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THE DISTRIBUTION OF SCIENCE ACCORDING TO MUSLIM PHILOSOPHERS

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Abstract

This research is qualitative research and includes literature research. The purpose of this study is to examine the distribution of knowledge with various branches and scopes. This research uses a descriptive method with a qualitative approach. The results of this study show that the concept of science in the Middle Ages and Muslim scientists including Al Farabi, Ibn Khaldun, Al Ghazali, and other scientists basically still has no classification of science on the one hand and religion on the other. The classification of knowledge given by experts at this time aims to make it easier for humans to study science so that humans have certain expertise in scientific disciplines, and do not deny other sciences so that there is a balance in themselves that brings benefits. The Islamic view of science is quite comprehensive. Science can be equated with science in the Western tradition, but Islam has a broader meaning. The scope of knowledge in Islam is not limited to the physical and observable, but also includes aspects of metaphysics.

Keywords: *Science; Muslim; Philosophers.*

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INTRODUCTION

Islamic civilization has developed and is divided into three parts, namely: the classical period, around 650 -1250 M, then the middle period, namely 1250-1800 M, and the modern period from 1800 M-present (Nasution, 1985). In classical times, it can be said that Islamic scholarship has reached a high level of discourse so it contributed to the development of science in later times. Some of the things that cause this to happen are the internal motivation of Islam itself to study without time limits (Stanton, 1990). Moreover, revelation from God was considered important by classical Muslims, so this was the reason why science received support and response from Muslims. This also makes the scientific tradition in Islam fertile and lively in the following periods.

The complexity of the sciences that develop in Islamic civilization today is understood as the religious sciences are only one part of the various branches of science as a whole. The progress of Islamic civilization has to do with the progress of all aspects of scientific fields. The existence of sharing of knowledge among various Muslim scientists turns out to create disharmony between various fields of Islamic science. To overcome this disharmony, various Muslim thinkers and scholars have come up with a complete classification of sciences with their hierarchies.

After all, humans have the nature to try to find the truth, including the truth of science. Moreover, the truth enables humans to gain knowledge of al-Haqq (the Trust), knowledge of the true Truth. Islam also strongly encourages and supports truth, rationality, and science (*al-'ilm*) which are the main things for its people to have. Several verses of the Qur'an also show the importance of knowledge and the position of scholars. It is as in the word of God:

يٰٓاَيُّهَا الَّذِيْنَ اٰمَنُوْٓا اِذَا قِيْلَ لَكُمْ تَفَسَّحُوْا فِى الْمَجٰلِسِ فَافْسَحُوْا يَفْسَحِ اللّٰهُ لَكُمْۚ وَاِذَا قِيْلَ انْشُزُوْا فَانْشُزُوْا يَرْفَعِ اللّٰهُ الَّذِيْنَ اٰمَنُوْا مِنْكُمْۙ وَالَّذِيْنَ اُوْتُوا الْعِلْمَ دَرَجٰتٍۗ وَاللّٰهُ بِمَا تَعْمَلُوْنَ خَبِيْرٌ

> *"O you who believe! If it is said to you, "Give spaciousness in the assemblies," then expand it, and Allah will surely provide room for you. And when it is said, "Stand up," then stand up, Allah will raise (degrees) those who believe among you and those who are given knowledge by several degrees. And Allah is All-Aware of what you do"* (*Surah al-Mujâdilah* [58]:11).

In another verse Allah says:

وَمِنَ النَّاسِ وَالدَّوَاۤبِّ وَالْاَنْعَامِ مُخْتَلِفٌ اَلْوَانُهٗ كَذٰلِكَ ۗ اِنَّمَا يَخْشَى اللّٰهَ مِنْ عِبَادِهِ الْعُلَمٰۤؤُا ۗ اِنَّ اللّٰهَ عَزِيْزٌ غَفُوْرٌ

> *"Only the scholars among His servants are able to attain the degree of taqwa (fear and closeness) to Allah"* (*Surah Fathir* [35]: 28).

The development of science which was originally from (rationality) and observation (empiricism) can certainly be the basis of the scientific method. Humans can also reflect, reflect and contemplate thoughts which are then followed up by observation, recording, analysis, and conceptualization. The desire that exists in humans also arises based on observations followed by reflection. However, the source of knowledge is not limited to observation, empirical experience, logical reasoning, and reading results, because all of them tend to be relative and temporary, even subjective.

The development of science begins with curiosity, moreover, humans also have various problems faced in human life. Humans also have the potential of reason, taste, intention, and the eyes of the heart (bashîrah). In addition, humans have a spirituality that is available within them so this makes humans compelled to know something and also be able to understand the various objects around them (Ruskanda, 1995).

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Indeed, knowledge or forms of knowledge viewed from an Islamic perspective all come from one source, namely Allah SWT. (Nasr & De Santillana, 1968). Even Islamic teachings do not recognize the essential separation between "religious knowledge" and "profane science". This is because the knowledge and intellectual perspectives that Islam has developed have a hierarchy so that it leads to knowledge of Allah SWT as the substance of all knowledge (Azra, 2019).

This is the reason why Muslim scientists try to integrate the sciences developed by all other civilizations into the hierarchical scheme of knowledge according to Islam. And this is also why Muslim scholars, thinkers, philosophers, and scientists from al-Kindi, al-Farabi, Ibn Sina, to al-Ghazali, Nasr al-Din al-Thusi, and Mulla Shandra are very concerned with the classification of the sciences (Nasr & De Santillana, 1968).

The source of knowledge that cannot be ignored is a revelation (the holy book), because this last source is absolute and transcendental, while other sources (reason, senses, experience, and so on) are relative, relative, and subjective. Because of this, this paper will discuss the division of knowledge according to Muslim philosophers. The complexity of the sciences that developed in Islamic civilization; is that the religious sciences are only one part of the various branches of science as a whole. The progress of Islamic civilization is related to the progress of all aspects of scientific fields. With the sharing of knowledge from various Muslim scientists, it is possible to enrich knowledge based on an Islamic approach. As for some Muslim philosopher figures such as Mulla Sadra al-Kindi (796-873 AD), al-Farabi (870-950 AD), Ibn Sina (980-1037 AD), al-Ghazali (1059-1111 AD) have shared knowledge and In this paper, we will discuss the division of knowledge according to Muslim philosophers

METHODOLOGY

This study will examine and describe the method of education in surah al-Mujadilah, in line with the focus of this research so the research will use a qualitative approach. The data or materials needed in this research are obtained from a number of literature or libraries, either in the form of books, encyclopedias, dictionaries, journals, documents, and other sources that are considered to be related to the problem being studied (Afifuddin & Saebani, 2012).

According to Afrizal, qualitative research is defined as a social science research method that collects and analyzes data in the form of words (oral and written) and human actions and the researcher does not attempt to calculate and quantify and does not analyze numbers (Afrizal, 2014). As a literature study, the source of data in this study is written data, both primary and secondary. The primary data in this study is the book of interpretation and documents related to the topic of this research.

Data collection techniques used by the authors in this study are: (1) Collecting and analyzing various verses in the Qur'an and the hadith of the prophet related to the research discussion. (2) Analyzing the verses in Surah Al Mujadalah which is the primary source in this study. (3) Collect various references that support answering the formulation of the problem under study, namely in the form of books of interpretation, educational books, and so on that are relevant to this research.

The data analysis techniques in this study: (1) Data reduction. Data reduction is defined as the process of sorting, focusing on simplifying, abstracting, and transforming rough data that emerges from written field notes. Reducing data means summarizing, choosing the main things, and focusing on the things that are important. Thus the data that has been reduced will provide a clearer picture, and make it easier for researchers to conduct further data collection. (2) Data Presentation. The presentation of data is a set of structured information that gives the possibility of drawing conclusions and taking action. In qualitative research, data presentation can be done in the form of brief descriptions, charts, relationships between categories, and the like. The most frequently used in data presentation is narrative text (Sugiono, 2014). (3) Withdrawal of Conclusions / Verification. After the data is presented in the data analysis series, the next process is drawing conclusions or verifying data. Data verification aims to obtain concrete data relating to the problems studied. Therefore, in answering the problems related to this research, the author

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uses the method of content analysis (content analysis) is a technique used to draw conclusions (Salim, 2012).

RESULTS AND DISCUSSION

Definition of Science in Islam

The Qur'an uses the word '*ilm* it's 854 times. The word *'ilmi*, among others, is used as a "process of attainment of knowledge. The word 'ilm" is rooted in 'ain-lam-mim which forms the word 'alāmah, which means a sign, pointer, or indication by which something or someone is known; cognition, labels; characteristics; indications; and signs. The word *ma'lam* (plural*: ma'âlim*) means road signs‖ or it can be referred to as something by which someone guides himself or something that guides someone (al-Qazwīnī & Harun, 1999).

The use of term science must refer to the verses of the Qur'an and natural phenomena. Therefore, since ancient times, Muslims have dismissed knowledge as meaning the Qur'an; shari'ah; sunnah, Islam; faith; spiritual knowledge ('ilm ladunni), wisdom and ma'rifah; or often also called light (nûr), mind (fikr), science, and education, all of which collect all the essence of knowledge (An-Nahlawi, 1979).

Words related to the knowledge that is also used by the Qur'an are *ra'yu* (see, think, observe, investigate) 332 times, Bashar (see, understand, pay attention) 149 times, *nazhar* (reason), pay attention, think) 99 times, and the word `Arafa (know, understand) 24 times. Meanwhile, the word aql in the form of a verb is found at least 48 times, *fikr* 19 times, the word lubb which means reason or reason 6 times, and the word wisdom (wisdom, philosophy, wisdom) is repeated 16 times (Fu'adAbd al-Baqi, 1992).

Terminologically, there are many views on the definition or understanding of science put forward by Muslim thinkers, both classical and contemporary. The various views on the definition of science are at the same time a strong indication of how seriously Muslims actually have a serious concern for science. Al-Baqillani defines science as knowledge about objects that are known as they are (Shihab, 2007). This definition is very popular among Muslim Philosophers.

Talks about science lead us to the sources of knowledge, in addition to the classification and variety of disciplines. This scientific discipline is always current, actual, developing and updated in every era and generation (Basyar, 2018). The verses of the Qur'an (text) and the verses of Allah that exist in the universe, both in an integrated manner, are not only interesting to read and study, but can also be sources and objects of research and development.

The basis of knowledge in Islam is an insight into the teachings of the Shari'a that Allah has set. In fact, what distinguishes the Islamic way of thinking and the Western way of thinking lies in belief. The first way of thinking is that Allah has power over everything and everything, including science. The origin of knowledge is from Allah (al-Haqq), so the goal of knowledge is not a process toward awareness of Allah the creator(Qadir, 1988). This confirms that Allah is the Source and Estuary of knowledge (*al-`Alîm, al-`Allām*).

Muslim thinker Al-Attas quoted by Wan Daud argues that the definition of knowledge comes from Allah SWT. and is obtained from the creative soul. Because it comes from Allah SWT., knowledge is defined as the arrival *(hushl)* of the meaning of something or an object of knowledge into the soul of the seeker of knowledge. The definition of science is something that is accepted by an active and creative soul, that science is the arrival of the soul (*wushl)* to the meaning of something or an object of knowledge. The point of emphasis is on the first definition of Allah swt. as the source of all knowledge; while in the second definition, it is more human-oriented who is the seeker of knowledge (Daud & Nor, 2003).

Science according to Islam is a means, media, or tool to achieve a noble goal, namely to achieve awareness about Allah the Most Holy, so that humans are aware of their knowledge must manage nature, establish good relations with others, and moreover worship Him consistently (istiqâmah) and responsible (An-Nahlawi, 1979).

The nature of science in Islam includes three fields, first, the field that was born from the process of observing a certain object that can be sensed such as natural science which makes the

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universe and the life in it the basis for the development of knowledge. The second is fields that use the ability of reasoning logic or reason such as philosophy. While the latter is a field that makes divine revelation texts or intuitions as sources of data or information, generally religious sciences fall into this category (Abidin, 2016).

Based on the above, the three fields of science can be positioned simultaneously and integratively in the study of Islamic epistemology, moreover, each field complements and supports the other. The existence of one field of science cannot erase the traces of another field. Proponents of one particular field of science cannot claim to be the only true source of knowledge and view others as wrong.

There are three sources of knowledge that are believed and held by Muslims, namely the source of knowledge that comes from the verses of *qauliyyah* (God's revelation); sources of knowledge related to the verses of the Kauniyyah (universe); and sources of knowledge related to insâniyyah verses (human beings).

The development of science as it is today does not happen suddenly, because it is carried out gradually, and evocatively. In order to understand the history of the development of science, one must also perform periodic divisions or classifications. The medieval era was marked by the appearance of theologians in the field of science. Scientists at that time could also be called theologians, so scientific activities were related to religious activities. However, there are findings in the field of science that occur at this time. Islamic sciences such as interpretation, hadith, fiqh, fiqh proposals, and theology have developed since the early days of Islam until now. Especially in the field of theology, Muktazilah is considered a carrier of rational thoughts (Hariyati & Fistiyanti, 2017).

According to Harun Nasution, rational thought developed in the classical Islamic era (650-1250 M). This thinking is influenced by the perception of how high the position of the reason is as contained in the Qur'an and hadith. This perception was met with the same perception from Greece through Greek philosophy and science that were in the cities of the center of Greek civilization in the Classical Age of the Islamic World, such as Alexandria (Egypt), Jundisyapur (Iraq), Antakia (Syria), and Bactra (Persia).

Division of Science

The Division of science According to Mula Shadra

His full name was Muhammad ibn Ibrahim Yahya Qawami Shirazi, often called Sadr al-Din al-Shirazi or Akhund Mulla Sadra. 2 Among his students known as Sadr al-Muta'allihin. He was born in Shiraz in the year 979/980 AH or 1571/1572 M into a famous and influential family, namely the Qawam family. His father Ibrahim bin Yahya al-Qawami al-Shirazi, a knowledgeable and pious man, had been governor of the Fars region. Socio-politically, he has a special power in his hometown, Shiraz (Saputra, 2016).

Mulla Sadra continued his studies in Isfahan, an important cultural center for the Islamic Eastern world at that time, he studied with the theologian Baha' al-Din al-'Alimi (d. 1031 H/1622 AM), then the peripatetic philosopher Mir Abu al -Qasm Fendereski (d. 1050 H/1641). But his most important teacher was a philosopher-theologian named Muhammad or better known as Mir Damad (d. 1041 H/1631 M), an initiator of the establishment of a center for philosophical and theological studies which is now known as the "Isfahan School" (Saputra, 2016).

According to Thabthaba'i as quoted by Fazlur Rahman, Mulla Sadra's works have no less than 46 titles plus 6 treatises which are considered Mulla Sadra's works. Some of his works, try to divide based on the central theme they contain, into purely philosophical works and works that are religious in nature. Based on the originality of the idea, there is a difference between original works and works that only contain explanations of the writings of previous philosophers, such as the explanation of Ibn Sina's metaphysics as contained in al-Syifa' and Suhrawardi's Hikmah al-Isyraq (Rahman, 1975).

Mulla Sadra's epistemology was built from four classical post-Mongol Islamic schools of thought, namely masysya'i (Peripatetic), *isyraqi* (Illmunianionist), 'Irfani (Gnosis, Sufism), and kalam (Islamic theology), with all the variations contained therein.

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Mulla Sadra divides philosophy into two main divisions, namely theoretical, which refers to knowledge of things as they really are. Its manifestation is reflected in the world of reason, including the soul in it as stated by Al-Farabi and Ibn Sina. The second, it is practical, which refers to the attainment of perfections suitable for the soul (Saputra, 2016).

Mulla Sadra's philosophy, more popularly known as al-hikmah al-muta'aliyah, is a kind of wisdom or philosophy based on a pure metaphysical foundation, obtained through intellectual intuition, and formulated rationally using rational arguments. Epistemologically al-Hikmah al-Muta'aliyah is based on three principles: intellectual intuition (*dzawq* or *isyraq*), rational proving reasoning (*'aql* or *istidlal*), and religion or revelation (syar'i).

The Division of science According to Al-Kindi

Al-Kindi's full name is Abu Yusuf Ya'kub ibn Ishaq ibn Shabbah ibn Imran ibn Ismail Al-Ash'ats ibn Qais Al-Kindi who was born in Kufa, Iraq today, at 801 AM, during the caliphate Harun Al-Rashid (786-809 M) of the Bani Abbas Dynasty (750-1258 M) (Soleh, 2016).

The name Al-Kindi is the clan or tribe of its ancestors, one of the great pre-Islamic tribes. Al-Kindi was born into a noble, educated, and wealthy family. Ismail Al-Ash'ats ibn Qais, his great-grandfather, had embraced Islam at the time of the Prophet and became a friend of the Apostle. They then moved to Kufa (Madani, 2015).

Al-Kindi's father, Ishaq ibn Shabbah, served as governor, during the Caliphs Al-Mahdsi (775-785 M), Al-Hadi (785-876 M), and Harun Al-Rashid (786-909 M), the reign of Al-Kindi Bani Abbas (750-1258 M). His father died when Al-Kindi was a child.

Historians give the nickname to Al-Kindi "Arabic Philosopher" because he is the only Muslim philosopher of genuine Arab descent who descended from Ya'qub ibn Qahthan. Al-Kindi is a very productive Islamic philosopher by writing various fields of knowledge. Ibn Nadhim said that Al-Kindi has released 260 titles of works such as Philosophy, Logic, and Cosmology. However, only a small number of Al-Kindi's works exist until now. Some narrations claim that Al-Kindi's works were lost during the reign of Caliph Al-Mutawakkil (Basri & Mufti, 2013).

Al-Kindi's greatest contribution was to open the doors of philosophy to Muslim scientists. Muslims in ancient times were very opposed to studying philosophy because it was feared that it would lead to reduced respect for God. However, Al-Kindi tried to build philosophical values and urged them to tolerate ideas from outside Islam (Murtiningsih, 2013).

Al-Kindi bridged the gap between the half-hearted intellectual approaches to the harsh philosophical disciplines of his Muslim contemporaries. It was this approach and attitude that earned him the title (of philosopher), for having introduced the field of pure philosophy, actually had few original ideas from it, even though he had free thought (Madani, 2015).

As is the case with Greek philosophers and other Islamic philosophers. Al-Kindi divides knowledge into two parts: 1. Divine Knowledge, namely direct knowledge that the Prophet obtained from God. The basis of this knowledge is belief. 2. Human science or philosophy. The basis is rational thinking (Nasution, 1995).

Al-Kindi was the first Muslim philosopher to present a classification of knowledge into 3 parts, namely: theoretical, practical, and productive science. The theoretical sciences whose investigations aim to gain knowledge of reality. Practical and productive sciences whose investigation aims to explain actions based on knowledge.

The Division of science According to Al-Farabi

His real name is Abu Nasr Muhammad Bin Muhammad Bin Lharkhan ibn Uzalagh al Farabi, born in the city of Wesij in 259H/872M (Wafi, n.d.). He was born one year after the death of the first Muslim philosopher, al-Kindi. His Iranian father married a Turkish woman and then he became an officer in the Turkish army. On that basis, al-Farabi was designated as a Turk (Mahmud, n.d.).

His career in philosophical thought in bridging Greek and Islamic thought, especially in logic (*manthiq*) and philosophy was very brilliant, so the title of a second teacher (al-mu'allim tsāni), deserved to be pinned. It is said to have studied logic in Baghdad by the Christian scholars Yuhanna

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ibn Hailan (d. 910 M) and Abu Bisyr Matta (d. 940 M), it should be noted immediately that, Baghdad at that time was among the main heirs of the philosophical and medical traditions in Alexandria (Dzulhadi, 2014).

The meeting and struggle of thought in Baghdad later became the connector of al-Farabi's thought, who mixed Islamic philosophy with Neo-Platonist Greek philosophy (Bagir, 2006). Al-Farabi in his development is also noted as the teacher of Yahya ibn Adi (d. 974 M), a Nestorian Christian translator as a logical figure of Ibn al-Sarraj (Nasr et al., 2003)

His education was long enough that in 330/941M Al-Farabi left Baghdad for Aleppo than to Cairo and breathed his last in Damascus, precisely in the month of Rajab in 339 H or December 950M (Dzulhadi, 2014).

He is a prolific philosopher in producing various written works, such as Aghrādh mā Ba'da al-Thābi'ah, Al-Jam'u Baina Ra'yai al-Hākimain, this work according to several sources contains al-Farabi's ability to review and reconcile philosophers of Plato and Aristotle. Other works are Risālah al-Itsbāt al-Mufāraqāt, At-Ta'līqāt, al-Jam'u Baina Ra'yu al-Hākimain, Kitab al-Siyāsāt al-Madīnah al-Fadhīlah, al-Mūsiqā al-Kabir, Risālah Tahsīl al-Sā'adah, 'Uyūn al-Masāil, al-Madnah al-Fadhīlah, rā' Ahl al-Madīnah al-Fadhīlah, while al-Ihshā al-Ulūm is said to be the last work before he died.

Al-Farabi can be regarded as a philosopher, and he studied Aristotle's philosophy. It is said that when Ibn Sina did not understand the contents of Maqālah fī Aghrād al-Hakīm fī Kulli Maqālah al-Marsūm bi al-Hurūf by Aristotle and he read it over 40 times, finally anchored in al-Farabi's work, entitled Tahqīq Gharad Aristātālīs fī Kitāb mā Ba'da al-Thabī'ah then revealed the 'dark veil' contents of Aristotle's work).

Al-Farabi pours his philosophical thoughts on creation in his work rā' Ahl al-Madīnah al-Fadhīlah which begins the discussion about God as the first cause, showing his seriousness in uncovering the dark veil of metaphysical philosophical thought. According to him, God is the first cause of all existence in this universe (Uliri, 1961).

The classification of science made by (Al-Fârabî, n.d.) can be tabulated as follows:

No.	Science Classification	Branches of Science
1	Linguistics	1. Syntax 2. Grammar 3. Pronunciation and Speech 4. Poetry
2	Logic	1. Definition and Formulation of Ideas 2. Syllogisms and Dialectical Proofs 3. Validity of Reasoning 4. Speech and Discussion Syllogisms
3	Introduction/Basic Sciences	1. Counting – practical and theoretical 2. Measurement – practical and theoretical 3. Optical Science 4. Knowledge of the sky 5. Music 6. Furniture Science
4	Physics	1. Mineral Science 2. Animal Science 3. Plant Science
5	Metaphysics	1. The Science of Being 2. The sciences that use observation 3. Social Science 4. Legal Studies 5. Rhetoric

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Al-Farabi reconstructed the building of the Science of Logic (*manthiq*) which was first laid by Aristotle so that he became the second teacher (al-mu'alim ats-tsāni). The nickname of the second teacher pinned to al-Farabi, among others, for reasons; First, it is very prominent in Logic (manthīq) which is the foundation of all branches of science, especially Philosophy and Logic which was built by Aristotle, which is explained again in his fi al-'Ibāra (Wiyono, 2016).

The Division of science According to Ibnu Sina

Ibn Sina was an Islamic physician, chemist, and philosopher. Ibn Sina is a popular name, his full name is Abu Ali al-Husain Ibn Abdullah Ibn Hasan Ibn Ali Ibn Sina. was born in Afsyana, a region near Bukhara, in 980 AD, into a Persian family who was passionate about learning ('Aroqi, 1991).

His father was Abdullah, a distinguished scholar of the Ismaili Shiites and at the time of his son's birth, he was a governor in one of the settlements of Nuh ibn Mansur (present-day Afghanistan) (Tholkhah & Barizi, 2004).

Ibn Sina was rich and respected. His family background. This background can support the formation of his scientific personality, in addition to the brilliance of his brain. On the other hand, Ibn Sina's family did pay serious attention to science and education, which greatly influenced his intellectual career. In addition, bilingual or bilingual skills also affect one's career (Heru Pratikno, 2021).

Ibn Sina's life was the heyday of the Abbasids in terms of knowledge and education, even though it was in stark contrast to the political situation which was experiencing many conflicts and divisions. At that time education was a demand, so there were so many scholars, the library was filled with the presence of Muslim scholars, and translation works were continuously carried out on various knowledge from other nations according to the wishes of the caliph and the viziers. Ibn Sina lived in the fourth century of the Islamic era, the Abbasid period which was most developed in terms of learning and knowledge (Salleh & Embong, 2017).

The West knows him as Avicenna as a result of the Judeo-Spanish-Latin metamorphosis. Ibn Sina is famous as a child prodigy. His early education started under his father's direction in Bukhara. Ibn Sina's education is encyclopedic starting from grammar, geometry, physics, medicine, law, and theology (Rukmana, 2013).

Ibn Sina is the Amir al-Athibba '(Prince of Doctors), Al-Shaykh al-Ra'is (Elder of the Wise), and Hujjah al-Haqq (Proof of God the Greatest) and The Third Master of Logica (Nasr, 1964).

Ibn Sina classifies science into Ibn Sina himself stating that science or philosophy (hikmah) is divided into two, theoretical knowledge (hikmah nazariyyah) is a provision related to things that we know but do not apply in practice. This science includes discussing problems of metaphysics (divinity), mathematics (riyadhiyah), and physics (thabi'iyah). Second, the practical sciences (hikmah 'Amaliyyah) are provisions relating to what is known and done. Included in the field of practical sciences such as ethics (Khuluqiyah), regulating family relationships in the household, economics (Tadbir al-Manzil), regulating the association of people in the state (Tadbir al-Madinah), and prophethood (shari'ah) (Sina, 1994).

The Division of science According to Ibn Khaldun

Ibn Khaldun's full name was Waliyuddîn Abu Zaid Abdurrahman bin Muhammad Ibn Khaldun al-Hadrami al-Ishbili. He was born in Tunisia at the beginning of Ramadan 732 H or 27 May 13322 and died in Cairo on 17 March 1406. His family came from Hadramant who then immigrated to Seville (Spain) in the 8th century after the peninsula was ruled by Arab Muslims. The family was pro-Umayyad and for many years held high positions in Spanish politics until finally moving to Morocco. After Morocco, they settled in Tunisia, and in this country, they were respected by the court and given land belonging to the Hafsiah dynasty (Khaldun, 1951).

Since childhood, Ibn Khaldun was involved in intellectual activities in his hometown, in addition to closely observing political life. His grandfather had served as finance minister in Tunis, while his own father was an administrator and military officer. Ibn Khaldun in his childhood was more interested in the world of science. He has mastered history, sociology, and several classical

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sciences, including *ulum aqliyah* (philosophy, Sufism, and metaphysics) at a young age. Ibn Khaldun studied science with a number of teachers, the most important of whom were: Abu Abdillah Muhammad bin al-Arabi al-Hashasyiri, Abu al-Abbas Ahmad bin al-Qushshar, and other teachers. He has brilliant intelligence, so many say that Ibn Khaldun was an Encyclopedist (walking dictionary).

Meanwhile, Ibn Khaldun divides knowledge into 1) rational sciences (*al-'ulûm al-'aqliyyah*) and 2) inherited sciences (*al-'ulûm al-Naqliyyah*). Simpler classification. More details are in the following table:

No.	Science Classification	Branches of Science
1	Rational Sciences	1. Logic 2. Physics (natural sciences) 3. Medical Science 4. Agricultural Science 5. Metaphysics (sciences outside nature) 6. Witchcraft 7. Unseen Science 8. Chemistry 9. The sciences of quantity: geometry, plane, space 10. Music 11. Counting (mathematics) 12. Astronomy
2	Inherited sciences (traditional)	1. Al-Qur'an & Science of the Qur'an 2. Hadith & Hadith Science 3. Legal Studies 4. Theology 5. Sufism 6. Linguistics: grammar, dictionary, and literature

The Division of science According to Al-Ghazali

Al-Ghazali introduced two major groups of knowledge, namely the science of religious practice ('ilm mu'amalah) and the science of spiritual disclosure ('ilmmukasyafah). 'Ilm mu'amalah deals with the prerequisites for obtaining a second knowledge. 'Ilmmukashafah is what the prophet spoke implicitly and briefly through symbols and figures of speech (Yani et al., 2020).

Mu'amalah science is divided into two, namely *dzahir* science, namely the science of the deeds of the limbs. This science concerns customs and worship. As for the Inner Science, namely the knowledge of the actions of the heart through the limbs. This knowledge concerns matters of the heart and soul, both praiseworthy and despicable (Baharuddin & Minarti, 2020).

It can be understood that Al-Ghazali classifies science into two parts, namely the Science of Mu'amalah and the Science of Mukasyafah where the Science of Mu'amalah is a tool to achieve the Science of Mukasyafah. The knowledge of Mukasyafah itself cannot be taught to others, but it is obtained directly by the grace of Allah to people who are worthy to receive and carry it, such as the prophets and the heirs of the Prophet. Therefore, it is important to implement the preaching of the prophet (Asmaya, 1970).

In the book Ihya 'Ulum ad-Din al-Ghazali grouping knowledge into *fardu 'ain* and fard kifayah. Fardu 'ain shows the sciences related to religious commands and prohibitions. Fardu kifayah includes the sciences whose mastery is obligatory for a Muslim society but is not binding on every individual. The science of *fardu kifayah* is divided into two, namely the religious sciences (*shar'iyyah*), which are taken and revolve around the revelations of Allah and the Sunnah of the Prophet, such as the science of interpretation, hadith, fiqh, usul al-fiqh, and others, as well as non-

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discriminatory sciences. religion (ghayru syar'iyyah) derived from the results of human reasoning, experience, and experiments, such as medicine, mathematics, economics, astronomy, and others (Yani et al., 2020).

According to Al-Ghazali, fardhu'ain knowledge is the knowledge that refers to religious obligations that bind every Muslim and Muslim woman. *fardu 'ain* category, namely the knowledge that every Muslim must possess, is non-negotiable, for the sake of his good and his safety in the hereafter. The sciences that fall into this category refer to the sciences that lead to the path leading to the salvation of life after death (*'ilm tariq alakhirah*). However, the implementation of the task of seeking knowledge of *fardu 'ain* must be adjusted to the level of needs both long and short term, and the abilities of each individual (Soleh, 2016). The fardhu'ain knowledge itself is divided into two, namely the Science of Mu'amalah and the Science of Mukasyafah.

Al-Ghazali divides these religious sciences into four types, namely: (1) principal (*ushul*), which consists of the *Qur'an, al-sunna, al-ijma'*, and *atsar* companions, (2) branches (*furu'*), which consists of the science of fiqh and the science of matters of the heart; (3) introduction (muqaddimat), namely the science of language and grammar and (4) and complement (mutammimat), which includes the sciences related to the Qur'an and al-hadith (Ghazali et al., 2016). In point number 3 relating to language, speakers should prioritize language politeness (Pratikno, 2020).

The sciences that are included in the non-religious sciences, first, the commendable sciences (*al-'ulum al-maheasy*) where the law is studied is fardhu kifayah such as medicine, and the science of reckoning. Medicine is beneficial for the safety of the human body, while the science of reckoning supports the life of human muamalah, such as in the case of inheritance. Through this material it is hoped that it can become a medium for cultivating character (Wardana & Wardana, 2021). Second, the permitted sciences (al-'ulum al-mubahah) such as poetry and history, and Third, the despicable knowledge (al-'ulum almadhmumah), namely the sciences that have no benefit, such as magic, astrology, and astrology. , and divination. Al-Ghazali also forbade studying sciences that lead people to kufr, such as studying the complicated parts of a matter before understanding clearly the secrets of the divine, such as metaphysics which is part of philosophy (Ghazali et al., 2016).

CONCLUSION

The concept of science in the Middle Ages and Muslim scientists including Al Farabi, Ibn Khaldun, Al Ghazali, and other scientists basically still has no classification of science on the one hand and religion on the other. The classification of knowledge given by experts at this time aims to make it easier for humans to study science so that humans have certain expertise in scientific disciplines, and do not deny other sciences so that there is a balance in themselves that brings benefits. The Islamic view of science is quite comprehensive. Science can be equated with science in the Western tradition, but Islam has a broader meaning. The scope of knowledge in Islam is not limited to the physical and observable, but also includes aspects of metaphysics.

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