, the idea that God is dead (Reddy et al., 2022).

Thus, science and civilisation from a modern perspective describe a materialistic, hedonistic, secularist, and individualistic life, where current progress gives rise to pragmatism for human life. Religion as control of life does not function because religion is considered an obstacle to progress.

Chinese civilisation, or China, is the oldest civilisation still being felt and has a vital role in developments in the world. It can be seen from the artefacts or philosophies left behind that the life of the ancient Chinese society was governed by feudalism; the noble group ruled over the people, the people paid taxes to the nobles, and respected the power of gain, among others, to the sky god as the supreme God, the power of nature and ancestral spirits.

Scientific civilisation and knowledge development in ancient China resulted in many astronomers who helped make a calendar system. It was developed for agricultural, shipping, and business activities requiring weather or season information. Technological developments can be seen from manufacturing mining goods and processed products into household furniture, weapons, jewellery, and agricultural tools.

All civilisations, especially in China, did not include religious factors in the classical period as the dominant social thought. Confucianism was recognised as a worldly intellectual tradition of humanism and rationalism. Of course, this gives rise to various religions, but China does not follow any religion (Xia, 2014).

Building Chinese civilisation since the classical period relying on local wisdom and respect for the universe, a philosopher named Confucius (551-479 BC) the state and society would be at peace if they corrected themselves from despicable acts, did things proportionally, and behaved according to each other's abilities. The core of his thoughts and teachings lies in ethics and morals that regulate human relations with others. Moral teachings contain wisdom, humanity, justice, virtue, rules, knowledge, integrity, loyalty, respect for parents, shame, kindness, and honesty. Be a chivalrous and forgiving attitude. The implications, if this is violated, will bring chaos. Then the state's attitude to acting is based on humanity and justice, so the people obey (Jiang-Fu, 2021).

Therefore, like other civilisations, Chinese civilisation can only be well understood in its historical transformation and relation to other civilisations. Like Samuel Huntington's "Clash of Civilizations" thesis, a historical and ethnocentric approach to Chinese civilisation is a self-fulfilling prophecy (Guang, 2011).

Thus, it is clear that Chinese civilisation, from the development of science and knowledge, has made a significant contribution to the world and human civilisation because of local wisdom and thought. Morality-building Chinese society minimises conflicts between rulers and people and vice versa, including there is no potential for religion. Hinder the development of science and the circumstances that occur.

In the mid-century years 500-1500 BC, European society already had a value of loyalty to the Catholic church, where an oath of allegiance was made for the knights loyal to their king. In Palestine, when the proofing loyalty crusade as Islamic rule. Their sense of nationalism grows to get proper recognition and develops long enough, which previously had grown a sense of loyalty to their king.

Along with the development of knowledge that has existed since the Greeks and Romans, it has stopped in Europe, where the rapid development of Christianity has occurred so that the power of the church is dominant and determines life in Europe. All activities and activities are regulated by church doctrine or God's laws. They do not provide freedom of thought, so it causes a setback in the development of science.

The most significant discovery in the development of civilisation in Europe was art. The discovery of the prospective method became very important in helping to make building designs and adding to the artistic impression. The development of science adds greater accuracy to ensure accuracy in textual scholarship.

When scientists or philosophers are under pressure because they are not allowed to violate or oppose the provisions of the church through Opinions, theories, or scientific results carried out, have led to severe violations of the law, so at this time, the decline in the field of science is due to the strength of church dogmas and doctrines (Cohen, 2007). The strong understanding of the church as God's commandment makes kings and priests the hands of God who have absolute rights even though they are irrational in making decisions or expressing opinions, thus closing the space for scientific interaction. The invalidity of the social structure of European society at that time did not get space in the rules of the church and religion. At the same time, the joints of the manifestation of Christianity are essentially the relationship between humans and God, which is the basis for every implementation of community activities.

The weak role of the community or civil society is due to the priest or priest being number one in determining the rules under the pretext of being based on God's word so that the church has full power and control of philosophy and knowledge in line with the church council (Ponce et al., 2017). It has led to the view that violations against churches, priests, or pastors can invite major disasters in people's lives. Hence, this religion powerfully regulates the development of science.

However, in the end, the thought movement in Europe was finally sparked during the Renaissance period, which restored the importance of renewing science as the basis of life, but as a result of this impulse, the emergence of liberal, democratic, and secular thought where world progress had nothing to do with religious activities. The European community movement became euphoric due to the weakening of the role of religion. In this case, the church would create a social order not based on theological values.

The long debate between science and knowledge in European civilisation was very long, where the progress built by the Greeks and Romans became stagnant due to the church's power, which strong development of science and knowledge and scientific work on scientists or scientist philosophers. As a result, European civilisation was in a state of crisis. Darkness or

decline gave rise to a revolution that took place and challenged complete control of the church.

Conclusion

The philosophy of sciences, including the development of citizen science, is produced in scientific analysis. It will provide a different view in a certain period to understanding the science development cannot adequately understand the specific results of certain scientists. The existence of science should not be seen as a final thing, so it needs to be criticised and studied. It does not need to be weakened and placed in the proper position to avoid absolute or consider science as scientific truth and develop in the formation of human civilisation. Philosophy in the 20th century is the peak of the history of philosophy sciences—the differentiation of scientific disciplines philosophy and the radicalisation of rationality moving from the problems to humans and science. The differences between civilisations and views on the development of science and knowledge, although not accurate, are still fundamental, where theology differences give birth to differences in the social structure of humans and God, individuals, and groups so that they do not have to give birth to conflicts called conflicts of civilisation. The level of understanding of postgraduate students in the philosophy of science in which there is a focus on science and civilisation as well as history and theology, both of which explain differences but are not in conflict with each other.

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