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Religious Moderation in Indonesia: Study of Astronomy Implementation Toward the Baha'i Introduction System in Indonesia

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Abstrack

Purpose: Bahai Calendar is a thought and modification of religious figures that is Bahaullah (the chapter). **Theoretical framework:** The almanac begins in 1844 ad for the reason of that year the proclaimed chapter. Then that year then the 1st year of the Bahai Era (EB). Totaling 7 days, the beginning of the day is Saturday. The month amounted to 19, 19 days each. One year it amounted to 361 days. Has a 19-year cycle called Vahid, if it has been through 19 times the Vahid cycle (361 years) then Kulli Shay-I. **Design/methodology/approach:** The beginning of the year falls between the 21st or the 20th of March by adjusting the time of the Vernal Equinox (Spring Entry) at the point of Aries. The names of the moon and the day are derived from the attributes that relate to God, the philosophy of number 19 is derived from the number of letters in Lafadz Bismillahirrahmanirrahim. **Findings:** The Bahai calendar is a calendar that will always spin and cycle fixed by a total of 7 days a week. A total of 19 months, each 19 days. One year it amounted to 361 days. It has a 19-year cycle called Vahid, 19 times the Vahid cycle (361 years) then Kulli Shay-I. The beginning of the year falls between 21 or 20 March adjusting the occurrence of the Vernal Equinox at the point of Aries. **Research, Practical & Social implications**: There were additional days (Ayyam-I HAA-i) 4 days in the year of Basitoh and 5 days in leap year, so that the beginning of the year falls on the same date. **Originality/value:** Bahai dating

system uses the celestial object of the sun as a reference for use, hence the date of Syamsiyah (Solar Calendar). This reality has been plural in Indonesia.

Keyword

Bahai Calendar; Syamsiyah; Bahaullah

Introduction

Every nation, country, even religion can be said to always have civilization. It is usually in the form of science as well as an impressive event to be remembered throughout the ages. Civilization also will not escape from space and time (where and when it happens). Uniquely, people first mark it with names that are easily remembered and remembered. Al-Quran Surah Al-Fiil has recalled about the memory of the incident of the building of the Kabah by King Abrahah. When Abrahahash-Shabbahal-Habasyi, the general representative of an-Najasyi over the land of Yemen saw the Arabs doing hajj to the Kaaba, he built a very magnificent church in the city of Shanaa. The purpose was to let the Arabs divert their hajj there. This bad intention is heard by a man who comes from the Bani Kinanah. He secretly sneak at night and broke into the church,[1]When they knew this harassment, they detuned the wrath of Abrahah and immediately he deployed a large army of 60,000 personnel to the Kaaba to blast him out. He also chose the greatest elephant as his only. In the army were nine or thirteen other elephants.[2]From that event, the people at that time named him with the year of the elephant. But precisely what date and year of the event is not noticed by people. Because at that time there was no system used and agreed. The tragic event occurred in the month of Muharram, 50 days or 55 days (in majority opinion) before the Prophet's birth.[3]

Live in a world like talking to time. Yesterday, today and the upcoming is the time. The realities of change and repetition of time that have occurred in human life have inspired the life to create a form of notation characterized by the numbers in a given unit, with this being the context of marking and dating in a calendar.[4]God gives Word of his creation in the form of signs that demonstrate the power and majesty of his kingdom. Indeed, Allah has made the light that shines from the sun is the rays and lights that radiate from the moon as a light. The difference between them is a power that God handed down to all the Earth beings. Both are armed and similar (between the sun and the moon). God determines the moon in the area, so the beginning of the moon is small, then the light and shape are increasing so that it will be a perfect full-day, and then it shrinks back to the overnight shape in the

[1] Sheikh Shafiyyurrahman al-Mubarakfuri, Sirah Nabawiyah life journey of the Apostle the Great Muhammad Saw. From the birth to the last minute, translation by Hanif Yahya., (Jakarta: Darul Haq, 2016), p. 58-59
[2] Syaikh Shafiyyurrahman al-Mubarakfuri, Sirah nabawiyah..., p. 59
[3] Shaikh Shafiyyurrahman al-Mubarakfuri, Sirah Nabawiyah..., p. 60
[4] Susiknan Azhari, Encyclopedia Hisab Rukyat, (Yogyakarta: Student Library, 2005, CET I), p. 87

form of a month .[5]The sun is used for the substitution of years marked by the season cycle. Activities related to seasons such as agriculture, shipping, fisheries, many migrations using the Sun calendar.[6]

Calendar is a time organizing system. The dating system is very important to regulate the relationship between people. The absence of a time organizing system in a community, causing chaos in organizing time in the community[7]According to the authors, the necessity of a calendar system is also useful for the sustainability of a community organization. It is also in the realm of government and corporations. For example, the company carried out a working contract with another company signed on 22 March 2018 and ended a year ahead until March 23, 2019. If in a community does not have a mutually agreed calendar system, it will be confused until when the contract will expire.

The research method used in this writing is a qualitative descriptive method, in which the author will try to explain by describing the findings that the authors get in the field either data obtained directly by plunging into the field or secondary data in the form of scientific records. To explore data sources in the field, the authors use observation methods, documentation, and interviews related to Bahai figures and religiously to obtain data suitability. In addition, the authors study it in the form of a library of both scientific books and scientific journals that come from both printed and electronic media and others related to this title is the implementation of an internal diversity in Muslims in understanding the dating concept of the Baha'i community.

Moderation of Efficacy in Islamic Dating: History of Baha'i in Indonesia

The carrier of Bahai religious teachings is Bahaullah, then continued with his eldest son named Abdul Baha which was then followed by Shoghi Effendo grandson of Abdul Baha who was appointed as a religious guardian. Bahai Religion was first born in Persia, which is currently named Iran in 1844. First appeared this religion was brought by Ali Muhammad who has the title Bab. On May 23, 2844 He announced that he was a messenger of God who was prepared to receive messengers to be sent by God. Bahaullah was originally named Husain Ali. Chapter martyrdom in 1850 and then Bahaullah announces that he was the messenger of God openly in Baghdad on 21 April 1863 and died in 1892.[8]

The Bahai people believe the Almighty God, they call God according to the

[5] Imam Al-Hafidz Ibnu Katsir Ad-Damsyiqi, Tafsir Al-Quranul Adzim, Juz 2, (Beirut : Daar Al-Fikr, 1997), p. 428.
[6] See more in the Hilal article and the issue of the Feast of Days, compiled by T. Djamaluddin (Staff of the field of sun and environment research, LAPAN, Bandung), can be found at http://media.isnet.org/kmi/isnet/Djamal/hilal21.html. Retrieved on Tuesday, July 27, 2020 at 22.00 WIB.
[7] Muh. Nashirudin, Universal Hijri calendar, (Semarang: El Wafa, 2013), p. 1
[8] Kustini, et al., Baha'i, Sikh, Tao: Strengthening of identity and struggle for civil rights, Jakarta: Research and training of religious life of Indonesian Ministry of Religion, Cet. I, 2015, p. 31

name understood by the local people. Therefore the name of God can be called Allah (Arabic), God (English), Tai Kamama (Mentawai), or Gusti Allah (Java). God as the creator of all living creatures. All religions are true, because of the source of the one God. All mankind is a great family, because it was created by God Almighty. 56 The holy book is called Al-Aqdas, Al-Iqon, Loh Loh, hidden sentences, seven valleys and four valleys, Ahdi, Loh Loh to kings and rulers of the Earth, Loh on the son of Wolves, and many other books. In addition to the books, the books or Loh written by Abdul Baha 'and Shoggi Effendi. They believe in life after death. The spirit of the dead is still alive in the other realm of God. Religion is for life after this nature. If one gets closer to God will go to heaven, if the farther away from God then will go to hell. Heaven is a state of enjoyment, while hell is a state of void / remoteness. Bahai Religion also believes in the presence of angels. God only creates goodness, God does not create evil. Angels are always good creations of God. God only creates goodness, God does not create evil. Evil is a condition of weakness. God created light, darkness is a condition without light. All the good of his energy is controlled by angels, while all the evil of his energy is controlled by demons or demons. The followers of Bahai religion are not allowed to participate in political parties and they are required to comply with any government form. while hell is a state of void/remoteness. Bahai Religion also believes in the presence of angels. God only creates goodness, God does not create evil. Angels are always good creations of God. God only creates goodness, God does not create evil. Evil is a condition of weakness. God created light, darkness is a condition without light. All the good of his energy is controlled by angels, while all the evil of his energy is controlled by demons or demons. The followers of Bahai religion are not allowed to participate in political parties and they are required to comply with any government form. While hell is a state of void / remoteness. Bahai Religion also believes in the presence of angels. God only creates goodness, God does not create evil. Angels are always good creations of God. God only creates goodness, God does not create evil. Evil is a condition of weakness. God created light, darkness is a condition without light. All the good of his energy is controlled by angels, while all the evil of his energy is controlled by demons or demons. The followers of Bahai religion are not allowed to participate in political parties and they are required to comply with any government form. God created light, darkness is a condition without light. All the good of his energy is controlled by angels, while all the evil of his energy is controlled by demons or demons. The followers of Bahai religion are not allowed to participate in political parties and they are required to comply with any government form. God created light, darkness is a condition without light. All the good of his energy is controlled by angels, while all the evil of his energy is controlled by demons or demons. The followers of Bahai religion are not allowed to participate in political parties and they are required to comply with any government form.[9]

The chapter itself is derived from Shia Muslim environment in Iran. His original name was Sayheed Ali Muhammad. The root of religion of Bahaullah is

[9] Kustini, et al., Baha'i, Sikh, Tao: strengthening..., thing. p. 33-34

derived from the chapter which essentially raids on the unity of religion, the unity of Righteousness of God and the unity of mankind. According to Bahai, religion is progressive revelation. It is a straight journey of "the Manifestations of the Lord" despite different religious names, but equally in the fact. Bahai religion emphasizes the importance of the prophets or apostles as "the Manifestation of God" on the face of the earth. Mankind can only know the righteousness of God, through these "manifestations of the Lord." Therefore, Bahai respects and believes all religious teachings commanded by the prophets, since Khrisna, Sidharta Gautama, Ibrahim, Moses,[10]

Bahai religion is an independent and universal religion, not a sect of other religions. The bearer of the revelation of the Bahai religion is Baháulláh (the glory of God), whose coming is preceded by his Bentara titled the Chapter (Gate). Baháulláh announced that his religious goals were to manifest a spiritual transformation in human life and to renew society institutions based on the principles of the oneness of God, that the foundation of all religions comes from the heavenly source, and the unity of all mankind. The people believe that religion must be a source of peace and harmony, both in family, society, nation and world. Bahai people have been known as companions to all religious believers[11]

The teachings of Bahái religion are the beliefs of God's investigating the truth independently, the elimination of prejudice, leading the pure and holy Life, the unity of mankind, unity in diversity, equality between men and women, compulsory education for all, loyalty to the government, not involved in partisan politics, deliberation as a means of making decisions, and solving spiritual economic problems. These teachings are aimed at the unity of mankind for the creation of world peace[12]

Implementation Of The Astronomical Bahai In Indonesia

Among the dozens of even hundreds of dating in this hemisphere, one of them is the Bahai calendar. Originally the calendar emerged from a Bahai religion. It was previously a Gregorian calendar, but the passage of time was modified through religious dogma that eventually published the Bahai calendar. The Bahai calendar is also called the Badí calendar (stunning or unique), used by the Bábisme and Bahá'í Faith ..[13]This calendar has a uniqueness that no other calendar has, and it has a unique concept that is not found in any other calendar system that applies in the world. One year is divided over 19 months (using different names), each consisting of 19 days, the number of days (361) plus an additional period "days of Intercalary" (4 in the year of the Basitah and 5 in the Year of Leap). The new year begins on the vernal equinox, and is calculated by the date of BE (Bahá'í Era),

[10] Kustini, et al., Baha'i, Sikh, Tao: strengthening..., thing. p. 56
[11] Baha'i National Assembly, Bahái Religion, (Jakarta: Indonesian Baha'i Religious Assembly, 2015), p. 2
[12] National Council of Baha'i, Religion..., p. 2
[13] Accessed at www//http. baha'iindonesia. org., Sunday 25 July 2020 at 22.00 WIB.

where, March 21, 1844 AD as the first day of the first year, the year in which the Báb proclaimed his religion.[14]

The next uniqueness of the Bahai calendar is the nineteen number of months in one year, and also each month has nineteen days. The names of the month are.[15]

Table 1. Month name in Bahai calendar

No.	Gregorian data	Name
1	March 21 - April 8	Bahá
2	April 9 - April 27	Jalál
3	April 28 - May 16	Jamál
4	17 May - 4 June	'Aẓamat
5	5 June - 23 June	Núr
6	24 June - 12 July	Grace
7	July 13 - July 31	Sentence
8	August 1 - August 19	Kamál
9	August 20 - September 7	Asthma
10	8 September - 26 September	Izzat
11	September 27 - October 15	Mashíyyat
12	October 16 - November 3	Ilm
13	November 4 - November 22	Qudrat
14	23 November - 11 December	Qawl
15	12 December - 30 December	Masáil
16	December 31 - January 18	Sharaf
17	January 19 - February 6	Sultan

It has fixed constants in the number of days in each month. In the same way that we know about the calendar of the number of days 30, 31 day and 28 days (Basitah year) or 29 (leap year) day in February. As well as the concept of cycles used, why it is chosen. According to the author, this needs to be researched and described in the form of narrative, what is the thing behind the creation of the Bahai calendar that is packaged in such a way. As well as how astronomy looks with the three predefined criteria that are Solar Calendar, Lunar Calendar and Luni Solar Calendar.

The same similar cycle used in the Baha'I calendar system is a 19 year cycle called the Váḥidan Supercycle 361 year (19 × 19) called Kull-I-Shay '(literally, "all things"). Different names exist in each year of the 19-year cycle. Actually the concept of a 19-year cycle has existed in several forms since the 4th century BC. Metonic cycle.[16]is a created size that is roughly correlated to the sun sign and moon of time and that appears in some calendar systems. The number 19 can be said to

[14] Accessed at www//http. baha'iindonesia. org., Sunday 25 July 2020 at 22.00 WIB.
[15] Accessed at www//http. baha'iindonesia. org., Sunday 25 July 2020 at 22.00 WIB
[16] The Metonic cycle is a certain common estimate of the tropical year and the synodic month: In other words, a 19-year period in which the lunar phase occurs on the same date. According to the Metonic cycle, the lunar calendar starts on the same solar date every 19 years. The relative position of the Earth and Moon returns to its original position repeatedly after 19 years. This cycle was discovered by Meton Yuni and called Metonic cycle. Why 19 years? Because the solar year phase (Syamsiyah) and Year of the Moon (chamomile) will meet precisely on the 19th cycle, in which the 235 month calendar month is exactly the same as the 19 year cycle based on the Sun calendar. (29.53 days x 235 (Sinodis cycle of the moon) is approximately equal to 365.24 days x 19). See, http://petabandung.net/kiblat/kalender_bulan2.php. Accessed Sunday, July 2, 2020 at 20.00 WIB.

be unique and special for the Bahai religion which is then implemented in its calendar system. According to the authors, there must be a scientifically intensive study to describe the privileges of the number and not just as a moment that is fitting to be used in the Bahai calendar alone.

In 2014, the Universal House of Justice elected Tehran, the birthplace of Baha'u'llah, as the location of the vernal equinox.[17] Set, thus "releasing the Badí Calendar bond (unlocking) of the Gregorian calendar. The Vernal Equinox occurs around 21-23 March each year, never the same because the Earth itself took 365.25 days to surround the sun. So it is not always on March 21st that the Vernal Equinox occurred due to the years of leap and Basitah. If the reference is made in the determination of the New Year Bahai is during the Vernal Equinox, then it should not always fall on the 21st of March, but in accordance with the calculation of Gregorian year entered Kabisat or Basitah.

From the above explanation of the Bahai calendar, we can understand that the Bahai calendaring is a continuous cycle derived from the modification of an astronomical viewpoint taking into consideration the movement of the Sun and the moon and the number 19 that is well-endowed by the Bahai, but there is actually a scientific reason that can prove it.[18] Calendaring in various language literature is referred to as Calendar, Almanac, date, and taqwin the term calendar derives from the modern English discussing "Celendier" whose origin originally came from the Latin (calendarium which means a small loan book of money loans ..[19]In essence the Latin designation of the Kalenderium is derived from the word Kalendar or Calendar which means the beginning of a month. Same with the calendar in Indonesia with the meaning of calendaring. According to the term calendar is specified as a table or a series of pages that show the day, week, month or year.[20]

Of all the terms, according to the author, the calendar has the same meaning as a regulation of the system as a time guideline. But what needs to be emphasized is that the calendar is empirically presented and can be enjoyed, as for the more date to the calculation system and the steps to acquire it. New World College Dictionary Webster's suggest three meanings of calendars, among others, a system used to determine the beginning, length and parts of the year and to compose year by day, week, and month[21]Secondly, a table or a list showing the

[17] When tracked, the movement throughout the year will follow the line we named the ecliptic line. The ecliptic line is intersecting with the celestial equator, which is the line that cuts the celestial sphere into two parts – the northern hemisphere and the southern hemisphere. The intersection of these two lines – the ecliptic and the celestial equator – is called the Equinox Point. When the sun is at this point, the duration of the day and night will be the same as 12 hours each. The point that passes through the sun on its way from the south to the north of the sky occurs in March, called the Vernal Equinox point. The point that the sun passes on its way from the north to the south of the sky, occurs in September, called the Autumnal Equinox point. The Vernal Equinox occurs about 21-23 March each year, never the same because the Earth itself took 365.25 days to surround the sun. See, langitselatan.com accessed on Sunday 25 July 2020 at 22.30 WIB

[18] Susiknan Azhari, Falak Science: Islamic Treasures and Modern Science, Yogyakarta: Muhammadiyah Voice, Cet. II, 2007, p. 82.

[19] Ruswa Darsono, Islamic calendar, System review, FIQH and Hisab of the calendar, Yogyakarta: Labda Press, 2010, p. 27

[20] Ruswa Darsono, Calendar..., p. 27

[21] Muh. Nashirudin, Universal Hijri calendar, (Semarang: El Wafa, 2013), p. 23

arrangement of Sundays and months that are typically used for a third year, list or schedule as a delay in decision cases in the courts, planned social events, and so on.[22]

The first definition, describing the calendar as a governing system also determines the beginning and length of the time units of both day, week, month and year. This definition can be used as one of the footing to interpret the calendar or calendaring in this study. As for the second point, it is the definition of a calendar as a result of a system built on the initial determination of length and parts of time units in a calendar dating have various methods of determination. Some calendars use the basis of an astronomical cycle with fixed rules, others are based on a cycle that has no astronomical relationship at all and some are based on astronomical observation.[23]

There are several dating that have flourished in the world from ancient times to modern eras. According to Susiknan Azhari, several dating that flourished in the world are: primitive dating system (primitive calendar systems), Western calendar, Chinese calendar, Egyptian calendar (Indian calendar), Calendar of Babylonia (Babylonia calendar), Jewish calendar, (Greek calendar)), Islamic calendar (Middle American calendar), and last Day of Central America (the East agenda23 Out of the ten different dating systems, it is all based on three major groups of calendar systems, namely the solar calendar, the Lunar calendar, and the lunisolar calendar. Therefore, in this case the author tries to review several things related to the classification of the three dating systems. Before knowing the dating system that has been grouped into three above, it does not hurt to know the history, and what things are needed and related to the creation, also the development of a calendar.

The history of calendar creation has a close association with the development of astronomical understanding in human life. This understanding of astronomy stems from the observation of the celestial bodies for quite a long time, so that the movement of the celestial bodies is understood as a repetitive pattern. From a habit or calculating counting ability, observations of celestial bodies and seasons with repeated patterns, recorded for a long time. Planning the activities, making the former nation list the days grouped into the moon and then grouped into the year.[24]

Development of the list grouping of the day, done predictions for future circumstances. The predicted result is further observations to verify the correctness of the prediction. So that the calendar has remained in a long time.[25]At least, there are four things needed and related to the creation and development of the calendar, namely first, observation is the raw data source that will be processed into a calendar. Observations were made against celestial bodies that could easily be observed patterns and movements. From the observation that later will be used as the base in setting the second calendar, calendar as the system, then the core of

[22] Muh. Nashirudin, Kalender..., p. 23
[23] Ruswa Darsono, Calendar..., p. 28
[24] Ruswa Darsono, Calendar..., p. 27
[25] Ruswa Darsono, Calendar..., p. 31

the calendar is located in the formulation of patterns. Calendars are repetitive patterns that are continuously used as a time-organizing system. The result of the observation of the celestial bodies will form an orderly pattern. The pattern is then formulated into a list of times to be a calendar.

The observation and formulation of the pattern cannot succeed if the next important point calculation is not carried out by calculating the calculation result. The use of calendars within a given time period will give a trust and confidence to the calendar in its function as a predictive tool.[26]Calendars after having regular data and patterns become meaningless when not in use. Thus, a consistent usage value is required in a community of people in addition to the general criteria used in the calendar, there is also a establishment criterion. The calendar system is said to be well established three things, namely first, have a boundary of the validity area (national) or global Second, there is a single authority that has set it third, there are consistent criteria agreed.

Conditions submitted as established calendar criteria are cumulative. That is, the absence of one condition makes the calendar is not an established calendar. For example, the Gregorian calendar with the current, internationally-established, now-in-and-the Gregorian system is said to be well-known since the above three are fulfilled. The first condition is fulfilled by the decision of the sole authority on the determination of the calendar, namely Pope Gregory XIII in 1582 to make corrections to the judicial calendar system which is deemed no longer relevant. On the second condition, there are several criteria set and agreed in the Gregory Calendar. Firstly, the vernal equinox (early spring) was set on 21 March. Therefore, the removal of 10 days from year 1582 by setting Thursday, October 4 become Friday 15 October. Secondly, that January 1 was set as the beginning of the new Year. Thirdly, the number of days in a year is 365.2425 days with the provisions where leap year is the year that is divided into 4 or a year that is out divided by 400 for the year of multiples 100.[27]By these rules, 1700, 1800, and 1900 are no longer regarded as leap years. And the year 2000 was a leap year.[28]

Therefore, in a leap year there are 366 days. While in a short year there are 365 days with the number of days in a month variative between 30 to 31 days except the month of February 28 for the short year and 29 for leap year. The conditions of the validity of the Gregorian calendar can be fulfilled by the International Date Line in 1880, ie the virtual line moving from the North Pole to the South Pole which is roughly through the longitude of 180 º. Until almost two centuries later the validity of the Gregorian calendar with new criteria was still limited to the territory of the Catholic influence. The new UK applied it to 1752 by doing the September 2 jump straight to September 14, 1752. So there had been an unsettling chaos difference occurred on Christmas Day 25 December in Rome, and England is still 14 December. Until the early 20th century there were still

[26] Ruswa Darsono, Calendar..., p. 32

[27] Muh. Nashirudin, Calendar..., p. 16

[28] Thomas Djamaluddin, Astronomi..., p. 31

several countries that had not yet implemented the Gregorian calendar system, such as the New Russia which was adopted in 1923. Nevertheless, the third term on the validity limit of the calendar was established with an International Date Line agreement on October 1884. The Sun and moon as the basis in the calendar's time reference, are divided into three types of calendars. (1) The Solar calendar is a calendar system that maintains the length of the year as close as possible to the Earth's distribution time surrounding the tropical year sun). 2) Lunar Calendar is a calendar system that uses the moon's circulation to the earth as the basis of its guidelines. (3) The Luni-Solar calendar is a calendar system that uses a lunar period around the earth for the Moon Unit,

Secondly, this system in other terms is called the date of Syamsiah, Miladiah, or AD. Etymologically, solar calendar is a dating system that refers to the cycle of the sun, so that some people call it solar calendar or sun. The concept of this dating system is based on the journey of the Earth's revolution orbiting the Sun, the sun becomes a reference in calendar calculations due to repetitive and orderly movements.[29]The regularity of the phenomenon is due to the regularity of Earth's rotation in its axis (earth rotational) approximately 23 hours 56 minutes with an average speed of 108,000 km per hour. This calendar is compatible with seasons such as Winter, summer, spring and autumn. The change in this season, due to the position of the Earth's rotation axis is not perpendicular to Earth's orbit around the sun. The Earth's equator forms an angle of 23.5 º against the Earth's orbit plane or the ecliptic field44

The result of the celestial and ecliptic equator is not a plot, in a year it will be seen the sun twice crossing the equator. The first time when the Sun moved from the southern hemisphere to the northern hemisphere (21 March) which was named after the spring point of the Vernal Equinox) and the second was when the sun crossed from the southern hemisphere to the northern hemisphere (23 September) named for the autumn Point (Autumnal Equinox). Halfway between the Autumnal and the Vernal Equinox is the Summer and Winter Soltices that occurred on 21 June and 22 Decemberthird, the lunar calendar system is the dating system whose calculations are based on the movements of the moon, so this system is also called the calendar of Kamariah. The concept of this dating system is based on the length of the moon rotation journey around the earth.[30]

If you see the movement of the Earth together around the sun, there are two times of circulation that have months, sidereal period and Sinodis period. The sidereal period is the time span that is required of the moon to surround the Earth one full circle for 27.32166 days or 27 h 7 J 43 m. While the Sinodis period is the time span required by the moon between a new moon phase to the next New Moon phase (two conjunctions) ie for 29.530588 days or 29 H 12 J 44 m 2.8 D, then in

[29] The sunrise and sunset positions near the eastern and western horizon move in gradual, repeating regularly from the northernmost point to the southernmost point then returning again to the northernmost point. Even the time changes are set regularly. Muh. Nashirudin, Calendar..., p. 29
[30] Novi Sopwan (ed), The Gradual Changes of Synodic Period of the Moon Phase, (Bandung: Penerbit ITB, 2008), p. 1-2.

one month sometimes aged 29 days or 30 days.[31]Regulation of a dating system that uses the moon period around the Earth for the Moon Unit, but for the adjustment of the season is carried out the addition of one month (intercalation) in certain years then lunisolar calendar. In this system, as the solar calendar system does not refer to the cycle of the month period, the age of one year is 365.2422 days, but in the issue of the month turnover adjusted to the period of the moon phase which is 29.530588 days.

If accumulated, within a period of 12 months (1 year) x 29.5306 days aged 354.367056 days. Then this system is faster about 11 days from the tropical year aged 365.2422518 days. So, it needs to be added a month in certain years as a counterbalance so that the system is always consistent with the normal sun movement, this calendar has 12 months with the number of days in a month is 29/30 days. So, in one year amounted to 354 days. This, caused the difference with the number of days in the year is 11 days so that the insertion month (intercalation) so that in the period of 19 years, there are 7 years containing 13 months and 13 years of age 12 months. One of the dating that belongs to the category of this system is the Chinese calendar. In addition to sharing as above, there is a division of calendar based on the ease or whether the calculation is used. Based on this division, the calendar is classified into two, namely; Arithmetic calendar and astronomic calendar.

Fourth, astronomical Sciences is very instrumental in the calendar. It can be seen among others in determining the length of the year which is for example using tropical cycles of the sun, and some are using the Sinodis cycle of the moon. The date of the astronomical method is based on the position of the celestial body. For example, Hijri calendar, to determine the date one we must observe the month first. Because the duration of the moon in the Sinodis cycle is 29 days 12 hours 44 minutes 3 seconds. Consequently, the number of days in a month erratically between 29 days or 30 days.[32]

Fifth, in every major religion, and the following civilization that it causes, there will be a new and unique creation of calendars, which govern and map the activities of their followers throughout the year. It is no different from the Imam Baha[33]Chapters imply the importance of the dispensation he conveyed by appointing a new calendar. He felt that a new age of unity should have a new calendar free of objections and associations that made every older calendar unacceptable to most of the world's population. He also felt that it did not make sense to mention the moon and the day after the ancient gods, on the contrary,

[31] The word Sinodis means a period of time from a New Moon (conjunction) to the next new moon derived from the Greek word Synodosatau meeting which refers to the relationship of the moon with the sun. Between 1000 BCE and 4000 A.D. It ranged from 29 days 6 hours and 26 minutes (29.27 days) to 29 days 20 hours 6 minutes (29.84 days) with an average of 29 days 12 hours 44 minutes 3 seconds (29.530588853 days). Novi Sopwan (ed), Period of the Moon Phase..., p. 1-2.

[32] Muh. Hadi Bashori, Penanggalan.., p. 14-16

[33] National University Of Singapore, Heavenly Mathematics: Cultural Astronomy. This literature is a paper assignment done by several students joined in one group. PDF files can be downloaded at www.math.nus.edu.sg/.../0506-1-17-Baha'i_Calendar.pdf., Tt., p. 8., Accessed on Sunday, March 25 2020 at 23.00 WIB.

would only make sense to mention their name after the attribute of the one true God[34] The thing that the chapter wants to show is the renewal of the thinking in the calendar that has been modified by entering the religious doctrines that he believes

The origins of the Baha'i calendar date back to the Ministry of Báb (1844-1850). The Báb states that The Badi calendar 'must be sun-like in the Gregorian calendar and should consist of 19 months of 19 days, (each named after a certain attribute of the one true God) with certain days. The new year, like the ancient Persian new Year, will be corrected in astronomy, beginning di_Vernal Equinox.[35]Basically, the Baha'i calendar is the Badi calendar with some improvements by Bahá'ullah own. Contrary to popular belief, it actually began in 1844, year of Báb declaration (this occurred on the night of 22 May 1844/5 Jumada al-Ula 1260, 2 hours and 11 minutes after sunset) and not at 19544 when Baha'u ' llah departed from Baghdad to Constantinople. Baha'u'llah is the one who stated that the beginning of the language calendar is a year in which Báb states that the new manifestation of God will soon arise. Bahá'ulláh also ordained that the vernal Equinox, the day of Naw-Rúz, is regarded as New Year's Day from the Badi calendar. Thus, Naw-rúzyear 1845 (Naw-Rúzsoon after the year of Báb Declaration) is regarded as the first Naw-Rúz of the Badi calendar ' and 21 March 1844 - 20 March 1845 considered as the first year of the Baha'i Era (BE). The Bahai calendar starts their new day at sunset. Nothing can be found to be significant, in addition to following the Middle Eastern culture with its Kamariy's calendar, which is dominated by Muslims who start their days at night, albeit at a slightly different time. The Baha'i calendar includes the Solar Calendar system based on a 19-year cycle of 1844-1863 M from the declaration of the Báb, days beginning and ending at sunset. One year is divided into nineteen months consisting of nineteen days in each month. The Baha'i year begins at sunset on the vernal day of the equinox. The years, months and days of Baha'I are named after the attributes that relate to God. Nothing can be found to be significant, in addition to following the Middle Eastern culture with its Kamariy's calendar, which is dominated by Muslims who start their days at night, albeit at a slightly different time. The Baha'I calendar includes the Solar Calendar system based on a 19-year cycle of 1844-1863 M from the declaration of the Báb, days beginning and ending at sunset. One year is divided into nineteen months consisting of nineteen days in each month. The Baha'i year begins at sunset on the vernal day of the equinox. The years, months and days of Baha'I are named after the attributes that relate to God. Nothing can be found to be significant, in addition to following the Middle Eastern culture with its Kamariy's calendar, which is dominated by Muslims who start their days at night, albeit at a

[34] National University Of Singapore, Heavenly Mathematics: Cultural Astronomy..., p. 8
[35] Even though the Vernal Equinox does not remain on March 21 each year, it was decided that it should be. This is to ensure that the Bahá'í calendar is "locked" to the Gregorian calendar. Without this, the calendar can vary a day or two when compared to the Gregorian calendar. See, National University Of Singapore, Heavenly Mathematics: Cultural Astronomy ..., p. 9

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slightly different time. The Baha'I calendar includes the Solar Calendar system based on a 19-year cycle of 1844-1863 M from the declaration of the Báb, days beginning and ending at sunset. One year is divided into nineteen months consisting of nineteen days in each month. The Baha'i year begins at sunset on the vernal day of the equinox. The years, months and days of Baha'I are named after the attributes that relate to God. The Baha'I calendar includes the Solar Calendar system based on a 19-year cycle of 1844-1863 M from the declaration of the Báb, days beginning and ending at sunset. One year is divided into nineteen months consisting of nineteen days in each month. The Baha'i year begins at sunset on the vernal day of the equinox. The years, months and days of Baha'I are named after the attributes that relate to God. The Baha'I calendar includes the Solar Calendar system based on a 19-year cycle of 1844-1863 M from the declaration of the Báb, days beginning and ending at sunset. One year is divided into nineteen months consisting of nineteen days in each month. The Baha'i year begins at sunset on the vernal day of the equinox. The years, months and days of Baha'I are named after the attributes that relate to God.[36]The day on the Bahai calendar ends and begins at sunset. Likewise, the monthly meeting of the Bahai religion was held starting the sunset on the first day of the month.

Table 2. Nineteen months in the year of Bahai

Month	Arabic Name	Translation	First Days
1st Month	Bahá	Splendor	March 21
2nd Month	Jalál	Glory	April 9
3rd Month	Jamál	Beauty	April 28
4th Month	'Azamat	Grandeur	May 17
5th Month	Núr	Light	June 5
6th Month	Grace	Mercy	June 24
7th Month	Sentence	Words	July 13
8th Month	Kamál	Perfection	August 1
9th Month	Asthma	Names	August 20
10th Month	'Izzat	Might	September 8
11th Month	Mashiyyat	Will	September 27
12th Month	'Ilm	Knowledge	October 16
13th Month	Qudrat	Power	November 4
14th Month	Qawl	Speech	November 23
15th Month	Masá'il	Questions	December 12
16th Month	Sharaf	Honor	December 31
17th Month	Sultan	Sovereignty	January 19
18th Month 1	Mulk	Dominion	February 7
19th Month	'Alá	Loftiness	March 2

Table 3. Names of days in the year of Bahai

Day	Arabic Name	Translation	Indonesia
Saturday	Jalál	Glory	Greatness
Sunday	Jamál	Beauty	Beautiful
Monday	Kamál	Perfection	Perfection
Tuesday	Fidál	Grace	Sincerity
Wednesday	'Idál	Justice	Justice
Thursday	Istijlál	Majesty	Power
Friday	Liberty	Independence	Stand-alone

[36] National University Of Singapore, Heavenly Mathematics: Cultural Astronomy..., p. 10

The number of calendar days of Bahai amounted to seven. The names of the days are similar to that of Christian liturgical practices as well as Islam and Judaism, the day of the Language Begins at sunset[37] The Baha'I year is also in its cycle of 19 years, called Vahid, meaning "unity" and has a value of numerology (forecasting) 19 in Arabic letters[38]

Table 4. Numerology of Arabic Letters in Bahai Calendar

Year	Arabic Name	Translation
1st Year	Alif	A
2nd Year	Bá	B
3rd Year	Ab	Father
4th Year	Dál	D
5th Year	Chapter	Gate
6th Year	Váv	V
7th Year	Century	Eternity
8th Year	Jád	Generosity
9th Year	Bahá	Splendor
Year	Arabic Name	Translation
10th Year	Hubb	Love
11th Year	Bahháj	Delightful
12th Year	Javáb	Answer
13th Year	Sunday	Single
14th Year	Vahháb	Bountiful
15th Year	Vidád	Affection
16th Year	Badí	Beginning
17th Year	Bahí	Luminous
18th Year	Abhá	Most Luminous
19th Year	Váhid	Unity

There is also a big 361 year cycle, called Kull-i-Shay (the name has numerological value 361 = 19 km² in Arabic). To complete the cycle three hundred sixty five days of the year (including changes related to leap year) there are four days of leap from 26 February to 1 March inclusive, before the last month of Baha'i, which is the month of fasting. The days of Intercalary, called Ayyam-i-Ha, are not considered to be part of any month. These days are spent doing charitable acts, giving gifts, hospitality, and preparing for fasting[39]

Sixth, the Bahai calendar or also called the Badi calendar is originally used in the country Israel, starting from the emergence of the Bahai religion by its own subordinates. The numbers used in this Bahai calendar have a uniqueness that is not found in any other calendar, nineteen months have nineteen days each month, the beginning of the year which always remains the calculation based on Vernal equinox. The use of the naming in the months and days as well as the cycle of the Bahai calendar using Arabic language is identical with Islamic teachings. From the perspective of Islam (faith of the Baha'I linking its origins), the importance of 19

[37] Robin Mihrshahi, A Wondrous New Day : The Numerology of Creation and 'All Things' in the Badí' Calendar, 2013., p. 15.
[38] National University Of Singapore, Heavenly Mathematics: Cultural Astronomy..., p. 10-11
[39] National University Of Singapore, Heavenly Mathematics: Cultural Astronomy..., p. 11

as a mystical representation of physical creation and divine "Revelator" is not based on some magical superstitious ideas. The entire Qur ' an is believed to be embraced in the first chapter of the book that the first chapter is also believed to be contained in the first verse. The first verse-Bismillah al-Rahman al-Rahim "in the name of the Lord, the profitable, the merciful!" - consists of 19 letters in Arabic. The first verse is believed to be contained in the letter "B" at the beginning of the verse, and that the letter "B" is believed to be contained in the point or point below the letter. The mystical meaning is that the initial "B", "19 letters of the first verse", the first chapter, and the entire Qur'an from the first point. 74 In the physical creation world, the universe starts at one point, producing all the galaxies, stars, solar system, and living organisms. In the realm of spiritual creation, the divine reality we cannot know is God, creating the first will from which all things were created; The manifestation of the divine Will is an inspired people known as the Apostle, prophet or embodiment of God, which produces sacred books and civilizations, transforming society according to new principles.

The chapter (the "Gate", 1819-1850), is titled "Primal Point," in honor of the point from which the universe and the Qur'an are produced. This illustrates the Bahá'í principle of true science harmony and true religion very well. It complies with scientific understanding, and has a strong symbolic meaning in terms of religion. In the end, however, the number 19 is the numerical value of the word "ONE" in all Scripture, Aramaic, Hebrew, and Arabic languages. Number 1, therefore proclaimer the first commandment in all scripture-that there is only one God. For the number 9, the significance comes from several places. Primarily, the Arabic alphabet can be used to represent numbers. All of their words have numerical values attached to them. Interestingly, the numerical value of the Bahá is 9. Bahá ' ulláh also often refers to Baha'is in his writings as "The people of the Baha". The use of number 9 is also often believed by many non-Baha, and some of the Baha, to represent the 9 manifestations of God. In fact, its significance is that 9 is the highest single digit in the decimal system, and thus visible to the Baha'i to "contain" all the other digits. It is a useful metaphor for universality and unity. Now, many have been mentioned about the numerical values inherent in the Arabic alphabet and to the world of amazing Arabic numerology. and thus visible to the Baha'i to "contain" all the other digits. It is a useful metaphor for universality and unity. Now, many have been mentioned about the numerical values inherent in the Arabic alphabet and to the world of amazing Arabic numerology. and thus visible to the Baha'i to "contain" all the other digits. It is a useful metaphor for universality and unity. Now, many have been mentioned about the numerical values inherent in the Arabic alphabet and to the world of amazing Arabic numerology.[40]The alphabet number is a number system used in the Arabic-speaking world before the use of Arabic numerals (which actually originated in India). In the alphabetic system, the letters of the Arabic alphabet were numerically rated. So in principle the system is similar to the Roman numerals-but the details are somewhat

[40] National University Of Singapore, Heavenly Mathematics: Cultural Astronomy..., p. 17

different. In the past these figures were used by mathematicians. In modern usage, they are mainly used for small number numbering, such as items in the list. They are also used to assign numerical values to Arabic words for the purposes of numerology. The word alphabet comes from the first four letters in the Order of ancient letters.

Table 5. Numerology Values Arabic alphabet

Alphabet	Score	Alphabet	Score	Alphabet	Score
ا	١	ك	20	ش	300
ب	٢	ل	30	ت	400
ج	٣	م	40	ث	500
د	٤	ن	50	خ	600
ه	٥	س	60	ذ	700
و	٦	ع	70	ض	800
ز	٧	ف	80	ظ	900
ح	٨	ص	90	غ	1000
ط	٩	ق	100		
ي	10	ر	200		

Example 82 the word Baha باه will have a nominal value, 2 + 1 + 5 + 1 = 9

The number of days in the year of the calendar is certainly fewer than 361 with the number of days on the Solar calendar, and more than the Lunar calendar. If viewed as a general in the calendar of the world, basically in the world there are three kinds of calendars that are based on two astronomic cycle is the cycle of moon and sun.[41]The Sun calendar, or often referred to as the Solar calendar, is a calendar based on the movement of the Sun. While the moon calendar or called the Lunar calendar is a calendar based on the moon movement. With the two principles of astronomical criteria above, not only gave birth to two dating systems. But also the collaboration of these two dating systems is often referred to as the Luni-Solar calendar. The above principles are the most common criteria used on the basis of dating, which we can see in the writings of Alan Longstaff, Calendars from Around the World who also explained the same thing.

Of the three dating systems, one characteristic of recognizing the basic celestial objects is the number of days in a year. In one year, the Solar calendar age was 365.2422 days. Where this time is the average time the earth needs to surround the sun. One year on average in the Lunar calendar is 354 days. 85 Where one period in a month aged 29.5306 days, and if accumulated in 12 months then amounted to 354.3672 days. While the Sun-Moon calendar, has the same number of days as one year of the Sun calendar but the number of days in the month is equal to the month calendar. So there are adjustments for the balance of the calendar.

In addition to the three-basic classification of use in a calendaring system that has been mentioned above, then based on the ease of calculation of the calendar is divided into two of the arithmetic and astronomical calendars. However,

[41] Ruswa Darsono, Islamic calendar, System review, FIQH and Hisab of the calendar, Yogyakarta: Labda Press, 2010, p. 32

this classification by definition, according to the author, still requires a basic celestial object as a reference in determining the calendar. Even then, the arithmetic calendar makes a count to simplify and predict the forward calendar continuously, as in Islamic Javanese calendar using Istdivine Hisab. While the astronomical calendar is used to maintain the existence and timeliness of the calendar in its use, such as on Hijri and Gregorian dating.

The methods used in setting calendars are varied. Some calendars base on astronomic recycling with fixed rules. And some others are based on the continual and abstract iteration of a cycle without astronomical relations at all. Each unit is carefully calculated and overtaken. And some others have two meanings and disconnected relations between them. Some calendars are recorded with written rules, and others are disseminated only by the tradition of[42]

Meanwhile, the Bahai calendar according to the author belongs to the Solar Calendar. It is also a standalone calendar system and has a recurring cycle. And this cycle according to the authors is measured mathematically and astronomically. Only so that the new Year remained on March 21st or March 20th at the time of the Vernal Equinox, it was given a 4-day insertion for the year of Basitah and 5 days for the year of Leap. The naming of the Bahai Day, month, year and calendar cycle is made up of Arabic, even in relation to the religion of Islam. The author sees that, according to Báb, the nineteen is a universal law or principle by which all things are created and the plan of God revealed in the world. It also stipulates that this figure is mainly derived from the nineteen letters from the opening verses of the Qur'an "Bismilláhi ' That is the philosophical significance of the reason why it used nineteen numbers for the number of months and cycles in the Bahai calendar. Different on the date of Qamariyah, in one year numbered twelve and the initial determination of the moon is marked by the New Moon (Hilal). The description of the Koran and the hadith below: "Indeed the number of months on the side of God is twelve months, in the decree of God at the time of creating the heavens and the earth, among them there are four unclean months .. "(Al-Tawbah: 36).[43]

"From Abu Hurairahr. A said, the prophet explained about the Hilal, then he said:" If you see it then be satisfied and if you see it (again) then open. If you are covered with clouds then count (month of Shaban) 30 days "(H. R Muslim).

In one year, there are 12 months in both Samsiyah, Qamariyah and Javanese year. But in the passage above God is more specialized verses above for the year Qomariyah which is in the months of Haram. According to some interpretations, the four-month Haram is Ramadan, Syawal[44] Dzulqodah, Dhulhijjah Calendar of Bahai or Badi when viewed from the base of its use based on celestial objects. So, the calendar is called the astronomical calendar. Of the three types of calendars (Solar calendar, Lunar calendar, and Solar Luni calendar), the Bahai calendar includes the type of Solar calendar. However, there was only an

[42] Ruswa Darsono, Penanggalan... p. 28
[43] Ministry of Religious Affairs of the Republic of Indonesia, Qur'an and translation, Semarang: PT Karya Toha Putra, T. T, p. 153.
[44] Abu Husain Muslim bin al Hajjaj, Al-Jami'u al-Shahih, Jilid 3, Beirut: Darl al Fikr, t.t, p.124 – 125.

initial adjustment of the year, which was to be known by the events of the vernal equinox. The Vernal equinox itself is a natural occurrence that is disguised on the celestial object, the sun. Then the author considers it necessary to analyze the calendar whether it agrees with the calendar theory. When viewed from the three criticalities; First, having a second boundary of the validity area, there is a single authority that has set it third, there are consistently agreed criteria.

Thus, Bahai Calendar has all three criteria. In the first criterion, we will find that it is used specifically by the Bahai religions, so that the boundary of the territory not only when the appearance of Bahai proclaimed by the chapter in Iran to death and then in Israel alone, but to the corners of the world for its adherents, has even established the Office of the National Spiritual Assembly in every country that has its adherents. As happened in the Islamic religion of Hijri year, the validity is not at the beginning of the Islamic religion in Saudi Arabia only but to the corners of the world, taking into consideration the location of longitude and latitude in its determination. Through the determination of the World Justice Hall early in Bahai was established, but still considering the local time area. Furthermore, after looking at the entire Bahai calendar, authors will also review the definitions. It is intended to conduct analysis tests whether the Bahai calendar is a calendar, or only a time system that cannot be called a calendar. The meaning of the calendar according to Susiknan Azhari is the organizing system of the time units for the purpose of marking and calculating the time in the long term.[45] In the other sense the date is a calendar containing the names of the moon, the names of the dates, the names of the days, as in the Gregorian calendar. As for the definition presented by Webster's New World College Dictionary on the meaning of calendars is as follows. By email to the rest of the World National Spiritual Assembly dated July 10, 2014. There was a data-dated date obtained from Her Majestys office Nautical Almanac in the UK. Tehran's referral points or Markaz is taken from The World Geodic System 1984, a recognized standard for global mapping and navigation

Conclusion

The Badi Calendar or Bahai calendar is a thought and modification of the religious figure of Bahai, namely Bahaullah. The almanac begins in 1844 ad for the reason of that year that the chapter proclaimed himself. Then the year is 1 from Bahai Era (EB). Totalling 7 days, the beginning of the day is Saturday. The month amounted to 19, 19 days each. One year it amounted to 361 days. Has a 19 year cycle called Vahid, if it has been through 19 times the Vahid cycle (361 years) then Kulli Shay-I. The beginning of the year falls between the 21st or the 20th of March by adjusting the time of the Vernal Equinox (Spring Entry) at the point of Aries. In order for the beginning of the year to fall on the same date, there must be additional days (Ayyam-I HAA-i) 4 days in the year of Basitoh and 5 days in leap year. The names of the moon and the day are derived from the attributes that relate to God,

[45] Susiknan Azhari, Ensiklopedi Hisab Rukyat, Yogyakarta : Pustaka Pelajar, cet. II, 2008, p. 115.

the philosophy of 19 numbers itself is derived from the number of letters in Lafadz Bismillahirrahmanirrahim.

The change of the day in the Bahai calendar is characterized by the sinking of the Sun (Ghurub as-Syams) such as the Lunar calendar. The day does not amount to 354 days 48 minutes 34 seconds according to the moon rotation period around the sun. The changing month does not take into account the position of the New Moon (Hilal), but only with a definite count of when one month is passed in nineteen days, then the next is the new moon. Similarly, in the calculation of adjustments with the Gregorian calendar, Leap year and Basitoh was not known before but only adhered to the Gregorian adjustment. The Almanac Bahaiini is called the astronomical calendar. Similarly, the criteria and terms of the calendar's date system can be categorized as a calendar.

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