SCIENTIFIC CONSIDERATION IN THE CONCEPT OF
ISLAMIC LAW IN INDONESIA
(A Study on The Fatwas of Falakiyah Of MUI)

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Abstract: This study aims to incorporate scientific consideration in
the application of falakiyah fatwas of the Indonesian Ulema
Council and maps the patterns of the nexus between religion and
science in those fatwas. This research involved a library study and
a qualitative method. The approaches took into account ushul
fiqh and scientific approaches. With regard to the theoretical
fundamentals, this research adheres to cum-doctrinaire
introduced by A. Mukti Ali and the theory relating to the nexus
between religion and sciences by Ian G. Barbour. The primary
data were sourced from six falakiyah fatwas by the Indonesian
Ulema Council from 1976-2010. The data were garnered
from documentation and analysed with content analysis. The research
results show that scientific studies in falakiyah fatwas of the
Indonesian Ulema Council play the following three roles: first,
scientific studies are to help understand problems that religious
knowledge cannot fathom; second, scientific studies along with
syar'i theorem are referred to as a primary consideration in
setting a fatwa; third, the scientific studies serve as the basis of
amendments in a fatwa. Unfortunately, Scientific studies are not
always consistently taken into account in setting falakiyah fatwah
of the council, thereby sparking diverging religious patterns intertwining with sciences in falakiyah fatwas, ranging from conflict relations, independence, and dialogues, to integration.

Keywords: Sains, Fatwa, Falakiyah, MUI

Introduction

These days, both science and technology have experienced massive growth, remarkably permeating the systems and patterns of human life. Abdullah Saeed once argued that cutting-edge scientific findings have been one of the factors stimulating massive changes and affecting human life. In religion, these findings often transcend prevailing religious provisions and laws.¹

Within the context of Islamic law, scientific products often lead to new problems that no regulations in the Quran, Hadiths or classical fiqh cover. Scientific findings also lead to irrelevant concepts of fiqh formulated by the classical ulama.² Their concept, however, has recently attracted diverging responses from modern ulama. For example, organ donor and transplantation involving hearts, livers, kidneys, corneas, and other body organs are seen by several ulama as haram without taking into account medical studies while some others see it as acceptable so long as they are performed in the hands of medical experts guaranteeing the safety and organ functions for both donors and recipients.³ In the case of Covid-19, the discovery of the virus is an ʿillah of legal transformation in the fatwas contributed by global ulama regarding the worship done in mosques.⁴

Other issues may involve sciences and their encounter with religion in terms of religious activities as one of falakiyah matters

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with regards to space objects in a matter of determining *qiblah*, prayer time, and the beginning of the month of *hijriyah*. M. Amin Abdullah holds a particular view of determining the month of Ramadhan and the day of Eid Al-Fitr in Indonesia, raising serious debate in society between those adhering to *ru’yah al-hilāl*, a method of observing *hilal* (the crescent shape of the moon) empirically and those following the method of astronomic *hisāb*. Amin further adds that this issue indicates the existence of paradigm conflict between religion and sciences.5 Susiknan Azhar also sees that the diverging views of determining particular months for religious activities in Indonesia are common between Muhammadiyah and Nahdlatul Ulama, each representing the symbol of the school of thought in astronomical *hisāb* and *ru’yah al-hilāl*, both of which are strongly influenced by their attitude and understandings towards sciences. The absence of agreements in the connecting paradigm between religion and sciences indicates that the diverging notions in determining the beginning of the month of *hijriyah* will remain.6

A similar issue also happens in determining *qiblah*, raising controversy among the classical and modern ulama. Ahmad Sarwat recorded that in Indonesia, the views of ulama and scholars go in two different directions; first, those considering the role of sciences in the matter of determining *qiblah* and those denying the role of sciences in the same matter.7

Theoretically, the *falakiyah*-related issues are closely linked to scientific studies in astronomy, in line with the notion of Ahmad

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7 The first group opines that the direction of *qiblah* in Indonesia should face the edifice of *ka’bah* (‘ain al-‘ka’bah) appropriately and accurately, and this is determined with the help of falak knowledge/astronomic science and other related branches of sciences, while the second group opines that sciences cannot be referred to as the basis of religious proposition, implying that the *qiblah* is directed to just *Ka’bah*, as in line with the opinions of the majority of ulama of *mazhab*. See Ahmad Sarwat, *Fiqh Kontemporer 1* (Jakarta: Rumah Fiqh Publishing, 2022), 335–39.
Izzuddin believing that *falakiyah* problems involve determining prayer times for Muslims principally seen as astronomic matters, such as orbiting space objects. Thus, it requires the role of astronomical science as an applicable approach. Close connection with scientific studies serves as an obvious example of the mutualistic nexus between *Fiqh* and science. However, not all ulama welcome such a scientific role in *falakiyah* context, which is marked by varied responses from them.

Departing from the above issues, this research seeks to further incorporate scientific consideration in fatwas set by the Indonesian Ulama Council (henceforth referred to as MUI), particularly regarding this *falakiyah*-related problem. From 1976 to 2010, MUI released six *falakiyah* fatwas, generally bringing three matters to the table: determining prayer times, *qiblah*, and the first day of the month of Ramadan, *Shawwal*, and *Zulhijah*. This research, in terms of the selection of this research topic, embarks on an understanding that MUI is an organization where ulama, zua’ma, and Muslim scholars gather in Indonesia. Thus, this study aims to delineate the direction and map the nexus between Islamic law and sciences in Indonesia, particularly in *falakiyah* fatwas.

The studies on the consideration of modern sciences in the fatwas of MUI, particularly, the *falakiyah* fatwa, have not received much attention from earlier researchers. So far, the studies on MUI and its fatwas have given too much attention to the methodological aspect of fatwas, the factors affecting fatwas, content analyses of fatwas, controversial fatwas of MUI, and so forth. The studies on the consideration of science in the MUI’s fatwas have recently been conducted, albeit restricted to health/medicine. Ali Sodiqin (2022) studied twenty fatwas on medicine from 2010 to 2021, revealing that MUI developed scientific *ijtihad* involving both inductive and deductive methods and three parties including ulama, scientists, and governments.

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collectively in initiating a dialogue of mind, revelation, and reality as the grounds for setting medical fatwas.\textsuperscript{10} M. Asrorun Ni’am Sholeh (2022) discovered that the fatwa made by MUI on COVID-19 also holds logical reasoning congruous with the objectives of WHO, serving as the basis for consideration in fatwas.\textsuperscript{11} A study on falakiyah fatwas of MUI was also conducted by Ahmad Izzudin (2012) criticizing the method of ijtihad set by MUI under Fatwa Number 03 of 2010 concerning Qiblah which is irrelevant simply because it fails to comply with recent astronomical studies.\textsuperscript{12} Ansori (2022) argues that this fatwa is seen as controversial since both the institutional and output processes are deemed problematic, raising the polemic in society.\textsuperscript{13} Muhammad Rasyid (2020) holds that Fatwa Number 2 of 2004 concerning the Provision of the First Day of the Month of Ramadhan, the Day of Shawwal, and Zulhijah seems to be an initial measure taken by MUI to amalgamate religious propositions and scientific studies on the methods of hisab and rukyah as the criteria to set the beginning of the month.\textsuperscript{14}

This study investigates six falakiyah fatwas of MUI released between 1976 and 2010. These fatwas involve the regulations regulating Friday prayer for travellers on a ship in 1976 and prayer


\textsuperscript{12} See further Ahmad Izzuddin, “Arah Kiblat dan Fatwa Majelis Ulama Indonesia (MUI) dalam Fatwa Majelis Ulama Indonesia (MUI)” dalam Mohammad Atho Mudzhar, Choirul Fuad Yusuf, dan dkk, Fatwa Majelis Ulama Indonesia (MUI) dalam Perspektif Hukum dan Perundang-Undangan, Cetakan Kedua (Jakarta: Puslitbang Kehidupan Keagamaan Badan Litbang dan Diklat Kementerian Agama RI, 2012), 556–66.


\textsuperscript{14} Muhammad Rasyid, “Integrasi Islam dan Sains Dalam Fadetta Majelis Ulama Indonesia (Tinjauan Fatwa MUI No. 02 Tahun 2004 Tentang tentan Peranaan Hisab dan Rukyah dalam Penetapan Awas Bulan.),” dalam Proceeding Antasari International Conference, vol. 1, 2020, 363–68.
and fasting in regions with disproportionate amounts of days and nights, the fatwa concerning the setting of the first day of the month of Ramadhan, Shawwal/Eid Al-Fitr, and Zulhijah/Idul Adha in 1980 and Fatwa Number 2 of 2004 concerning the Provision of the First Day of the Month of Ramadhan, Shawwal, and Zulhijah, Fatwa Number 3 of 2010 concerning Qiblah and Fatwa Number 5 of 2010 concerning the Direction of Qiblah. All these fatwas serve as the primary sources of this study, while other books, journals and previous studies are referred to as secondary data. The contents of these fatwas were further analysed, considering legal propositions, ulama’s and experts’ notions, and sciences contained in those fatwas. This study principally aims to reveal the involvement of modern sciences as the consideration of falakiyah fatwas of MUI and portrays the mapped paradigm of the nexus between the religion and sciences in falakiyah fatwas of MUI employing the typology of scientific and religious relationship developed by Ian G. Barbour, including conflict, independence, dialogues, and integration.

The Interacting Religion and Sciences

Religion and sciences shape remarkable cultural power and intellectuals. In the history of human life, religion and sciences have been the media paramount to civilization development unifying human races globally. The studies of Islam and sciences have also been the focus of the studies among bachelor students in theology, philosophy, sciences, and history since the 1960s and the popularity has remained since the 1990s to date.15 These days, religion and sciences are commonly found in actual talks in public spheres, magazines, and television.16

Studies on religion and sciences principally revolve around methodologies, connections established between the two and attempts made to adjust them. To date, there has been ample scientific work conducted by bachelor students comparing the methodologies of religion and sciences and mapping the nexus bridging the two. Ian G. Barbour is an influential figure in religion and scientific studies in these modern days. In some of his work; Religion in an Age of Science (1990), Religion and Science; Historical and Contemporary Issues (1997), When Science Meets Religion (2000), and Nature, Human Nature, and God (2002), Barbour tries to map the relationship between religion and science in a historical purview and build the integration of the two. In his work, Barbour also holds that the nexus of these two aspects which is often delineated in conflict is not the sole relationship. He mapped the patterns of this connection into four typologies: first, conflict, a religion-and-science-oriented relationship negating one another; second, independence, disuniting religion and sciences; third, a dialogue, a relation offering a constructive connection between religion and sciences, done by exploring the similarities and differences, the good and shortcomings; fourth, the integration, a relationship that attempts to discover the central point between the two, and this relationship is synthesized and extensive.  Of all these four typologies, Barbour supports the view of integration since he views that it can guarantee the sustainability of both religion and sciences in the time to come.

Following the age of Barbour, bachelors in theology and science attempted to formulate the relationship patterns between religion and science, as proposed by John Haught, a theologian from America and professor at Georgetown University. Haught arranged the typology resembling that of Barbour, but some modifications took place. This typology includes conflict, contrast, contact, and confirmation. Ted Peters is an American professor in

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theology and ethics who developed and extended the model of Barbour’s approach. He formulated eight approaches to establish an understanding of the connection between sciences and religion: scientism, ecclesiastical authoritarianism, scientific creationism, two-language theory, hypothetical consonant, ethical overlap, and new-age spirituality.\(^9\)

For more than the last five decades, the studies on the relationship between religion and the sciences above departed from the historical experience of the nexus between Western science and Christianity to get scientific findings aligned. Recently, the studies on religion and sciences have extended further, reaching the tradition of non-Christian religion and portraying the connection of the two as far-reaching fields, particularly in Islamic tradition.

**Considering Sciences in the Concept of Islamic Law**

In Islam, Muslim bachelors these days have developed a new methodology in ijtihad, involving several scientific perspectives, particularly the modern scientific perspective. Abdullah Saeed stimulates the necessity of developing progressive ijtihad and re-interprets religion relevant to the global context, circumstances, and scientific and technological development.\(^{20}\) Nidhal Guessoum showed his attention to the significance of integrating religious and scientific understandings. He encourages Muslims not to be too orthodox to ensure that they can compete with modern sciences and to keep their religious values updated.\(^{21}\) In Indonesia, the views of the integration between religion and sciences have also been initiated by experts and academicians. A. Mukti Ali initiated a scientific-cum doctrinaire approach to understanding religion, combining the dimensions of religious

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doctrine and scientific doctrine. This approach is intended to scientifically fathom religion on the basis of sociological, anthropological, historical, and philosophical approaches and others by taking into account historical, social, political, and cultural aspects. M. Amin Abdullah also suggested the integration-interconnection aspects to bridge textual (hadarah annās), philosophical (hadarah al-falsafah), and modern scientific (hadarah al-‘ilm) civilization. Moreover, Mulyadhi Kartanegara also offered a concept of an integrative and holistic relationship between religion and sciences. Islamic studies indicate that the studies on law, philosophy, kalam, and tawasaf alone will not manage to accommodate the necessity unless modern scientific studies are involved.

The endeavour to bridge religion and sciences was echoed by Muslim intellectuals in the classical era, and it has remained to the post-classical period, where varied scientific disciplines have been common for the need for religious activities since then. David King, an astronomical historian of Islam once argued that Islam, unlike other religions, referred to scientific approaches to set standards for ritual and religious activities involving varied scientific purviews. David King further argued that the procedure of setting these standards had been around since the early time of Islam and continued to develop from the IX to the XV century. The scientific approaches required direct observation of space objects such as the sun and the moon, and Muslim bachelors also came up with theories, arranged astronomical tables, and found new instruments used as a reference to decide the direction of qiblah, prayer time, and the month of hijriyah. Surprisingly, they

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24 Mulyadi Kartanegara, Integrasi Ilmu, 1 ed. (Bandung: Arasy Mizan, 2005), 22.
also produced a world map bearing geographical coordinates to help determine the direction of *qiblah* worldwide. Embarking on these discoveries, David King came up with a conclusion implying that the need to set the standards for religious activities has established an insight for most Muslim bachelors to further study and develop astronomical, astrophysical, mathematical, and geographical sciences for hundreds of years. Muslim scholars and researchers also helped with religious services while observing space objects.\textsuperscript{26}

Seeing this robust connection of religious activities among Muslim communities laden with studies in astronomical, mathematical, and geographical fields, Ebrahim Moosa called it epistemic coherence between *Fiqh* and science. He further argued that most people of classical *fuqahā* were quite close to scientific fields like, inter alia, astronomy, geography, mathematics, geometrics, and medicine. As a consequence, conflict with positive law (*Fiqh*) was hard to find, where the two should be duly settled despite an existing conflict.\textsuperscript{27}

The scientific procedure in setting the standards of religious activities of Muslims, as in deciding the direction of *qiblah*, prayer time, and the month of *hijriyah*, is also known as the science of *Falak* which studies space objects and their orbit to discover prayer time for Muslims worldwide. This science represents the mutualistic integration between Islamic law and science from classical times to these days. The amalgamation between Islam and science in *Falak* is apparent in the application of varied scientific and technological purviews. Creating such standards should transcend the propositions in the Quran, *Hadīs*, and the concepts given by ulama and involve, among others, astronomy,


\textsuperscript{27} Ebrahim Moosa, *Interface of Science and Jurisprudence: Dissonant Gazes at the Body in Modern Muslim Ethics dalam God, Life, and the Cosmos; Christian and Islamic Perspectives*, Ed. Ted Peters (Surrey: Ashgate Publisher, 2003), 329.
astrophysics, geography, and satellite technology.\textsuperscript{28} Considering the significance of \textit{Falak} as science, Susiknan Azhar holds that, apart from its function to decide the above standards, this science also serves as the basis for scientific and technological development and mastery, as represented by the scientific work of bachelor and Muslim scientists in the classical era which have made a remarkable contribution to the current technology.\textsuperscript{29}

The Method of Setting a Fatwa of MUI

The Indonesian Ulema Council—commonly known as MUI—founded on 26 July 1975 in Jakarta, is an organization for Ulama, \textit{zuama}, and Muslim scholars representing Islamic organizations in Indonesia. MUI holds a vital role for Muslim people in Indonesia, considering its function to release fatwas individually or collectively.\textsuperscript{30}

The products of fatwas released by MUI generally cover religious matters (worshipping, \textit{aqidah}, and religious streams), socio-cultural matters, sciences and technology, foods, drugs, cosmetics, and the Sharia economy. All these fatwas are established within particular forums of the Fatwa Commission, Sharia National Council (DSN), \textit{l\textquoteleft}jtim\textacute{a} Ulama of MUI, National Session (MUNAS) MUI, Muzakarah National, National Work Meeting MUI, and Alim Ulama Workshops as well as Munas Ulama. All these products of fatwas released by MUI departed from the collective results of \textit{ijtihad} (\textit{ijtihad jam\textacute{a}\textacute{'i}}) according to the methodology approved by MUI.\textsuperscript{31}

In creating a fatwa, MUI refers to \textit{qat\textprime{}i}, \textit{qawli}, and \textit{mahaji} as the three approaches hierarchically made and as an inextricable unity providing the basis for fatwa-making. The first approach—

\textsuperscript{28} Adib, “Relasi antara Fiqh dan Sains di Era Modern; Sebuah Refleksi Epistemologis,” 178–79.
\textsuperscript{29} Susiknan Azhar, \textit{Ilmu Falak; Perjumpaan Khazanah Islam dan Sains Modern} (Yogyakarta: Suara Muhammadiyah, 2007), 1–3.
\textsuperscript{31} Asrorun Ni'am Sholeh, \textit{Metodologi Penetapan Fatwa Majelis Ulama Indonesia; Penggunaan Prinsip Pencegahan dalam Fatwa} (Jakarta: Emir, 2016), 83–84.
qat‘i—refers to the discovery of Islamic law directly studied from the Quran and Hadiths as the primary sources of Islam. This approach is reinforced by qawli whose discovery of fatwa adheres to the thoughts of early ulama as reflected in reliable Fiqh books (Mu’tabaruh). When a problem has never been settled or discussed in the Quran or Hadīs or any Fiqh books of ulama, or when there is a clash of perspectives among ulama, the MUI often uses mahajī—an approach that uses the methods to discover Islamic law acknowledged in setting a fatwa. This approach can also refer to other four methods; al-jam‘ū wa al-taufiq (finding the connecting point), tarijihi (finding the most reasonable notion), ilhaqi (analogising a case to its counterpart as written in Fiqh books) and istinbāti (doing ijtihad based on the acknowledged methods of usūl fiqh).32

Apart from those propositions, the MUI also considers other arguments born from studies in science and technology. In particular matters, sessions held by the Fatwa Commission of MUI involve experts and practitioners as the representatives of varied scientific fields of the issues regulated by fatwas. Particularly, the scientific and technological perspectives set the basis for the authorities to test food, drugs, and cosmetics (LPPOM) of MUI to declare the halal status of food, drugs, cosmetics, and possibly other goods.33

Ma’ruf Amin views that the consideration of science in the concept of setting a fatwa of MUI and the rising new problems are inextricable. Never before have these problems been acknowledged even by earlier ulama, as they have been eclipsed by the current cutting-edge science and technology these days. To fathom new problems resulting from such modern science and technology, MUI also needs to consider the perspectives of science and technology. The ever-growing science and technology have

33 Tim Penyusun, Pedoman Penyelenggaraan Organisasi Majelis Ulama Indonesia, Revisi 2018 (Jakarta: Majelis Ulama Indonesia, 2018), 271–72.
been the factors essential to the acceleration of Islamic law reform this time along with today’s changing conditions in society and the rising contemporary and complex issues. According to Amin, scientific studies as the reference to understand Islamic law and fatwas stand on three vital roles: first, deciding the most influential notions of law (rājih) among other thoughts contributed by those of classical fuqahā when sciences had not massively grown as they are now; second, scientific and technological studies and findings these days can be applied to review the perspectives given by ulama of the past to fit today’s context with more intricate dynamics; third, explaining new issues of Islamic law following scientific and technological development never discussed in classical Fiqh books.34

Falakiyah Fatwas of MUI; the Identity of Fatwas and the Methods to Officially Declare the Fatwas

The fatwas released by the MUI regarding falakiyah issues are within the scope of religious activities, covering the six fatwas under three discussion topics: First, two fatwas on prayer time, particularly Friday prayer time and fasting month in regions with disproportional amounts of days and nights in 1980; second, two fatwas to decide the month of hijriyah, the month of Ramadhan, shawwal/Eid-al Fitr, Zulhijah/Idul Adha in 1980 and Fatwa Number 2 of 2004 concerning the Provision of the First Day of the Month of Ramadhan, Shawwal, and Zulhijjah; third, two fatwas under Fatwa Number 3 of 2010 concerning Qiblah and Number 5 of 2010 concerning the Direction of Qiblah.

Seen from the stipulating forum, six falakiyah fatwas were set in two forums, namely Fatwa Commission and the National Session of MUI. The fatwa outlining Friday prayer for travellers on a ship in 1976, Fatwa Number 2 of 2004, Fatwa Number 3 of 2010 and Fatwa Number 5 of 2010 were enacted in the Fatwa Commission. Fatwas concerning prayer and fasting in regions with

34 Mar’uf Amin, Solusi Hukum Islam (Makhārij Fiqhiyyah) Sebagai Pendorong Arus Baru Ekonomi Syariah dl Indonesia (Kontribusi Fatwa DSN-MUI dalam Peraturan Perundang-undangan RI), 12.
disproportionate days and nights in 1980 and fatwa stipulating the beginning of the month of Ramadhan, shawwal/Eid al Fitr, Zulhijjah/Idul Adha in 1980 were enacted in the National session.

Methodologically, *falakiyah* fatwas of MUI do not entirely follow consistent patterns. For instance, the fatwa concerning prayer time in the regions with disproportional days and nights enacted in the National Session II back in 1980 does not provide any comprehensive considering part in the fatwa as it should do with the reference to the Quran and Hadīṣ, the notions of ulama and other arguments. Instead, it directly mentions the dictum of the fatwa. The fatwa regulating Friday prayer for travellers on a ship in 1976 and the fatwa concerning the provision of the first day of the month of Ramadhan, shawwal/Eid al Fitr, Zulhijjah/Idul Adha 1980 only adhered to the perspectives given by ulama without mentioning the legal bases of the Quran and Hadīṣ. To compare, the other three fatwas comprehensively mentioned the considering part of fatwas, encompassing the legal bases from the Quran, Hadīṣ, Fiqh principles, and the views given by the ulama, namely Fatwa Number 2 of 2004, Fatwa Number 3 of 2010, and Fatwa Number 5 of 2010. All these fatwas were enacted between 2004 and 2010.

The propositions of law used as references by MUI to enact *falakiyah* fatwas and legal provisions (dictum) of the fatwas are further elaborated as follows: 35

Table 1: *Falakiyah* Fatwas of MUI and their legal arguments

<table>
<thead>
<tr>
<th>No.</th>
<th>Fatwa identity</th>
<th>Legal Argument</th>
<th>Dictum</th>
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</table>
| 1.  | The fatwa on Friday prayer for travellers on a ship in 1976 | The school of thoughts of Ibnu Hazm and Hanbali | ▪ Acceptable rules of Friday prayer among travellers on a ship  
▪ If the journey takes two Fridays on a ship in a week, the Friday prayer can be done on the first day |

35 Ma’ruf Amin dkk., *Himpunan Fatwa Majelis Ulama Indonesia (Edisi Terlengkap)* (Jakarta: Penerbit Erlangga, 2019).
<table>
<thead>
<tr>
<th></th>
<th>Fatwa concerning the provision of prayer and fasting time in regions with imbalanced days and nights in 1980.</th>
<th>The ideas of <em>jumhūr</em> of ulama</th>
<th>Determining the first day of the month of Ramadhan and Shawwal may refer to global <em>ru'yah</em>. Determining the month of Zulhijjah/Idul Adha refers to the <em>matla</em>' of each country.</th>
</tr>
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<tr>
<td>2.</td>
<td>If, when necessary, there are no Fridays, the prayer time is to be based on the prediction of the day.</td>
<td>The prayer and fasting time in regions with imbalanced days and nights should adjust to that of a neighbouring region with balanced days and nights.</td>
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<td>3.</td>
<td>Fatwa concerning the provision of the first day of the month of Ramadhan, Shawwal/Eid al Fitr, Zulhijah/Idul Adha of 1980</td>
<td>The ideas of <em>jumhūr</em> of ulama</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Fatwa Number 2 of 2004 concerning the provision of the First day of the Month of Ramadhan, Shawwal, and Zulhijjah, <em>al-Qur‘ān, Ḥadīs, Fiqh</em> principles, and ulama’s notions, one of which is Imam Syarwānī’s</td>
<td>Determining the first day of the month of Ramadhan, Shawwal, and Zulhijjah according to the methods of <em>hisāb</em> and <em>ru’yah</em> by the Ministry of Religion of the Republic of Indonesia at a national level Muslims are required to comply with the decree set by the government of Indonesia. The Ministry of Religion is required to consult with MUI, Islamic organizations, and other related organizations to set the months concerned. The results of <em>ru’yah</em> <em>hilāl</em> of the neighbouring</td>
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Friday

- If, when necessary, there are no Fridays, the prayer time is to be based on the prediction of the day.

- The prayer and fasting time in regions with imbalanced days and nights should adjust to that of a neighbouring region with balanced days and nights.

- Determining the time of the first day of the month of Ramadhan and Shawwal may refer to global *ru'yah*.

- Determining the month of Zulhijjah/Idul Adha refers to the *matla'* of each country.

- Determining the first day of the month of Ramadhan, Shawwal, and Zulhijjah according to the methods of *hisāb* and *ru'yah* by the Ministry of Religion of the Republic of Indonesia at a national level

- Muslims are required to comply with the decree set by the government of Indonesia.

- The Ministry of Religion is required to consult with MUI, Islamic organizations, and other related organizations to set the months concerned.

- The results of *ru'yah* *hilāl* of the neighbouring
Scientific Consideration in the Concept of Islamic Law in Indonesia

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<td>5.</td>
<td>Fatwa Number 3 of 2010 concerning Qiblah</td>
<td>al-Qur‘ān, Ḥadīṣ, ulama’s notions, some of which are those of Imām ‘Alāūddīn al-Kasanī, al-Hanafi, Imā al-Qurtūbī, Ibn Uqdamah, and Imām al-Syirāzī and the paper by Prof. Dr. KH. Ali Mustafa Ya’qub, MA.</td>
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<td></td>
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<td>▪ The direction of qiblah for those facing/seeing the Ka’bah is the edifice of the Ka’bah (‘ain al-Ka’bah).</td>
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<td>▪ The direction of qiblah for those praying far from the Ka’bah refers to the direction of where the Ka’ba is (jihād al-Ka’bah).</td>
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<td></td>
<td></td>
<td>▪ The direction of qiblah for Indonesia is to face the Ka’bah (jihād al-Ka’bah).</td>
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<tr>
<td>6.</td>
<td>Fatwa Number 5 of 2010 concerning the Direction of Qiblah</td>
<td>al-Qur‘ān, Ḥadīṣ, the notions of Ulama, some of which are those of Imam ‘Alāūddīn al-Kasanī al-Hanafi, Imām al-Qurtūbī, Ibn Uqdamah, and Imām al-Syirāzī, as well as the paper by KH. A. Ghozali Masruri.</td>
</tr>
<tr>
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<td></td>
<td>▪ The direction of qiblah for those facing/seeing the Ka’bah is the edifice of the Ka’bah (‘ain al-Ka’bah).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ The direction of qiblah for those praying far from Ka’bah is the direction where Ka’bah is erected (jihād al-Ka’bah).</td>
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<tr>
<td></td>
<td></td>
<td>▪ The qiblah for Indonesia faces the northwest with varied positions, depending on the regional locations.</td>
</tr>
</tbody>
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Considering sciences in *Falakiyah Fatwas* of MUI

In terms of the methodological aspects, apart from the propositions cited from the Quran, Ḥadīṣ, ulama’s notions, Fiqh principles, and the studies of *ushul fiqh*, and in terms of setting these fatwas, this research has found that MUI considers the perspective adopted from modern scientific studies, particularly
Astronomical and earth sciences. In *falakiyah* fatwas, scientific studies represent three roles: first, fathoming the problems that religious knowledge fails to elucidate; second, science along with *syar’i* propositions as the primary consideration to set a fatwa; third, scientific studies as the primary consideration to set a fatwa and to act as a basis for the alteration of a fatwa.

The involvement of scientific studies in understanding the issues above can be further elucidated with religious knowledge, as obvious in the fatwa concerning Friday prayer time for travellers travelling on a ship in 1976. To set this fatwa, MUI referred to the notions of the ulama of Hambali and Ibnu Hazm, believing that Friday prayer is compulsory for travellers and non-travellers.\textsuperscript{36} These notions were taken simply to consider merit and reinforce *ukhuwah Islamiyah* for those exploring the ocean on a ship.

On the other hand, MUI also considers scientific studies to set fatwas, taking into account scientific approaches to help rationalise and understand the issues of Friday prayer on a ship as asked by ship crew experiencing difficulty determining the dates on their journey from Indonesia to America or vice versa, where they had two Fridays in a week or there were no Fridays during their journey on a ship. In such a case, MUI also considers *falak* and earth science to elucidate this phenomenon as if there were two same days or there were no particular days on the international date line.\textsuperscript{37} This phenomenon occurred because the ship passed through the international date line from either the east or the opposing direction, adding or reducing a day/date.\textsuperscript{38} Although it was not taken as a primary consideration, scientific approaches in

\textsuperscript{36} M. Atho Mudzar in his study criticized the notion cited from Ibnu Hazm by MUI to create this fatwa. He viewed that this adoption by MUI from the notion of Ibnu Hazm was something extreme and unacceptable in the context of the conceptualization of Islamic law in Indonesia, considering that Ibnu Hazm was a distinguished ulama in *Zahirī* mazhab—a mazhab excluded from sunni as recognized by ulama in Indonesia. See further Mohammad Atho Mudzhar, *Fatwa-Fatwa Majelis Ulama Indonesia; Sebuah Studi tentang Pemikiran Hukum Islam di Indonesia* (Jakarta: INIS, 1993), 93.

\textsuperscript{37} Amin dkk., *Himpunan Fatwa Majelis Ulama Indonesia (Edisi Terlengkap)*, 163.

\textsuperscript{38} Muh Nashiruddin, *Kalender Hijriyah Universal; Kajian atas Sistem dan Prospeknya di Indonesia* (Semarang: Rafi Sarana Perkasa, 2013), 88–89.
a fatwa hold a vital role in helping fathom matters that Fiqh does not encompass.

In another fatwa case, a scientific study along with the syar’ī proposition was taken as the primary consideration to set a fatwa, as obvious in Fatwa Number 2 of 2004 concerning the Provision of the First Day of the Month of Ramadhan, Shawwal, and Zulhijjah. In this fatwa, MUI seems to give room to the role of astronomical hisāb to determine the beginning of the month when the position of the moon is parallel to the method of ru’yah al-hilāl as referred to in the dictum of the fatwa. Historically, this method was set as an example by the Prophet Muhammad and his fellows to determine the beginning of the month of hijriyah, leaving a reasonable religious basis. On the other hand, the hisāb method represents the recent product of astronomy and mathematics. Astronomical hisāb plays an essential role in assisting ru’yah al-hilāl and can even serve as a legal argument over either welcoming or denying the hilal results. The method of hisāb along with ru’yah al-hilāl serves as a reference for MUI in its fatwa to determine a fasting month and the day of Eid al Fitr. Determining the beginning of the month as mentioned above combines the two methods by MUI to decide the first fasting day of the month and the day of Eid al Fitr, thereby guaranteeing uniformity in Indonesia.

Scientific studies also serve as the primary consideration in determining a fatwa and the basis of the alternation of a fatwa, as in line with Fatwa Number 5 of 2010 concerning the Direction of Qiblah. Before the publication of the enactment of this fatwa, MUI enacted Fatwa Number 3 of 2010 concerning Qiblah, sparking controversy and criticism over the provision stating that facing the

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39 According to Ibnu Ruyd, the method of hisab based on the orbiting moon and the sun to decide the position of hilal was first introduced by Mutarrif ibn Shakir, an ulama of the Great Tabi’in. The use of this method was followed by ulama of mazhab Syāfi’ī giving the proposition on the use of hisab to decide the first day of the month despite invisible hilal. Muhammad bin Ahmad bin Muhammad Ibnu Rusyd Al-Qurthubi, Bidayah al-Mujtahid wa Nihayah al-Muqtashid (Riyadh: Bait al-Afkār ad-Dauliyah, 2007), 682.

40 Nazaruddin Umar et.al., Upaya Penyatuan Kalender Hijriyah Indonesia; Sejak 1975 Hingga Kini (Pamekasan: Duta Media Publishing, 2018), 50.
west represents the direction of *qiblah* for Muslims in Indonesia. This provision is said to have neglected the presence of science as the consideration in setting forth a provision in a fatwa. To respond to this controversy and criticism, MUI reviewed the fatwa concerned by inviting KH. Ghozali Masruri, a Falak expert, presented his paper on deciding the direction of *qiblah* from the perspective of *Falak* knowledge. Under its fatwa commission, the MUI republished Fatwa Number 5 of 2010 concerning the Direction of *Qiblah* bearing the elucidation and improvement of the fatwa concerning the matter. The dictum was amended from the statement mentioning the west as the direction of *qiblah* to another provision stating that the direction of *qiblah* for Indonesia faces the northwest with varied details of position, depending on the location of each region. This fatwa indicates that the diverging latitude and longitude positions across the regions in Indonesia should be considered in determining the angles and azimuth of the direction of the *qiblah*. This also shows that, in addition to the propositions from the Quran, *Hadīs*, *Fiqh* principles, and the notions of ulama, MUI has also considered scientific studies, including *falak* knowledge, astronomy, geography, and other related sciences as the primary bases of consideration in deciding and revising fatwas.

Other fatwas regarding prayer and fasting in regions with imbalanced portion of days and nights of 1980, the day of Ramadhan, the day of Shawwal/Idul Fitr, the day of Zulhijjah/Idul Adha 1980 and Fatwa Number 3 of 2010 concerning *Qiblah* indicate that the scientific studies have been overlooked in deciding a fatwa, considering that fatwa has, so far, only referred to the propositions from the Quran, *Hadīs*, *Fiqh* principles, and the thoughts of ulama. Determining the prayer and fasting time in polar regions with disproportional amounts of days and nights as discussed in Fatwa concerning prayer and fasting in such areas and *matla’* regarding the application of *ru’yah al-hilāl* in a country is

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discussed in a fatwa on deciding the month of Ramadhan, Shawwal/Eid al Fitr, Zulhijjah/Idul Adha, representing the matters of astronomical phenomena; therefore, understanding these matters is inextricable from the involvement of astronomical studies. However, those two fatwas have not considered astronomical or falak science. Similarly, Deciding the direction of qiblah as referred to in Fatwa Number 3 of 2010 takes more than religious matters; instead, it also refers to scientific studies having long been developed by Muslims since the classical period. Determining the direction of qiblah has involved several methods, theories, assisting tools, and satellite technology, but Fatwa, so far, has been merely based on qat’i proposition and the ideas of ulama in the classical period, seeming to have ruled out the scientific authorities in fathoming religious issues.

The Patterns of the Nexus between Religion and Science in a Fatwa

Inconsistent consideration of scientific studies in falakiyah fatwas of MUI and the absence of an agreement over the paradigm of religion and sciences connected in falakiyah fatwas vary, ranging from conflict, independence, dialogues, and integration.

First, regarding conflict, Fatwa MUI Number 3 of 2010 concerning Qiblah is the product of falakiyah fatwa by MUI, representing the perspective towards the conflict between religion and sciences. This research categorises this fatwa into the nexus of conflict because, in addition to the absence of the consideration of scientific studies in a fatwa, the paradigm of conflict in a fatwa came from the statement of Ali Mustafa Ya’qub, the Vice Chairman of Fatwa Commission of MUI, asserting that the application of science of astronomy, Geography, Geometrics, and others in determining the direction of qiblah cannot serve as the propositions regulating religious activities simply because they are not part of religious propositions. The involvement of those branches of science to help fathom religion is risky because it extends to a realm that may spoil aqidah (creed). According to Ya’qub, only the Quran and Hadis stand as the authorities in Syari’at Islam, not even
sciences and other authorities. In other words, citing from sciences as religious propositions opposes Islam.\(^{42}\) In such a context, the issue of deciding *qiblah* has raised conflict between Islamic law and sciences.

Second, in terms of independence, the patterns of the relationships in *falakiyah* fatwas of MUI are presented by two fatwas regarding prayer and fasting in regions with disproportional amounts of days and nights and regarding deciding the first day of the month of Ramadhan, the day of Shawwal/Eid al Fitr, and the day of Zulhijjah/Idul Adha. These two fatwas highlight the perspective that the sciences and religious activities of Islam are separated domains bearing no direct connection. The fatwa on prayer and fasting time in regions with imbalanced days and nights only highlights the dictum of the fatwa without delineating the background and considering parts of the fatwa. However, this dictum mostly refers to the notions of the majority (*jumhūr*) of ulama, believing that deciding prayer and fasting time in such regions will have to adjust to that of the neighbouring region.\(^{43}\) This notion is based on *qiyaṣ* proposition towards the *Hadīs* of the Prophet regarding the appearance of Dajjal to the earth without any considerations or attempts to connect it to scientific studies. On the other hand, the fatwa concerned does not rebut the two. Thus, regarding this fatwa, MUI positions sciences and the understanding of religion as independent entities within two different domains and ways. Furthermore, the fatwa on deciding the first day of Ramadhan, the day of Shawwal/Ied al Fitr, and the beginning of Zulhijjah/Idul Adha, MUI tends to have disconnected scientific studies from religion without further attempts to open a dialogue about the two.


In this fatwa, MUI has set the two provisions of fatwas: First, the application of *matla’* in an international scope to decide the first day of Ramadhan and the day of Shawwal/Eid al Fitr; second, the enforcement of the application of *matla’* in the scope of *wilāyah al-hukmi* to decide the first day of the month of *zulhijah/IIdul Adha*. The first legal provision refers to the notion of *jumhūr* of ulama according to the generality of *Hadīs* concerning the order of fasting. The second legal provision refers to the method of *qiyas* with the *maktūbah* prayer. In this fatwa, MUI does not consider scientific aspects but only the regional aspects within a global and local scope. On the contrary, the matters of *matla’* are closely linked to the geographical location of a region affecting the visibility of *hilal*, while this issue is often linked to the science of astronomy. This fatwa, therefore, shows an independent view towards or separation between the domains of religion and sciences.

Third, in terms of the dialogue between religion and sciences, the fatwa regulating Friday prayer was obvious for travellers in 1976. In addition to considering the perspective of Ulama of the *mazham* about the rules of Friday prayer for travellers, MUI also considers scientific studies in deciding the day of Friday prayer in case of two Fridays in a week or the absence of Friday within a week during the journey on a ship. To rationalise this problem, MUI involves scientific studies, particularly *Falak* and earth sciences, considering that this problem cannot be elucidated according to a Fiqh approach or religious knowledge. Two Fridays in a week or the absence of a Friday within a week can only occur on a ship sailing and passing through an international date line (IDL), a pseudo line on the surface of the earth close to 180 degrees, functioning as separator on the Gregorian calendar. Passing through this line to the east will reduce one day. On the other hand, passing through this line to the west will add up one day. This date line exists to regulate time

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zones internationally for business and communication purposes. Therefore, MUI has opened a dialogue between the issues of Fiqh and sciences in the regions that religious knowledge cannot adequately explain.

*Fourth*, the pattern of the integration between sciences and religion is obvious in Fatwa Number 2 of 2004 and Fatwa Number 5 of 2010. The relation of integration between religion and sciences in Fatwa Number 2 of 2004 regarding the Provision of the First Day of the Month of Ramadhan, Shawwal, and Zulhijah is manifested in the recognition given by MUI to the conceptual and methodological alignment in the method of *hisāb* and *ru’yah* in deciding the months of religious activities in Islam and combining the two. The method of *ru’yah al-hilāl* is a method with a proposition and reasonable basis in religion once put into practice by the Prophet Muhammad and his fellows, while the method of *hisāb* is a product of astronomical science according to the analytical and empirical reasoning of orbiting space objects. These two methods are recognised by MUI as relevant methods supplementary to one another in deciding the first day of the month among Muslim people. In terms of Fatwa Number 5 of 2010 concerning the Direction of *qiblah*, the integration of religion and sciences takes more than the involvement of scientific studies in deciding a fatwa, but sciences serve as the basis to set legal provisions or alter legal provisions in a fatwa. The presence of this fatwa represents a measure taken by MUI to reconcile religion and sciences outlined in Fatwa Number 3 of 2010 concerning *qiblah* which raises conflict of integration where sciences are the main consideration to enact a fatwa. The dictum of fatwa declaring that the *qiblah* for Muslims in Indonesia is to face the west with varied positions depending on the regional features of each region indicates that latitude and longitude aspects have been taken into consideration across the Archipelago of Indonesia, resulting in determining the angles and azimuth of the direction of the *qiblah*. In this fatwa, MUI has considered scientific studies as the primary

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basis for making a fatwa concerning the direction of qiblah and revising the earlier fatwa that took no scientific consideration.

Conclusion

Departing from the above details, this study concludes that determining falakiyah fatwas for MUI takes more than the propositions of nas, the notions of ulama and the studies of ushul fiqh, but it considers scientific studies on the matters regulated in fatwas. Sciences and falakiyah fatwas hold three essential roles: First, fathoming problems that religious knowledge cannot adequately elucidate; second, sciences together with the proposition of syar’i serve as the elements of primary consideration to make fatwas; third scientific studies are the main consideration in making fatwas and serve as the basis for the alternation of fatwas. However, scientific considerations in falakiyah fatwas have not been consistently performed in fatwas. Some other falakiyah fatwas do not consider any scientific studies. This inconsistency in determining falakiyah fatwas results in varied patterns of relationship between religion and sciences intertwining in falakiyah fatwas, ranging from conflict, independence, and dialogues, to integration. So long as there is no paradigm of the nexus between religion and sciences conceptualised and agreed upon by MUI, there might be separation or even conflict between fatwas and sciences. Therefore, MUI is required to formulate ijtihad that involves several aspects, such as ulama, scientists, and even governments. All these aspects must actively take part in harmonising revelation and contextual reality to ensure that the fatwas produced will not be disconnected from reality.

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