

## Renewing the Thoughts of the Hijri Calendar of Muhammadiyah, Nahdlatul Ulama and Persatuan Islam and Its Implications for Realization of National Hijri Calendar

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**Abstract:** This paper discusses the issue of renewing the thought of Hijri calendar by Muhammadiyah, Nahdlatul Ulama (NU) and Persatuan Islam and its implications for the existence of a national Hijri calendar. The focus of this paper is to highlight changes in methods and criteria, reference algorithms and the scope of the calendar application area. The main problem in this paper is how Muhammadiyah, NU and Persatuan Islam reform the Hijri calendar thoughts and what are the implications for the realization of the national Hijri calendar. The results of this study indicate that both Muhammadiyah, NU, and Persatuan Islam have updated the Hijri calendar's thought, both in the aspects of methods and criteria, algorithm references and the scope of the calendar application area, which leads to the conformity of the calendar concept that is normatively and scientifically appropriate. The renewal of thought is caused mass organizations face problems with the methods and criteria for determining the beginning of the month in the Hijri calendar. The renewal of thought also influenced by advances in science and technology. However, because this renewal has not been supported by the similar epistemology of determining the beginning of the month and the identity politics of mass organizations, the opportunity to realize a national Hijri calendar is still very unlikely.

**Keywords:** Hijri Calendar, Thought of Renewal, Muhammadiyah, Nahdlatul Ulama, Persatuan Islam

**Abstrak:** Tulisan ini membahas masalah pembaruan pemikiran kalender Hijriyah oleh Muhammadiyah, Nahdlatul Ulama dan Persatuan Islam dan implikasinya pada keberadaan kalender Hijriyah nasional. Fokus tulisan ini adalah menyorot perubahan metode dan kriteria, referensi algoritma serta cakupan wilayah keberlakuan kalender. Pokok permasalahan dalam tulisan ini adalah bagaimana pembaruan pemikiran kalender Hijriyah Muhammadiyah, Nahdlatul Ulama dan Persatuan Islam, dan bagaimana implikasinya terhadap terwujudnya kalender Hijriyah nasional. Hasil penelitian ini menunjukkan bahwa baik Muhammadiyah, NU, maupun Persis telah melakukan pembaruan pemikiran kalender Hijriyah, baik pada aspek metode dan kriteria, referensi algoritma serta cakupan wilayah keberlakuan kalender yang mengarah pada kesesuaian konsep kalender yang sesuai secara normatif dan sains. Pembaruan pemikiran disebabkan karena ormas menghadapi problematika metode dan kriteria penentuan awal bulan dalam kalender Hijriyah. Pembaruan juga dipengaruhi oleh kemajuan ilmu pengetahuan dan teknologi. Tetapi karena pembaruan ini belum didukung oleh kesamaan epistemologi penentuan awal bulan dan masih lekatnya politik identitas ormas, maka peluang terwujudnya kalender Hijriyah nasional masih kurang memungkinkan.

**Kata Kunci:** Kalender Hijriyah, Pembaruan Pemikiran, Muhammadiyah, Nahdlatul Ulama, Persatuan Islam

## Introduction

The differences in determining the beginning of the month in the Hijri calendar, especially the beginning of Ramadan, Shawwal, and Zulhijah in Indonesia are still common. During the Dutch colonial period, there were differences in the determination of the beginning of Ramadan in 1868 AD. At that time the Dutch government asked a Betawi cleric, Sayyid Usman to reduce these differences.<sup>1</sup> Then in 1918, the Pangulu decided the start of Ramadan on Tuesday 11 June 1918, but the followers of Muhammadiyah and Sidik Amanat Tabligh Fatonah in Kudus and Surakarta followed the reckoning decision on Monday 10 June 1918.<sup>2</sup> In the 1930s, the early differences in Shawwal also occurred.<sup>3</sup> The differences in determining the beginning of the month of Shawwal also occurred in 1945 which fell between 7 and 8 September 1945, due to differences in decision-making methods. During the New Order era, differences in determination of Shawwal also occurred, such as in 1985, 1992, 1993, 1994, 1998.<sup>4</sup> These differences continued during the Reformation period, such as the beginning of Zulhijah in 2000, the beginning of Ramadan 2001, the beginning of Shawwal 2002, the beginning of Zulhijah in 2003, the beginning of Shawwal 2006, 2007, 2011, the beginning of Ramadan 2012, 2013, 2014, the beginning of Zulhijah 2014 and 2015.<sup>5</sup>

Differences are usually only one day apart between the government's decision and the decision of one of the Muslim mass organizations such as Muhammadiyah, Nahdlatul Ulama (NU), or Persatuan Islam (Persis). However, after the Reformation era, the difference could be three or even four days apart. This difference occurs because of the determination of the beginning of the Hijri months according Islam Aboge,<sup>6</sup> Tarikat Naqsyabandiyah<sup>7</sup> and Syattariyah Padang,<sup>8</sup> and Jamaah An-Nazir Gowa.<sup>9</sup> Of the several groups above, there are three mass organizations, Muhammadiyah, NU, and Persis that are always the subject of discussion when there are differences in the determination of the beginning of the Hijri months in Indonesia, especially Ramadan, Shawwal, and Zulhijah because these months have implications for the harmonious celebration of fasting days and Eids.<sup>10</sup>

Efforts to unify the beginning of the months in the Hijri calendar, especially Ramadan, Shawwal and Zulhijah, have been carried out through many ways such as deliberations, seminars, workshops, work meetings, and so on. However, the effort to unify the Hijri calendar has so far not yielded results, because each mass organization still adheres to different methods and criteria. These mass

<sup>1</sup> Nico J. G. Kaptein, *Islam, Colonialism and the Modern Age in the Netherlands East Indies: A Biography of Sayyid Usman (1822-1914)* (Leiden: Brill, 2014). 79.

<sup>2</sup> Muhamad Hisyam, *Caught Between Three Fires: The Javanese Pangulu Under the Dutch Colonial Administration 1882-1942* (Jakarta: INIS, 2001). 106.

<sup>3</sup> Muhammad Roem, *Bunga Rampai Dari Sejarah Jilid II* (Jakarta: Bulan Bintang, 1977). 172-175.

<sup>4</sup> Susiknan Azhari, "Fenomena Perbedaan Idul Fitri Masa Orde Baru: Sebuah Survey Historis," *Profetika: Jurnal Studi Islam*, Vol. 2, No. 1 (2000): 92.

<sup>5</sup> Susiknan Azhari, "Penyatuan Kalender Islam: Mendialogkan Wujudul Hilal Dan Visibilitas Hilal," *Ahkam: Jurnal Ilmu Syariah*, Vol. 8, No. 2 (2013): 158-59.

<sup>6</sup> Ahmad Izzuddin, "Hisab Rukyat Islam Kejawaen (Studi Atas Metode Hisab Rukyah Sistem Aboge)," *Al-Manahij: Jurnal Kajian Hukum Islam*, Vol. 9, No. 1 (2015): 123-40.

<sup>7</sup> Urwatul Wusqa, Salma, and Walan Yudhiani, "Dinamika Penentuan Awal Ramadan Di Sumatera Barat," *Al-Manahij: Jurnal Kajian Hukum Islam*, Vol. 14, No. 2 (2020): 317-34.

<sup>8</sup> Firdaus, "Dinamika Hisab Taqwim Tarekat Syattariyah Di Sumatera Barat," *Ibda: Jurnal Kajian Islam Dan Budaya*, Vol. 17, no. 1 (2019): 1-20.

<sup>9</sup> Sudirman, Edi Gunawan, and Kasjim Salenda, "Method of Law Istibath Jama'ah Al-Nadzir: Determination of the Beginning of the Month of Ramadhan," *Ijtihad: Jurnal Wacana Hukum Islam Dan Kemanusiaan*, Vol. 19, no. 2 (2019): 259-70.

<sup>10</sup> Suhanah, "Dampak Sosial Perbedaan Pendapat dalam Penentuan Awal Ramadhan dan 1 Syawal Terhadap Umat Islam Di Kota Semarang," *Harmoni*, Vol. 11, No. 2 (2012): 156-68.

organizations are still unable to accept the offer of calendar unification criteria.<sup>11</sup> Calendar unity will be realized if there are common thoughts regarding the Hijri calendar of each mass organization, both Muhammadiyah, NU, and Persis. As long as the calendar ideas of Muhammadiyah, NU, and Persis each run separately and are different from each other, it will certainly be difficult to realize the unity of the Hijri calendar in Indonesia.

In determining the beginning of the Hijri months, Muhammadiyah uses astronomical calculations for the new moon (*hilāl*), NU uses actual new moon sighting (*rukyatul hilāl*) guided by calculating the possibility of the observable crescent moon (*imkān al-ru'ya*) with MABIMS<sup>12</sup> criteria and Persis uses the calculation of the possibility of the observable crescent moon (*imkān al-ru'ya*) with LAPAN<sup>13</sup> criteria. The methods and criteria for determining the beginning of the Hijri months from Muhammadiyah, NU, and Persis are now have been undergoing several updates. Updates are not only on aspects of methods and criteria, but also on aspects of the algorithm for the beginning of the months and the scope of application of the Hijri calendar. The renewal of the Hijri calendar thoughts carried out by Muhammadiyah, NU, and Persis in the perspective of the philosophy of science is something normal, because most types of scientific activities, both the exact sciences and social sciences, even religious sciences always experience a shift in scientific paradigm. Scientific activity always has a historical dimension, so that it accepts changes, improvements, shifts, re-examinations, and improvements to the building of scientific epistemology.<sup>14</sup>

In the context of efforts to unify the Hijri calendar in Indonesia, the renewal of thoughts of Hijri calendar by each mass organization is certainly something important to research. The results of this study can be used to see the implications for the realization of the national Hijri calendar in Indonesia.

## Renewal of Thoughts on the Hijri Calendar on Muhammadiyah, Nahdlatul Ulama, and Persatuan Islam Perspectives

### 1. Renewal of Thoughts on the Hijri Calendar on Muhammadiyah Perspective

The use of astronomical calculation (*hisāb*) by Muhammadiyah has started since Ahmad Dahlan as the founder of Muhammadiyah lived.<sup>15</sup> The renewal of the Hijri calendar thought by Muhammadiyah can be seen from changes in methods and criteria. Muhammadiyah chose to use *hisāb* as a method of determining the beginning of the Hijri month. Before using the *hisāb wujud 'l-hilal* (astronomical calculations with the criteria of the new moon presence), Muhammadiyah had used *hisāb imkān al-ru'ya* (astronomical calculations with the criteria of the observable crescent moon) and *hisāb ijtīmā' qabla 'l-ghurub* (astronomical calculations with the criteria of conjunction before sunset).<sup>16</sup> The first *hisāb* used by Muhammadiyah was *hisab hakiki* (true calculations) with *imkan al-ru'ya* criteria and

<sup>11</sup> Ahmad Fadholi, "Pandangan Ormas Islam Terhadap Draf Kriteria Baru Penentuan Kalender Hijriah di Indonesia," *Istinbath: Jurnal Hukum Islam* Vol. 17, no. 1 (2018): 211–15.

<sup>12</sup> MABIMS is the Minister of Religion of Brunei, Indonesia, Malaysia and Singapore.

<sup>13</sup> LAPAN is Indonesia's National Institute of Aeronautics and Space (*Lembaga Penerbangan dan Antariksa Nasional*).

<sup>14</sup> M. Amin Abdullah, *Studi Agama Normativitas Atau Historisitas?* (Yogyakarta: Pustaka Pelajar, 1996). 102.

<sup>15</sup> M. T. Arifin, *Gagasan Pembaharuan Muhammadiyah* (Jakarta: Dunia Pustaka Jaya, 1987). 90–93.

<sup>16</sup> Majelis Tarjih PP Muhammadiyah, *Penggunaan Hisab dalam Penetapan Bulan Baru Hijriyah/Qomariyah*, in Choirul Fuad Yusuf and Bashori A. Hakim (Eds.), *Hisab Rukyat Dan Perbedaannya* (Jakarta: Badan Litbang Agama dan Diklat Keagamaan Departemen Agama RI, 2004). 27–28.

then it changed to *ijtima' qabla 'l-ghurub* until 1937 AD/1356 H. In 1938 AD/1357 H, Muhammadiyah began to use the *wujūdul hilal* criteria. Muhammadiyah uses this criteria as a middle ground between *hisāb ijtima' qabla 'l-ghurub* and *imkān al-ru'ya* methods.<sup>17</sup> Muhammadiyah chose to use the *hisāb wujud 'l-hilal* because the accuracy of the calculation results in reality has been proven in the event of a solar eclipse.<sup>18</sup>

*Hisāb* as a method of determining the beginning of the Hijri calendar months officially appeared at the 28th Muhammadiyah congress in Medan on 19-25 July 1939. It was used to decide when Muslims to do fasting, whether to use *ru'yat al-hilāl* (witnessing the new crescent moon by a just person), or to bring the number of days in Sya'ban to 30 days if cloudy, or with the *hisāb* method.<sup>19</sup> At the 32nd Muhammadiyah congress on 9-14 July 1953, it was also decided that the issue of *hisāb* and *ru'ya* was decided, that determining the fasting month and the Eid al-Fitr could use both *ru'ya* and *hisāb*.<sup>20</sup> In this decision, it can be understood that Muhammadiyah is still of the opinion that to determine the beginning of Ramadan and Syawwal, apart from using *ru'ya*, *hisāb* can also be used. However, it seems that the Muhammadiyah's Tarjih Council is more inclined to *ru'ya* than *hisāb*,<sup>21</sup> Although at the 25th National Conference of Tarjih Council, there was a proposal to the Tarjih Council and the Development of Islamic Thought to review the decision. Then Muhammadiyah reaffirmed the use of *hisāb* as a determinant of the beginning of the Hijri months at the Tarjih Congress in Pencongan Wiradesa Pekalongan, Central Java, on 23-29 April 1972 with a decision to use astronomical calculation (*hisāb*) only rather than actual observation (*ru'ya*).<sup>22</sup>

At the 26th National Conference of Tarjih Council on 3-5 October 2003 in Padang, Muhammadiyah again issued a decision stating that the function and position of *hisāb* was the same as *ru'ya* to be a guide in determining Ramadan, Syawwal and Zulhijah. The *hisāb* used is one with the criteria of *hisāb haqiqi wujudul hilāl*. Moreover, the *matla'* (applicable place) applied is the *matlā' wilāyat al-hukm* of the Unitary State of the Republic of Indonesia. If the boundary line for the appearance of the crescent divides the territory of Indonesia, then the determination of the beginning of the month is at the discretion of the Muhammadiyah Central Executive.<sup>23</sup> The decision of the 26th National Conference of Tarjih Council in Padang confirms the decision of the 25th National Conference of Tarjih Council in Jakarta, the function and position of *hisāb* is the same as *ru'ya* in determining the beginning of the Hijri months. *Ru'ya* is not better than *hisāb*.

I, as the author of this paper, do not find for certain the phases of the renewal of the algorithm system for determining the beginning of the Hijri months that occurred in the Muhammadiyah. From historical researching, the Muhammadiyah calendar was initiated by KH. Ahmad Dahlan in 1915 and who did the calculations in the early period were H. Siradj Dahlan and KH. Ahmad Badawi.<sup>24</sup>

<sup>17</sup> Susiknan Azhari, *Penggunaan Sistem Hisab Dan Rukyat Di Indonesia: Studi Tentang Interaksi Muhammadiyah Dan NU* (Jakarta: Badan Litbang dan Diklat Departemen Agama RI, 2007). 84.

<sup>18</sup> Yusuf Somawinata, *Ilmu Falak: Pedoman Lengkap Waktu Salat, Arah Kiblat, Perbandingan Tarikh, Awal Bulan Kamariah, Dan Hisab Rukyat* (Jakarta: Rajawali Press, 2020). 151.

<sup>19</sup> Majelis Tarjih Pimpinan Pusat Muhammadiyah, *Himpunan Putusan Tarjih Muhammadiyah* (Yogyakarta: Suara Muhammadiyah, 2016). 172.

<sup>20</sup> Majelis Tarjih Pimpinan Pusat Muhammadiyah, *Himpunan Putusan Tarjih*. 293-294.

<sup>21</sup> Majelis Tarjih dan Tajdid PP Muhammadiyah, *Tuntunan Ramadlan* (Yogyakarta: Suara Muhammadiyah, 2015). 24.

<sup>22</sup> Majelis Tarjih Pimpinan Pusat Muhammadiyah, *Himpunan Putusan Tarjih*. 381-382.

<sup>23</sup> Majelis Tarjih dan Tajdid Pimpinan Pusat Muhammadiyah, *Himpunan Putusan Tarjih 3* (Yogyakarta: Suara Muhammadiyah, 2018). 75-77.

<sup>24</sup> Susiknan Azhari, *Penyatuan Kalender Islam: Dari Solidaritas Individu-Sektarian Menuju Solidaritas Kebangsaan-Kaumatan* (Yogyakarta: Museum Astronomi, 2020). 71.

In historical context, those who did the calculations in the early period were H. Siradj Dahlan who lived between 1898-1948 and KH. Ahmad Badawi lived between the years 1902-1969. It is most likely that the algorithm used was the early month calculation algorithm that developed during their lifetime. At the time of H. Siradj Dahlan, the algorithm for calculating the beginning of the month that developed still varied between *hisāb haqiqī taqribī* and *hisāb haqiqī tahqiqī* books. Meanwhile, when the calculations were carried out by KH. Ahmad Badawi, the algorithm system that has developed has used a lot of contemporary calculation systems. H. Siradj Dahlan is known to have worked in the astronomical skills, *Ilmoe Falak* (Cosmographie). Then his astronomy skills were taught to his students, KH. Muhammad Wardan (1911-1991) who was famous as a *hisāb* Muhammadiyah figure.<sup>25</sup> Muhammad Wardan is known to have been the Chairman of the Tarjih Council of Muhammadiyah from 1959-1985 with his works *Umdatul Hasib, Kitab Ilmu Falak dan Hisab* and *Hisab Hakiki dan Urfi*.<sup>26</sup>

From these data, it is concluded that the algorithm for the beginning of the Hijri calendar months used by H. Siradj Dahlan is probably the same as what was conveyed to his student KH. Wardan who then compiled the book *Hisab Urfi dan Hakiki* as books that included in the *hisāb haqiqī tahqiqī* category. It means what H. Siradj Dahlan used and then conveyed to KH. Wardan is the same, the *hisāb haqiqī tahqiqī*. Then in the next generation, the calculation of the Muhammadiyah almanac was carried out by Ir. Basit Wachid, KH. Bidran Hadi, Drs. H. Abd. Rachim, and Dr. Oman Fathurrohman. If referring to Abd. Rachim who wrote a book on astronomical calculation of the beginning of the months and calculating the beginning of the moon and solar eclipse, which in the first book uses Nautical Almanac data and in the second book uses New Comb data, it can be concluded that Abd. Rachim uses contemporary calculation data and systems in his Hijri month calculation. This shows that what is used by Abd. Rachim and his friends in their calendar calculations are contemporary calculation algorithms. Unfortunately, the phase in the form of the right time cannot be found to explain this.

Muhammadiyah also initiated the realization of the unification of the Hijri calendar. The idea of unifying the Hijri calendar can be concluded that the official 'Hisab Rukyat Agency' was formed by the Ministry of Religion of the Republic of Indonesia in 1972 which then in 1973 included several people from each Muslim mass organization such as K.H. Wardan, Drs. Abd. Rachim, Ir. Basit Wachid, and H. Bidran Hadi from Muhammadiyah, K.H. Turaichan Adjhuri, KRB. Tang Soban, KH. Alie Yafie, KH. A. Djalil from NU, and KH. Ali Ghazali from Persis to become a scattered member of the Hisab and Rukyat Agency. With the inclusion of celestial figures from each mass organization, it became clear that they were invited by the Government through the Hisab and Rukyat Agency to seek to unify the Muslim calendar throughout Indonesia.<sup>27</sup> With the existence of an inter-organizational forum to unify the Hijri calendar in Indonesia, it is a measure of the phase in which the idea to realize the National Hijri calendar has been conceptualized. Muhammadiyah has begun to seriously study the unification of the global Hijri calendar.<sup>28</sup> At the Muhammadiyah Congress held in 2015 in Makassar, there was a decision to move towards the realization of the global Hijri calendar. Even though it is

<sup>25</sup> Susiknan Azhari, *Hisab Hakiki Model Muhammad Wardan: Penelusuran Awal*, in Choirul Fuad Yusuf and Bashori A. Hakim (Eds.), *Hisab Rukyat Dan Perbedaannya* (Jakarta: Badan Litbang Agama dan Diklat Keagamaan Departemen Agama RI, 2004). 35.

<sup>26</sup> Susiknan Azhari, *Hisab Hakiki Model Muhammad Wardan*, 38.

<sup>27</sup> Rohadi Abdul Fatah, *Almanak Hisab Rukyat* (Jakarta: Dirjen Bimas Islam Kemenag RI, 2010). 78-79.

<sup>28</sup> Rupi'i Amri, "Dinamika Penentuan Awal Bulan Kamariah Menurut Muhammadiyah: Studi Atas Kriteria Wujudul Hilal Dan Konsep Matla'," *Jurnal At-Taqaddum* 4, no. 1 (2012): 141.



not yet official, Muhammadiyah has released a Global Islamic Calendar 1442 H with the criteria for the decision of the Turkish Congress in 2016 AD.<sup>29</sup>

## 2. Renewal of Thoughts on the Hijri Calendar on Nahdlatul Ulama Perspective

The idea of determining the beginning of the month in the Hijri calendar appeared at the NU Congress in 1954. The NU decision stated that the legal status of announcing the beginning of Ramadan and Syawwal with *hisāb* before there was an official announcement by the government was not allowed.<sup>30</sup> This is because for NU, the method of determining the beginning of the month in the Hijri calendar, especially Ramadan, Syawwal and Zulhijah is *ru'ya bil fi'lī* or *istikmāl*.<sup>31</sup> At the national Alim Ulama Conference in 1983, NU also decided that the Government's determination of the beginning of Ramadan and Syawwal based on calculation was not mandatory. At the national Alim Ulama Conference in 1987, NU decided that the *wuquf* of a *hisāb* expert who followed the Saudi Arabian government's decree was still valid even though it was different from the *hisab* result. NU has always been oriented to the opinion of scholars who are of the opinion that it is absolute in determining the beginning of Ramadan, Syawwal and Zulhijah are not distinguished, the results of *ru'ya al-hilāl* from one region in Indonesia are the basis for the government in determining the beginning of Ramadan, Syawwal and Zulhijah in all regions of Indonesia, even though the *matla'* is different. *Ru'ya al-hilāl* in determining the beginning of Ramadan, Syawwal and Zulhijah, is judged to be *fard kifaya* (community obligation) according to the opinion of the four schools except the Hanbali's school of law, which decides it is *sunna* (preferable). *Ru'ya al-hilāl* carried out by the government is enough to be the implementation of *fard kifaya* for all Indonesian Muslims. In relation to *wilayatul hukm*, NU issued a decision relating to whether fasting is voluntary on the day of Arafah for Muslims who are not performing the pilgrimage because of the *Yaum Arafah* calendar, which is the 9th of Zulhijah, not because of *wuquf* events. NU also decided that the calendar to be guided was the local country calendar, which was determined based on *ru'ya*. At the 30th NU congress in Kediri in 1999, NU decided on the issue of determining the beginning of the month with an international *ru'ya*, with a decision that Indonesian Muslims and the Government of the Republic of Indonesia should not participate in the international *ru'ya al-hilāl* because they are not within the legal unity. The decision was based on the consideration of the location of the Indonesian territory where the *matla'* is different from Saudi Arabia. *Ru'ya* that is not successful in Indonesia, could be successful in other countries as Saudi Arabia because the time of sunset in Saudi Arabia is four hours earlier than in Indonesia.<sup>32</sup> In the decision there are criteria for *imkān al-ru'ya* of MABIMS as a determinant of the beginning of the month with the conditions that the new moon height is 2 degrees above the horizon, the elongation angle is at least 3 degrees and it happens after conjunction or *ijtima'*, and the age of the month is at least 8 hours.<sup>33</sup>

<sup>29</sup> Arwin Juli Rakhmadi Butar-butur, *Esai-Esai Kalender Islam Global* (Medan: Al-Azhar Centre dan OIF UMSU, 2021). 46.

<sup>30</sup> Tim LTN PBNU, *Ahkamul Fuqaha: Solusi Problematika Aktaual Hukum Islam Keputusan Muktamar, Munas Dan Konbes Nahdlatul Ulama 1926-2010* (Surabaya: Diantama, 2011). 290.

<sup>31</sup> Lajnah Falakiyah PBNU, *Pedoman Rukyat Dan Hisab Nahdlatul Ulama* (Jakarta: Lajnah Falakiyah PBNU, 2006). 20.

<sup>32</sup> PBNU, *Ahkamul Fuqaha: Solusi Problematika Aktaual Hukum Islam Keputusan Muktamar, Munas Dan Konbes Nahdlatul Ulama 1926-2010*. 386, 410, 416-17, 569, 558, 557.

<sup>33</sup> Fatah, *Almanak Hisab Rukyat*. 42-43.

Nahdlatul Ulama also formulates that the determination of the beginning of Ramadan, Syawwal and Zulhijah must be based on *ru'ya al-hilāl* or *istikmāl*. *Hisāb* is only a guide in the implementation of *ru'ya*. The determination of the beginning of Ramadan, Syawwal and Zulhijah is a the government determination. If the government refuses to carry out *isbat* (decision meeting) based on *ru'ya*, then it becomes the authority of the Nahdlatul Ulama Executive Board to inform all NU members of the *ru'ya* results. NU has used *hisāb* as a tool in the implementation of *ru'ya*. There is no further explanation regarding the technical aspects for its implementation, what kind of function can be given to calculate on the implementation of *ru'ya*, both regarding time, method, and an assessment of the validity of the results. In the early 90s, NU had not use the accurate calculation results as a tool to assess the validity of *ru'ya* results. This was proven in three consecutive years, 1992, 1993 and 1994. NU ratified the *ru'ya* results of the begining of the month of Syawal in 1412, 1413, and 1414 although they did not match the accurate calculation results.<sup>34</sup> The astronomical calculation used by NU as a tool that guides *ru'ya* is a calculation system that belongs to the *hisāb haqiqī taqribī* because according to the *hisāb haqiqī taqribī* system it produces a positive *hilāl* (moon crescent) above the horizon, although according to contemporary calculation the new moon is still below the horizon.<sup>35</sup>

However, at the end of the 90s, NU began to give attention to accurate calculation as a tool in assessing the validity of the results of *ru'ya*. In determining the 1st Syawwal 1418, PBNU held a joint meeting with P.P. Lajnah Falakiyah specifically to determine the beginning of the month of Syawwal 1418 H, because the position of the new moon on January 28, 1998 or 29 Ramadan 1418 was below 0.5 degrees, therefore it was impossible to do *ru'ya* (observation). If there are *ru'ya* results that are not supported by accurate calculation, according to PBNU, they will be considered.<sup>36</sup> NU did not receive reports on the *ru'ya* results in Bawean and Cakung because for the territory of Indonesia, the position of the new moon was not possible for *ru'ya* in the determination of Syawwal 1418 H./1998 AD.<sup>37</sup> NU has made a paradigm shifting of thought from not using *hisāb imkān al-ru'ya* as a guide for *ru'ya* to using it (*hisāb imkān al-ru'ya*) as a guide for *ru'ya*.<sup>38</sup>

Before 2007, NU also had not made accurate calculation results as a tool in determining the date for performing *ru'ya*. If there is an *istikmāl* or making the moon age 30 days because the *ru'ya al-hilāl* fails, then for the implementation of the *ru'ya al-hilāl* in the following month, NU always determines the 29th, which is calculated from the 1st of the *istikmāl*. With reference to the 1st day of *istikmāl*, NU has the potential to get into trouble if the following month the *ru'ya al-hilāl* fails again.<sup>39</sup>

The calculation used by NU is high accuracy. This is different from the previous one where the *ru'ya al-hilāl* guideline is based on the results of the calculation of the *hisāb haqiqī taqribī* with the *hisāb haqiqī tahqiqī*, even many NU's *pesantrens* still use the book of the *hisāb haqiqī taqribī* category such as *Fathur Ra'ufil Mannan* and *Sullamun Nayyirain*. The calculation applied by NU is based on *al-Khulasatul Wafiah*, *al-Matla'us Sa'id*, *Badi'atul Misal*, *Nurul Anwar*, *Ephemeris Hisab Rukyah*, the *New Comb* system. *Sullamun Nayyirain*, *Fathur Ra'ufil Mannan* and the calculation system was recommended by PBNU

<sup>34</sup> Abd. Salam, *Penentuan Awal Bulan Islam dalam Tradisi Fikih Nahdlatul Ulama: Membaca Konstruksi Elite NU Jawa Timur* (Surabaya: Pustaka Intelektual, 2009), 183-84.

<sup>35</sup> Azhari, "Fenomena Perbedaan Idul Fitri Masa Orde Baru: Sebuah Survey Historis." 93.

<sup>36</sup> Salam, *Penentuan Awal Bulan Islam*. 184.

<sup>37</sup> Ahmad Izzuddin, *Fiqh Hisab Rukyat Di Indonesia: Upaya Penyatuan Mazhab Rukyah Dengan Mazhab Hisab* (Yogyakarta: Logung Pustaka, 2003). 142.

<sup>38</sup> Azhari, "Fenomena Perbedaan Idul Fitri Masa Orde Baru: Sebuah Survey Historis." 95.

<sup>39</sup> Salam, *Penentuan Awal Bulan Islam*. 185.

(the Executive Board of NU). The calculation used by PBNU is a simplification of the calculation of *al-Khulasatul Wafiyah*. While the calculations and the formulas are a combination of the *al-Khulasah* system with the geometry formulas of a spherical triangle as in the *New Comb* system.<sup>40</sup>

Nahdlatul Ulama issued the idea of unifying Hijri calendar that was officially known when NU representatives participated in the scattered membership of the 'Hisab and Rukyat Agency' of the Ministry of Religion of the Republic of Indonesia in 1973, the same as Muhammadiyah did, as it has explained above. The government's efforts to create a unified Hijri calendar that applies to all regions of Indonesia can become a unification of the idea of unifying the national Hijri calendar.

### 3. Renewal of Thoughts on the Hijri Calendar on Persatuan Islam Perspective

The development of Hijri calendar thought in Persis began with the use of the calculation method as a determinant of the beginning of the month. A. Hassan as the main figure of Persis argues that the method of determining the beginning of the Hijri month is allowed by calculation.<sup>41</sup> According to him, the use of calculation (*hisāb*) is true and has proven to be more accurate than the *ru'ya* method.<sup>42</sup> The use of calculation is also supported by Moenawar Cholil as another Persis ulama figure. The calculation criteria used by Persis can be known with certainty starting with the almanac published by Persis using the *hisab ijtimā' qablal ghurub* method. This criterion of *ijtimā' qablal ghurub* was used by Persis from 1960-1995.<sup>43</sup> The almanac was made with reference to *Sullamun Nayyirain, Fathu Ra'ufil Mannan* and *Khulasatul Wafiyah*.<sup>44</sup> In 1996, the *ijtimā' qablal ghurub* criteria were updated with the *wujūdu 'l-hilāl* criteria from 1995-2001. The *wujūdu 'l-hilāl* criteria include the *wujūdu 'l-hilāl* criteria in Bandung from May 1995-August 2000. Furthermore, in September 2000-2001, the *wujūdu 'l-hilāl* criteria used are the *wujūdu 'l-hilāl* criteria for all regions of Indonesia.<sup>45</sup> The renewal occurred after the establishment of a new Hisab and Rukyat Council in 2000 with a discourse on the validity of the *wujūdu 'l-hilāl* criteria of the new moon.<sup>46</sup> The use the *wujūdu 'l-hilāl* concept with *matla' wilayatul hukm* for all regions of Indonesia is an important consideration because it relates to the *halal* and *haram* of breaking the fast or Eid al-Fitr.<sup>47</sup>

*Hisāb* as a method of determining the beginning of the Hijri month, which has been updated as described above, has not been based on an official Persis decree, but it applies with reference to A. Hassan thoughts and it was realized by KH. E. Abdurrahman by making almanacs. Only in 2001, *hisāb* (calculation) as a method of determining the beginning of the month that has been used for a long time appeared in the official decision of the Hisab and Rukyat Council of Persatuan Islam regarding the position of *hisāb* and *ru'ya* in determining the beginning of the month. In the decision, it is stated that the determination of the beginning of the month with *hisāb* is valid for worship guides. To

<sup>40</sup> Muhyiddin Khazin, "Penggunaan Rukyatul Hilal dalam Penetapan Bulan Baru Penanggalan Qamariyah di Indonesia" in Choirul Fuad Yusuf and Bashori A. Hakim (Eds.), *Hisab Rukyat Dan Perbedaannya* (Jakarta: Badan Litbang Agama dan Diklat Keagamaan Departemen Agama RI, 2004). 215-17.

<sup>41</sup> A. Hassan, *Soal-Djawab Tentang Berbagai Masalah Agama Jilid II* (Bandung: C.V. Diponegoro, 1969). 581-82.

<sup>42</sup> Ahmad Syarief Hakim, "Dinamika Kriteria Kalender Hijriyah Persis", *Papers*, Presented at the Hisab Rukyat Evaluation Work Meeting in 2020 at the Forriz Hotel Yogyakarta, 2020.

<sup>43</sup> Abu Sabda, *Ilmu Falak: Rumusan Syar'i dan Astronomi Seri 02* (Bandung: Persis Pers, 2019). 87.

<sup>44</sup> Ahmad Syarief Hakim, "Sekilas Sejarah Almanak Persis", *Unpublished Paper*, 2013.

<sup>45</sup> Sabda, *Ilmu Falak: Rumusan Syar'i Dan Astronomi Seri 02*. 87.

<sup>46</sup> Hakim, "Sekilas Sejarah Almanak Persis", *Unpublished Paper*. 2013.

<sup>47</sup> Ahmad Syarief Hakim, "Kriteria Wujudul Hilal Dan Imkanur Ru'yah dalam Tinjauan Syar'i", *Unpublished Paper*, 2007.



determine the *hisāb* of the Persatuan Islam, it is necessary to have standard rules. The emergence of a decree regarding the validity of *hisāb* as a method of determining the beginning of the Hijri month was followed by a change that the method of *hisāb* used was *hisāb imkān al-ru'ya*. The *hisāb* with *imkān al-ru'ya* criteria began to be used in the preparation of the almanac in 1423 H/2002 AD during the leadership of Abdurrahman Ks. The criteria for *imkān al-ru'ya* used at that time were the criteria for *imkān al-ru'ya* based on the MABIMS (the Minister of Religion of Brunei, Indonesia, Malaysia and Singapore) agreement.<sup>48</sup> The change in the criteria for the *wujūdul hilāl* criteria to the *imkān al-ru'ya* criteria according to the MABIMS version was the result of an agreement between the Hisab and Rukyat Council with the Hisbah Council of Persis in 2002 in Bandung. Almanacs from 1423 H/2002 AD to 1433 H/2012 AD use this criteria.<sup>49</sup> The basis for this renewal is the idea that the *hilal* (new moon crescent) is considered to exist if the *hilal* is above the horizon at sunset after *ijtima'* (conjunction) and it can be observed (*ru'ya*). *Imkān al-ru'ya* requires that the beginning of the month be determined if *ijtima'* occurs before sunset, at sunset of the new moon above the *ufuq mar'i* (true horizon), and can be done for *ru'ya*.<sup>50</sup> According to KH. Usman Sholehuddin, one of the chairman of the Hisbah Council of Persis, the criteria for *hisab* with *imkān al-ru'ya* criteria is the most appropriate standard, because it is a combination of methods, collaboration between understanding the arguments of the Qur'an, sunnah, field observations, and astronomical calculation.<sup>51</sup>

In 2012, Persis updated the Hijri calendar thought again with the decision that the criteria for the beginning of the Hijri month was *imkān al-ru'ya* and the criteria were given to the Hisab and Rukyat Council of Persis. This is stated in the decision of the Hisbah Council of Persatuan Islam regarding the criteria for determining the beginning of the month of Hijri calendar between *wujūdu 'l-hilal* and *imkān al-ru'ya*.<sup>52</sup> On March 31, 2012, Persis changed the criteria from the *imkān al-ru'ya* with MABIMS criteria to the astronomical *imkān al-ru'ya* criteria with the reason that these criteria have been scientifically tested. This criteria was used for the preparation of the 1434 H almanac.<sup>53</sup> The meaning of the *imkān al-ru'ya* criteria used by Persis is the difference in the height of the moon and sun not less than 4 degrees, the distance between the moon and sun arc not less than 6.4 degrees. This is stated in the Joint Decree of the Hisab and Rukyat Council with the Hisbah Council of Persatuan Islam, No. 005/PP-C.1/A.3/2012 and No. 019/PP-C.1/A.2/2012.<sup>54</sup> The main reference for making astronomical data on the Hisab and Rukyat Council of Persis is the book of Jean Meeus on Astronomical Algorithms. High-accuracy formulas were chosen for the calculation of astronomical data for the position of the moon and sun.<sup>55</sup>

There is no renewal of thought in Persis about the unification of the Hijri national calendar as happened in NU. With the joining of KH. Ali Ghazali became a member of the Hisab and Rukyat Agency in 1973, Persis's idea was only an attempt to realize the local Hijri calendar for every region in Indonesia.

<sup>48</sup> Sabda, *Ilmu Falak: Rumusan Syar'i Dan Astronomi Seri 02*. 164-65, 87.

<sup>49</sup> Hakim, "Sekilas Sejarah Almanak Persis", Unpublished Paper. 2013.

<sup>50</sup> Hakim, "Kriteria Wujudul Hilal Dan Imkanur Ru'yah dalam Tinjauan Syar'i", Unpublished Paper. 2007.

<sup>51</sup> Usman Sholehuddin, "Imkanur Rukyat: Metode Yang Paling Tepat" Risalah: Majalah Dakwah Islamiyah, No. 9 Tahun 48, 2010. 29.

<sup>52</sup> Sabda, *Ilmu Falak: Rumusan Syar'i Dan Astronomi Seri 02*. 166-69.

<sup>53</sup> Hakim, "Sekilas Sejarah Almanak Persis", Unpublished Paper. 2013.

<sup>54</sup> Sabda, *Ilmu Falak: Rumusan Syar'i Dan Astronomi Seri 02*. 170-72.

<sup>55</sup> Ahmad Syarief Hakim, "Awal Bulan Ramadhan, Syawwal, Dzulhijjah 1438 H Dan 1 Muharram 1439 H Menurut Hisab Astronomis Persatuan Islam (Persis)", Papers Presented in the Muzakarah Determination Event 1 Ramadan and 1 Shawwal 1438 H and 1 Muharram 1439 H, 2017.

## Implications of Renewing the Thoughts on the Hijri Calendar of Muhammadiyah, Nahdlatul Ulama, Persatuan Islam on the National Hijri Calendar

The reform of the Hijri calendar thought by Muhammadiyah, NU and Persis seems to have the same type, which is carried out within the framework of an established Hijri calendar both in terms of *fiqh* and science aspects. Muhammadiyah, for example, in the early period used *hisāb* with *imkān al-ru'ya* criteria then it change to *hisāb* with *ijtima' qablal ghurub* criteria, then it change again to *hisāb* with *wujūd 'l-hilāl* criteria, which began in 1938 AD/1357 H. Muhammadiyah also plans to realize a global Hijri calendar that will not only end the problem of the unity of the ummah in carrying out its civil affairs, but also overcome the local worship such as fasting and Eid, moreover it also can unite global calendar to determine a worship day such as fasting on the day of Arafah.<sup>56</sup>

Nahdlatul Ulama has also updated Hijri calendar thought. The use of *ru'ya* guided by *hisāb haqiqī taqribī* has changed with the implementation of *ru'ya* guided by *hisāb haqiqī tahqiqī* and contemporary *hisāb*. The function of *hisāb*, which was previously only as a guide for *ru'ya*, is then used as a tool for selecting the results of *ru'ya*. *Hisāb* is used to determine the time of *ru'ya*, which is not used at the beginning of time. The *hisāb haqiqī taqribī* is no longer used, but it switches to an *hisab penyelarasan* (calculation alignment) that has high accuracy.

The update of the Hijri calendar thought by Persis was carried out in very clear stages. At the beginning of the time using *hisāb ijtimā' qablal ghurub*, updated to locally *hisāb wujūd 'l-hilāl* to nationally *hisāb wujud 'l-hilāl*, updated to *hisāb imkānu ru'ya* with MABIMS criteria to *hisāb imkānu ru'ya* with LAPAN criteria. The use of *hisāb* references from books includes the *hisāb haqiqī taqribī* category such as *Sullamun Nayyirain* and *Fathur Ra'ufil Mannan*, updated with books that are included in the *hisāb haqiqī tahqiqī* category such as *Khulashatul Wafiyah*, then continuously updated with contemporary data such as the *Ephemeris Hisab Rukyat* of the Ministry of Religion and finally using the data that is processed from the Jean Meeus algorithm. It is used for the astronomical calculation data by the Persis' Hisab and Rukyat Council. The response to the unification of both NU and Persis calendars is still within the framework of the national Hijri calendar.

The renewal of the Hijri calendar thought by Muhammadiyah, NU and Persis shows that each mass organization re-understands the arguments related to “*hisāb* and *ru'ya*”. They argue that the decision no longer fulfills scientific validity, resulting in the emergence of anomalies and crises of Thomas S. Kuhn's concept. With the anomalies and crises, the scientific community in each mass organization such as the Tarjih and Tajdid Council in Muhammadiyah, the Bahsul Masail Council at NU, and the Hisbah Council in Persis, are looking for solutions to solve the anomalies and scientific crises.

In Muhammadiyah, although the update from *hisāb imkānu ru'ya* to *hisāb ijtimā' qablal ghurub* cannot be known for a clear reason, at least in the update from *hisāb ijtimā' qablal ghurub* to *hisāb wujūdul hilāl* can be accepted because *hisāb ijtimā' qablal ghurub* is considered not in accordance with the teachings of the Qur'an, Sunnah and progress of the times. Muhammadiyah also initiated the realization of the unification of the Hijri calendar for global, not only for national calendar. The discourse to realize a global Hijri calendar is well established with the arguments presented by

<sup>56</sup> Syamsul Anwar, “Tindak Lanjut Kalender Hijriah Global Turki 2016: Tinjauan Usul Fikih,” *Jurnal Tarjih*, Vol. 13, No. 2 (2016): 104.

Syamsul Anwar and Susiknan Azhari as figures who intensively studied the development of Hijri calendar thought in the Tarjih and Tajdid Council of Muhammadiyah. Muhammadiyah's thoughts on the importance of a global calendar, of course, cannot be separated from the context of the thoughts of world Islamic astronomical figures such as Mohammad Ilyas, Nidhal Qasm, Muhammad al-Atbi, Karim Mizyan, Muhammad Syaukat Audah, and Jamaluddin Abdur Raziq. Their thinking influences the experience in their scientific community.<sup>57</sup>

Nahdlatul Ulama as an organization that has received the label *ru'ya* school of thought (*mazhab rukyat*) until now, has carried out reforms. The renewal of NU's thinking is known to have real changes with the publication of the book *Pedoman Rukyat dan Hisab Nahdhatul Ulama* in 1994 as a guide to *ru'ya* and determining the beginning of the Hijri month, namely: the correct implementation of *ru'yatul hilāl*, the position of *ru'ya* and *hisāb* in determining the beginning of the month, and accurate calculation of the results of the alignment as a tool for *ru'yatul hilāl*. Previously, the *ru'yatul hilāl* in NU was carried out with simple equipment, and it often only need eyes with the guidance of *hisāb haqiqī taqribī*. This practice has resulted in many people claiming to see the crescent inaccurately as the basis for determining the beginning of the months of Ramadan, Syawwal and Zulhijah. The difference in Eid al-Fitr between NU and the Government in 1992, 1993, 1994 is evidence that the accuracy of *ru'ya* among NU at that time was still using the *hisāb haqiqī taqribī* reference category where the height of the crescent was positive, even though according to the *hisāb haqiqī tahqiqī* and contemporary *hisāb* calculation, the crescent is still below the horizon.

The problem of differences in Eid al-Fitr was followed up with meetings among the NU religious authorities, such as the Lajnah Falakiah NU seminar on August 19, 1992 in Pelabuhan Ratu, the seminar on the harmonization of *hisab* and *ru'ya* methods on August 29, 1993 in Jakarta, and the Plenary Meeting of PBNU October 10, 1993 in Jakarta. The NU scientific authority is evidence of efforts to solve problems, anomalies and scientific crises related to the method of determining the beginning of the Hijri month. At that time, *hisāb* had not yet become a tool for performing *ru'ya* that its operations were explicitly stated. In 1998, the position of *hisab* as a tool for *ru'ya* is explicitly not only as a tool to determine the location of the crescent, but it is also used to select the results of *ru'ya*, as it was practiced to reject *ru'ya* in Cakung and Bawean.<sup>58</sup>

Persatuan Islam (Persis) reforms the Hijri calendar in terms of methods, criteria and references. The renewal of thought is carried out because the old theory is considered to have experienced an anomaly and crisis that requires a solution. Persatuan Islam explained that the change in the reference algorithm used was due to the new reference more fulfilling the demands of science and technology. Persis also conducted a review of the shariah arguments that became the basis for determining the beginning of the Hijri months. Persis decided that *hisāb imkānūr ru'ya with LAPAN criteria* was the most appropriate method. Persis also decided that *ru'ya* was still needed as a correction tool for *hisab*. Persis exactly stipulates that only *ru'ya* obtained from at least two different places and accompanied by evidence of the crescent image will be considered for correcting the referenced almanac.<sup>59</sup> The correct *ru'ya* results as a way to determine the beginning of the month (when the height of the crescent at the end of the month does not meet the criteria of *imkānūr ru'ya*) is used to correct the

<sup>57</sup> Syamsul Anwar, *Hari Raya Dan Problematika Hisab Rukyat* (Yogyakarta: Suara Muhammadiyah, 2008). 115-47.

<sup>58</sup> Salam, *Penentuan Awal Bulan Islam*. 185.

<sup>59</sup> Sabda, *Ilmu Falak: Rumusan Syar'i Dan Astronomi Seri 02*. 86.

almanac starting from 2013 along with the use of *hisāb imkānur ru'ya LAPAN* as a guide to determine the entry of the beginning of the month.

The renewal of thoughts by Muhammadiyah, NU, and Persis proves that thought cannot be separated from the socio-cultural context and the time of the thinkers' lives. From the perspective of the philosophy of science, this is very reasonable. There is no thought of a person or character that is not related to the context of society. According to Thomas S. Kuhn, the history of science-physics develops through the collection of various facts are influenced by context. According to him, the development of science goes through the paradigm of science.<sup>60</sup> What Kuhn says is like Karl Mannheim does, who recognizes subjectivity in knowledge and rejects objectivity in the social sciences, in the sense of objectivity in the natural sciences that negates the role of the subject. According to Mannheim, human knowledge is inseparable from the subjective element and the psychological condition of someone who knows it. Knowledge and existence are two entities that cannot be separated. Knowledge and belief are products of socio-political processes.<sup>61</sup> The renewal of the Hijri calendar of Muhammadiyah, NU and Persis, both related to the method of determining the beginning of the month and the use of algorithm reference sources, as well as the idea of unifying the global Hijri calendar is a result of the interaction between religious authority figures in their organizations with the thoughts of leaders and the public.

All these paradigm shifts of thought are caused by the scientific community that has religious understanding in every mass organization: the Tarjih and Tajdid Council for Muhammadiyah, the Bahtsul Masail Council for NU, and the Hisbah Council for Persis. They feel that there are difficulties or problems, which in Kuhn's perspective are referred to as anomalies and the crisis related to the determination of the beginning of the month in the Hijri calendar. They make improvements and find solutions to problems of anomalies and crises. With the process of renewal, there is the possibility of a scientific revolution.

A scientific paradigm revolution can also occurred at NU; for example is the method of determining the beginning of the month, which only uses *ru'ya* with the guidance of *hisāb haqiqī taqribī* during the KH period. Mahfudz Anwar, as chairman of LFNU (*Lembaga Falakiah NU*), for example, changed his mind to start using *hisāb haqiqī tahqiqī* and contemporary *hisāb* as a tool. The use of accurate *hisāb* as a tool for *ru'ya* even then increases its function as a selection tool for *ru'ya* results and a tool for determining the time of *ru'ya* implementation. Indeed, the majority of NU scholars are still guided by the rule that states it is *ru'ya* that legally determines the entry of the beginning of the month in the Hijri calendar, especially the beginning of Ramadan, Syawwal and Zulhijah. NU figures and scholars such as KH. MA Sahal Mahfudh, KH. Musthofa Bisri, KH. Masdar Farid Mas'udi, and KH. Ahmad Rofiq still believes that the determinant of the entry of the beginning of Ramadan and Syawwal is the *ru'ya*. However, among some NU figures, there has been an opinion that *hisāb* can be a method of determining the entry of the beginning of the Hijri month independently.

KH. Ahmad Zahro is one of the NU figures who argues that determining the beginning of the Hijri month including the beginning of Ramadan, Syawwal and Zulhijah can be done using the *hisāb* method. In the case of differences in holidays, he suggests that it is enough to use *hisāb* so that the

<sup>60</sup> Mohammad Muslih, *Filsafat Ilmu: Kajian Atas Asumsi Dasar, Paradigma, Dan Kerangka Teori Ilmu Pengetahuan* (Yogyakarta: Lesfi, 2016). 134.

<sup>61</sup> Muhyar Fanani, *Metode Studi Islam: Aplikasi Sosiologi Pengetahuan Sebagai Cara Pandang* (Yogyakarta: Pustaka Pelajar, 2008). 38.

equality of holidays can be achieved.<sup>62</sup> K.H. Ahmad Bahauddin Nursalim, known as Gus Baha, an NU figure from Rembang, Central Java, also has an opinion that allows the use of *hisāb* as a method of determining the beginning of the Hijri month. According to him, the word “*ra’ā*” in the hadith can be interpreted not only to see with the eyes, but also to see with knowledge. Muhyiddin Khazin, one of the leaders of the Central LFNU, said that if according to the *hisāb* the new moon is above the horizon and is greater than the “*Kriteria Awal Bulan Indonesia*” or KABIN that is always visible, however because there are clouds, it cannot be visible, then the determination of the beginning of the month is based on *hisāb* and the night is the first day of the following month. In this last stipulation, Muhyiddin places *hisāb* as a determinant of the beginning of the Hijri month independently.<sup>63</sup> Shofiyullah, one of the Lembaga Falakiah NU activists in East Java said that if the position of the crescent according to an accurate reckoning has met the criteria for imkanur rukyat, but failed to be rukyat due to weather constraints, it can be concluded that the crescent has already existed and the determination of the beginning of the month can be based on the results of the reckoning.<sup>64</sup>

Efforts to unify the Hijri calendar are limited to information for discussion. Decisions regarding changes to the method and criteria for the beginning of the Hijri month depend on the development of each scientific community of mass organizations. The process of systematization, interpretation, and reinterpretation carried out by the schools, has a significant role as an epistemic community that can influence the discourse of religious thought in each mass organization. The scholars holding authority form a historical bloc that contains social, intellectual and political relations.<sup>65</sup>

The thinking of each mass organization is very independent and does not depend on other mass organizations or institutions including the government, as long as the authority of religious understanding recognizes the paradigm that becomes the guideline is still established. NU, for example, stated that if the government determined the start of Ramadan, Syawal, Zulhijah not based on the results of *ru’ya*, then NU was not obliged to follow it. In some cases, NU often differs in determining the start of Ramadan and Syawal with the government.<sup>66</sup> KH. Usman Sholehuddin, the one of figure of Persatuan Islam, gave a statement explaining the independence of his group’s thinking. Usman said that Persis would stick to the truth he believed in and would not object to differences. If at any time, the determination of the beginning of the month is the same as the government’s stipulation, it does not mean that Persis is joining the government, it just happens that the criteria are currently the same as the government. However, if the Government wants togetherness, it will be better.<sup>67</sup>

With the analysis and the explanation above, it can be concluded that the renewal of thoughts of Muhammadiyah, NU, and Persis about the Hijri calendar has not yet led to the realization of the Indonesian national Hijri calendar. The existence of an established calendar, including the Hijri calendar, requires the existence of a single authority or ruler who determines it, the existence of

<sup>62</sup> Salam, *Penentuan Awal Bulan Islam*. 295.

<sup>63</sup> Muhyiddin Khazin, “Menuju Penyatuan Kalender Hijriyah Di Indonesia,” *Jurnal Bimas Islam* 1, no. 3 (2008): 68–70.

<sup>64</sup> Salam, *Penentuan Awal Bulan Islam*. 290–91.

<sup>65</sup> Ahmad Nur Fuad, *Dari Reformis Hingga Transformatif: Dialektika Intelektual Keagamaan Muhammadiyah* (Malang: Intrans Publishing, 2015), 68.

<sup>66</sup> Wildani Hefni, “Dinamikiyyah Jam’iyyah Nahdah Al-Ulama Fi Ithbat Awa’il Al-Shuhur Al-Qamariyyah Bi Indunisiya,” *Al-Ahkam: Jurnal Pemikiran Hukum Islam* 28, no. 2 (2018): 275.

<sup>67</sup> Sholehuddin, “Imkanur Rukyat: Metode Yang Paling Tepat,” *Risalah: Majalah Dakwah Islamiyah*, No. 9 Tahun 48, Desember 2010, 30.



agreed criteria, and the existence of regional and national boundaries of applicability.<sup>68</sup> However, in terms of criteria, it is still necessary to emphasize the existence of a unified method. The *hisāb* method is important for calendar preparation because the calendar must be able to contain time scheduling far ahead.<sup>69</sup> Moreover, *ru'ya* still causes many problems when it comes to calendar preparation, because *ru'ya* cannot cover places in all parts of the earth.<sup>70</sup> If, one day, Muhammadiyah uses the criteria for *imkān al-ru'ya* in compiling the global Hijri calendar, the unified criteria for *imkān al-ru'ya* can be realized. If the scientific community of religious authorities at NU makes a paradigm shift from the *ru'ya* method to *hisāb* method, then calendar unity can also be realized.

The paradigm shift of thinking towards the existence of the national Hijri calendar can be concluded from several explanations. Indications of the existence of the national Hijri calendar in Muhammadiyah, NU and Persis can be known if it is associated with the adoption of advances in science and technology. On the other hand, indications of the difficulty of the existence of a national Hijri calendar appear when each mass organization is still consistent and strict in using their respective epistemologies such as NU with *ru'ya* method, Muhammadiyah and Persis with *hisāb* method. The theory that *hisāb* and *ru'ya* have become ideologies of religious understanding in each mass organization strengthens this conclusion. Muhammadiyah until now formally still believes that the *hisāb* of *wujūdul hilāl* is the most appropriate method for compiling its calendar. The *hisāb* of *wujūdul hilāl*, which at the beginning of time as a methodological normative method, turned into identity politics.<sup>71</sup> Likewise, NU firmly still believes that *ru'ya* is the only valid method to determine the entry of the beginning of the Hijri calendar month.<sup>72</sup> Persatuan Islam (Persis) is different from Muhammadiyah and NU. Persis seems more open and unaffected by identity politics, so the renewal of its calendar thinking seems very progressive following the development of science and technology. Within the framework of identity politics, each mass organization always conveys its decisions to its members to be followed. Obedience to the decisions of the leaders of mass organizations becomes a symbol of loyalty and consistency to the organization's religious understanding. Obedience also occurs because each community feels that they are part of an organization that needs to make adjustments to the norms issued by the leader of the mass organization.<sup>73</sup>

Therefore, there are several ways to solve the problem of the existence of the national Hijri calendar. The first relates to the problem of contradictory Hijri calendar epistemology among mass organizations. This effort can be done through an effort to rethink, reformulate the decisions of their *ijtihad* results of the previous religious understanding authorities with a multidisciplinary, interdisciplinary, and transdisciplinary approach.<sup>74</sup> This kind of *ijtihad* is expected to produce *ijtihad* results to be fresher.<sup>75</sup> The second, with regard to mass organizations that cannot be separated from

<sup>68</sup> Thomas Djamaluddin, *Astronomi Memberi Solusi Penyatuan Ummat* (Jakarta: Lapan, 2011). 26.

<sup>69</sup> Syamsul Anwar, *Studi Hukum Islam Kontemporer Bagian Dua* (Yogyakarta: UAD Press, 2020). 229.

<sup>70</sup> Syamsul Anwar, "Metode Penetapan Awal Bulan Qamariah," *Analytica Islamica*, Vol. 1, No. 1 (2012): 34–35.

<sup>71</sup> Maskufa, "Hisab Wujud Al-Hilal Sebagai Politik Identitas Muhammadiyah dalam Diskursus Hisab Rukyat di Indonesia," *Indo-Islamika*, Vol. 6, No. 2 (2016): 183–202.

<sup>72</sup> Hefni, "Dinamikiyyah Jam'iyyah Nahdah Al-Ulama Fi Ithbat Awa'il Al-Shuhur Al-Qamariyyah Bi Indunisiya."

<sup>73</sup> Nihayatur Rohmah, "Ketaatan Muslim Indonesia Terhadap Penetapan Hari Raya Antara Itsbat Pemerintah Dan Ikhtbar Ormas Islam," *An-Nuha*, Vol. 6, No. 2 (2019): 127–41.

<sup>74</sup> M. Amin Abdullah, *Multidisiplin, Interndisiplin, Dan Transdisiplin: Metode Studi Agama Dan Studi Islam di Era Kontemporer* (Yogyakarta: IB Pustaka, 2020), 83–146.

<sup>75</sup> M. Amin Abdullah, *Fresh Ijtihad: Manhaj Pemikiran Keislaman Muhammadiyah Di Era Disrupsi* (Yogyakarta: Suara Muhammadiyah, 2019), 97–219.

the interests of identity politics and sectoral egos, the idea that the state can take its role to the fullest, so that the different methods and criteria for determining the beginning of the Hijri calendar month can be changed for wider interests.<sup>76</sup> The government or the Ministry of Religion is the legal authority to make a decision to enter the beginning of the month in the Hijri calendar, and it must be accepted.<sup>77</sup> KH. Ibrahim Hosen, a prominent Islamic scholar, mentions that the rule of legal maxim *ḥukm al-ḥākim ilzāmun wa yarfa' al-khilāf* (the government's decision is binding or must be obeyed) when explaining that uniformity and *amaliah* unity of Muslims are indispensable in promoting *ukhuwah Islamiyah* (Islamic brotherhood). According to him, in *fiqh* issues related to social issues, the intervention of *ulil amr* or the government is absolutely necessary.<sup>78</sup>

However, all these ideas will not have a good effect on the existence of the national Hijri calendar if the two problems above, both epistemological problems and identity politics, still influence the thinking of each mass organization. If this thought models implemented, the expression of some people who say "Unification of the Hijirah calendar is difficult to realize"<sup>79</sup> can change to "Unity of the national Hijri calendar may be realized".

## Conclusion

From the explanation that has been described above, it can be concluded that the renewal of thoughts of Muhammadiyah, NU and Persatuan Islam (Persis) about the Hijri calendar includes updating of methods and criteria, algorithm references, and the scope of the calendar's validity area. The renewal of the Hijri calendar thought carried out by Muhammadiyah, NU, and Persis occurs because each religious authority feel an anomaly and crisis in the methods and criteria for determining the beginning of the month in their calendar. Updates are made as an adjustment to advances in science and technology. The renewal of thought further strengthens the normative and scientific validity of the calendar. However, the differences among mass organizations in the epistemology of the Hijri calendar between *ru'ya* and *hisāb*, as well as the existence of sectoral identity and ego politics, still cause the opportunity to realize a national Hijri calendar is still very unlikely. The existence of a national Hijri calendar will become a reality if mass organizations carry out multi, inter and trans disciplinary *ijtihad* and avoid identity politics and sectoral egos.

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<sup>76</sup> Mahyuddin Nawawi, "Menegakkan Mazhab Negara" in Choirul Fuad Yusuf and Bashori A. Hakim (Eds.), *Hisab Rukyat Dan Perbedaannya* (Jakarta: Badan Litbang dan Diklat Departemen Agama RI, 2004), 229-30.

<sup>77</sup> M. Nur Hidayat, "Otoritas Pemerintah dalam Penetapan Awal Bulan Qamariyah Perspektif Fiqh Siyasah Yusuf Qardhawi," *Jurisdictie: Jurnal Hukum Dan Syariah*, Vol. 3, No. 1 (2012): 78-91.

<sup>78</sup> Ibrahim Hosen, *Prof. KH. Ibrahim Hosen Dan Pembaharuan Hukum Islam Di Indonesia* (Jakarta: C.V. Putra Harapan, 1990), 172.

<sup>79</sup> Azhari, "Penyatuan Kalender Islam: Mendialogkan Wujudul Hilal Dan Visibilitas Hilal." 164.

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