

The Astronomical Calculations and Ramadan

By Dr. Zulfiqar Ali Shah

In the year 2006, the Fiqh Council of North America took the position that the scientifically authenticated astronomical calculations are a valid Islamic source of confirming or negating a lunar Islamic month. Subsequently, a number of papers appeared refuting the Fiqh Council's position. Among the papers written against the Fiqh Council's position, the two authored by Shaikh Hamza Yusuf were perhaps the most systematic. These two articles titled "Cesarean Moon Births"¹ were also perhaps the most provocative in the sense that they forcefully challenged the use of astronomical calculations in confirming the Islamic months as totally un-Islamic. In his writing, Hamza Yusuf insinuated that such a position was nothing short of deliberately opposing the "infallible" (*mutawatir*) commandments of the Holy Prophet (PBUH) and was equal to following the pitfall of the Children of Israel all the way to their lizard hole.

The main arguments of Shaikh Hamza Yusuf, Shaikh Mukhtar Maghraoui and others, who oppose use of calculations in confirming or negating Ramadan, could be summarized in the following main points:

1: The Noble Qur'an (in view of this group) categorically requires physical Moon sighting (with the naked eye) to confirm the beginning and ending of the devotional Islamic months such as Ramadan and *Zil-Hajjah*. The act of "witnessing the month of Ramadan" stated in the Qur'an means actually sighting the new Moon of Ramadan with the human eye. The Qur'anic term for the Crescent Moon is *al-Hilal* which, they argue, literally means "the sighted Moon."

2: The Prophetic traditions, which reach to the level of infallibility, also require unconditional commitment to the physical sighting of the new Moon by the naked eyes. There are only two definitive methods of confirming or negating the Islamic months which are approved by the Prophetic injunctions. These are: the Moon sighting by the naked eye or the completion of 30 days.

3: Muslim scholarship over the centuries has accepted these two categorical methods as normative in nature. The classical jurists have roundly rejected all efforts aimed at utilizing these mathematically computed astronomical calculations regarding Ramadan. They have vehemently opposed those Muslim scholars who employed calculations, including some known jurists, in part or in total. Some of these scholars such as *Mutarraf bin Abdillah (a successor, Taba'ee)*, *Abu al-Abbas Ahmad bin Umar Ibn Suryj (D 306 AH)*, and *Taqi al-Din Ali al-Subki (683-756 AH)* were otherwise given tremendous respect for their knowledge and piety. Rejection of the astronomical calculations has been an established norm in all the known schools of Islamic jurisprudence including the Ja'afari school of thought.

4: Deployment of the astronomical calculations has not been accepted but by a small minority of jurists based upon their weak interpretations of *Ahadith*. Even this minority opinion does not permit bypassing the physical sighting altogether. They only allow the use of calculations in cases of obscurities such as clouds.

5: Physical eye sighting of the crescent moon has been the universal Prophetic practice. The Jewish people were also required to follow the same method in determining their lunar months, and they were known to have followed this practice in history. Over time, they changed this divinely required Prophetic practice in an effort to synchronize their religious festivals and schedules with the solar civil calendars of secular

¹ Hamza Yusuf, *Cesarean Moon Births, Part I & II*, posted on www.zaytuna.org (Zaytuna Institute's web site), 2006-2007

authorities. Now, following a calculated calendar for Islamic months is nothing short of imitating the Jews in their utter misguidance and pitfall.

6: Hamza Yusuf, in particular, contends that the pre-Islamic Arabs as well as Muslims of the first generation were quite capable of employing astronomical calculations in determining their lunar months. Muslims emphatically rejected this method due to crystal clear Prophetic prohibitions regarding this matter. The science of astronomy in the past had reached its climax among the Muslim scholars due to their special interest in monitoring the motions of celestial bodies such as the Sun, Moon and other stars. Some of the known Muslim jurists such as Imam al-Qarafi, Imam Ibn al-Arabi and many others were also astronomers of the high caliber who could establish precise calendars for lunation, recognize conjunctions, and predict possible sight ability of the new moon. In spite of that, these jurists did not resort to deployment of astronomical calculations in regards to Ramadan and other Islamic months. The science of observational astronomy had not developed much over the past centuries. Consequently, current dependence of the Fiqh Council upon the scientifically proven astronomical calculations to fix an Islamic calendar is not progression, but rather it is sheer backwardness.

I would like to state from the onset that all of these vehemently propounded and popularly supported arguments do not stand ground against an in depth analysis. The Qur'an never required physical Moon sighting as the legal cause (*sabab*) for fasting. The Qur'an's required legal cause for fasting is "witnessing the month". It is an agreed upon fact among all the Qur'anic exegetes that the Qur'anic phrase "whoever witnessed the month" means whoever is present in his residential place and gets to know about Ramadan's arrival through any kind of knowledge, including sighting but not confined to sighting, should fast. The Prophetic reports asking for sighting to begin or end Ramadan, in reality, require "certainty" vis-à-vis arrival and end of the month of Ramadan. The pre-Prophetic Arabs of *Jahiliyyah*, following the Jewish lead, were arbitrarily intercalating their lunar calendar so that Hajj and other religious acts could fall in specific seasons and not in extreme cold or hot seasons. They used to add a thirteenth month to a 12 months lunar year to realize this goal. Their arbitrary methodology of intercalation changed the actual Hajj timings from the month of *Zil Hajjah* to other lunar months such as *Muharram* or *Safar*. The Prophet (PBUH) brought the sacred times back to their divinely defined timings by connecting the lunar months with the actual new Moons. The physical sighting of the new Moon was prescribed as a mean to achieve that certainty. The actual Moon sighting was the only available method during those times to attain certainty. Actual Moon sighting has never been the objective of fasting but what it proves i.e., the month of Ramadan, as the famous classical Hanafi jurist Sa'ad al-Din Mas'ud bin U'mar al-Taftazani describes:

أَنَّ قَوْلَهُ تَعَالَى { فَمَنْ شَهِدَ مِنْكُمُ الشَّهْرَ } مَعْنَاهُ شَاهَدَ الشَّهْرَ فَالشُّهُودُ عِلَّةٌ وَأَيْضًا قَوْلُهُ عَلَيْهِ الصَّلَاةُ وَالسَّلَامُ { صُومُوا لِرُؤْيَيْهِ } يَدُلُّ عَلَى ذَلِكَ إِذْ لَيْسَ الْمُرَادُ حَقِيقَةَ الرُّؤْيَاةِ إِجْمَاعًا بَلْ مَا يَثْبُتُ بِهَا وَهُوَ شُهُودُ الشَّهْرِ²

"The meanings of the Qur'anic verse "whosoever witnesses the month" means (person) witnessing the month (being present in the month). Consequently, witnessing the month is a cause "illah" (of fasting) and the Prophetic statement "fast by sighting it" proves that. All the Muslim jurists agree that the actual sighting is not meant here (meaning it is not the objective) but (the objective is) what the sighting proves and that is the witnessing (coming of) the month."

The modern jurist late Dr. Mustafa al-Zarqa puts the point in a nutshell:

وما دام من البديهيات أن رؤية الهلال الجديد ليست في ذاتها عبادة في الإسلام، وإنما هي وسيلة لمعرفة الوقت، وكانت الوسيلة الوحيدة الممكنة في أمة أمية لا تكتب ولا تحسب، وكانت أميتها هي العلة في الأمر بالاعتماد على العين الباصرة، وذلك بنص الحديث النبوي مصدر الحكم³

"It is an established fact that sighting the new Moon in itself is not an act of Islamic worship "Ibadah. It is just a mean to know the time. It was the only way available to a nation which knew not how to write or calculate. Its unlettered status was the sole reason for it to be dependent upon the naked eye. This is precisely what the text of the *Hadith*, which is the original source of this ruling (fast by sighting it), states."

² Al-Taftazani, Mas'ud bin U'mar, *Sharh al-Talwi'h 'ala al-Towdi'h*, Maktabah Sabeeh, Egypt, 1, 401

³ Mustafa al-Zarqa, *Fatawa Mustafa al-zarqa*, Dar al-Qalam, 163-64

It is traditionally argued that actual sighting of the new Moon is a prelude to fasting. Physical sighting is the legal (Islamic) cause (*sabab*) and Ramadan cannot be determined except through this cause i.e., actual sighting. It is also argued that the Prophetic reports establish only two methods to confirm or negate the month of Ramadan namely through sighting the crescent Moon or through completing thirty days (*ikmaal*). The question arises whether the actual Moon sighting is a precondition for starting the month on the 29th day of Sha'abaa only or, it is also a requirement on the 30th day of the month?

It is an agreed upon fact among all the jurists that actual Moon sighting is not required to confirm Ramadan on the 30th day of the month of Sha'abaa. In fact many Muslim countries announce Ramadan in advance to be the next Islamic day (31 day of the month) if the new Moon was not sighted on the 29th day of the month. Nobody is asked to look for the actual Moon on the 30th day except that it is recommended as a *Sunnah* and, not as an act of obligation. The fact of the matter is that this entire debate vis-à-vis actual Moon sighting as a prerequisite to fasting or breaking the fast, is related only to the 29th day of the month. Consequently, the actual sighting could be a legal reason for starting fasting of Ramadan only after the 29th day of the month and not after the 30th day of the month, as the cause and the effect go hand in hand. The Prophetic *Ahadith* requiring completing thirty days of the month would come into effect only if it were cloudy because the Prophet (PBUH) said, "complete thirty days *if it was cloudy*". The conditional clause "*if it was cloudy*" would be applicable only in case of obscurities and not in case if the horizon was clear on the 29th day's evening.

Moreover, these Prophetic reports do not ask Muslims not to see the new Moon on the 30th day of the month *if it was not cloudy*. Now, if the actual Moon sighting was the sole legal cause of starting or ending the month of Ramadan, then this cause (*sabab*) would have been required not only on the 29th day but also on the 30th day of the month. Once we know that sighting as a cause is not required on the 30th day, we can conclude that, it is not the actual sighting but the certainty about arrival of the month of Ramadan, which is a precondition to fasting the month. It can also be surmised that the Prophetic traditions (both positive and negative clauses) that require actual Moon sighting are also concerned primarily with starting or ending the month on the 29th day of the lunar month. Had they been connected with the start of fasting after the 30th day of Sha'abaa, then sighting the new Moon would have been required even on the 30th day's evening. Many of us seem to over step this fact.

Shaikh Maghraoui argues that the negative clause in the *Ahadith* "do not fast until you see the new Moon" is categorical in demanding that sighting and only sighting is the mean to ascertain the beginning of the month.⁴ He states: "Most significantly, the text, "Do not fast until you sight the crescent...", uses the strongest, most unequivocal language that sighting and only sighting is the means of ascertaining the beginning of the month."

The question is that why the Prophet (PBUH) would insist upon requiring the actual Moon sighting (as the condition for fasting) only on the 29th day's evening and not on the 30th day's evening? It is an interestingly important fact to ponder upon. Had the physical sighting of the Moon intrinsically been obligatory to start or end the month of Ramadan, it would have been required both on the 29th as well as 30th day of the month. A binding legal cause (*sabab*) of an act of worship cannot be established as a prerequisite only for one day of the month and not for the other day. The cause and effect go hand in hand in all situations, as the encyclopedic jurist Imam Abu Isha'q al-Sha'tibi has very well stated.

ما أثبت سبباً، فهو سبب أبداً لا يرتفع...⁵

"The established (legal) cause always remains the cause and never changes".

The modern Jurist Abd al-Karim Zaydan defines the legal cause (*al-sabab al-shara'i*) as follows:

“ما جعله الشارع معرفاً لحكم شرعي، بحيث يوجد هذا الحكم عند وجوده و ينعدم عند عدمه.”⁶

⁴ Mokhtar Maghraoui "An Islamic Legal Analysis Of The Astronomical Determination Of The Beginning of Ramadan." Soon it will be posted on www.zawiyah.net 8

⁵ Al- Sha'tibi, Abu Isha'q, al-Muwa'faqa't, Dar al-Kutub al-'Ilmiyyah, 1, 54

“The cause is what the Lawgiver has established to define the legal ruling in such a way that this specific ruling exists with its existence and disappears with its absence.”

How could Moon sighting be the sole binding legal cause of fasting if the month of fasting can be started either by sighting or by completion or by mere estimation? It seems that Shaikh Maghraoui and Shaikh Hamza like others had gotten mixed up between *al-hukm al-takli'fi* and *al-hukm al-wada'i*. *Al-hukm al-takli'fi*, in Islamic Jurisprudence, denotes a divinely commissioned ruling that requires the Muslims to either act upon an act or refrain from it, or gives a choice between doing an act or not doing it. This kind of *hukm* includes almost all the categories like mandatory, recommended, permitted, disliked and impermissible (*haram*) acts.

“وهو ما يقتضي طلب الفعل، أو الكف عنه، أو التخيير بين فعله وتركه، وهو يشمل الوجوب والإستحباب والإباحة والكراهة والتحریم، ومن أمثلة ذلك وجوب الصلاة”⁶.

On the other hand, the positional or positivistic divine commandment (*al-hukm al-wadai'*) is situational in nature. It identifies the cause, condition or the reason for prohibition of a ruling or a specific thing. It is just a description of a specific ruling and not a demand from the Lawgiver to perform or abandon a thing. For instance noon is a cause to perform the Zuhr prayer, committing an act of theft results in a capital punishment. If there is no theft there is no punishment. The lawgiver does not require steeling by that *hukm wadi'*.

“الحكم الشرعي الوضعي: وهو ما يقتضي جعل شيء سبباً لشيء، أو شرطاً له، أو مانعاً منه، وهو بالتالي ليس فيه أي طلب من المكلف بفعل أو ترك، بل هو بيان من الشارع مثل: اعتبار زوال الشمس سبباً لوجوب الصلاة، أو اعتبار السرقة سبباً لوجوب الحد”⁷.

Therefore, the *hukm al-taklifi* is “fasting the month of Ramadan” and *hukm al-wadi'* is “witnessing the month of Ramadan”. The actual Moon sighting in the past was just a mean to determine this act of witnessing and not the objective or *sabab* in itself. Imam Yahya bin Sharaf al-Nawawi states: “ولا يجب صوم رمضان إلا بدخوله ويعلم دخوله بروية...”⁸.

“The fasting of Ramadan does not become obligatory until the month (Ramadan) arrives and the arrival is known through sighting the new Moon.”

Imam Ibn A'bd al-Barr has beautifully stated the point in a nutshell, “God says, “Whoever witnesses the month, let him fast” (2:185). He means, and God knows best, “**Whoever among you knows, with a knowledge that is certain, that the month has indeed begun must fast it.**” And knowledge that is certain is [based on] either a clear and widespread sound sighting or the completion of thirty days of the previous month.”¹⁰

Shaikh Faisal Mowlawi, a renowned contemporary jurist, deduces from these classical quotes the logical conclusion that the coming of Ramadan obligates the act of fasting. The act of witnessing the month ascertains that coming of Ramadan. Therefore the act of witnessing the month is the real *sabab* and not the sighting because the “witnessing” takes place with sighting and without sighting, as Imam Fakhar al-Din al-Razi categorically states:

أن شهود الشهر بماذا يحصل؟ فنقول: إما بالرؤية وإما بالسمع¹¹

“How is “*shahud al-shahar*” “witnessing the month” accomplished? We say it is achieved either by physical sighting or by hearing.”

⁶ Abd al-Kari'm Zayda'n, *al-Waji'z fi Usul al-Fiqh*, Dar al-Tozi'a' wa al-Nashr al-Isla'miyyah, Cairo, First Ed., 1414-1993, 55

⁷ Zaydan Ibid, 26; also see Shaikh Faisal Mowlawi, “*al-sabab al-sharai' li wujub siyam Ramadan: Hal huwa dukhu'l al-shahar am ro'yat al-hilal*”, an unfinished paper presented to the European Fiqh Council in May of 2007, page 8

⁸ Ibid, 26-27; Mowlawi, Ibid

⁹ Al-Nawawi, al-Majmu'a Sharh al-Muhazzab, www.shamela.ws/, 6, 270

¹⁰ Cited from Hamza, Ibid, I, 15

¹¹ Al-Razi, Fakar al-Din Abu Abdillah Muhammad, Tafsir al-Razi, (www.altafsir.com), 3, 103

Consequently, sighting is just one of the means to determine this arrival of the month of Ramadan and not the legal cause for fasting.

«ومعنى ذلك أنّ دخول رمضان هو سبب وجوب الصيام، وأن رؤية الهلال هي وسيلة العلم بدخوله.»¹²

Further more, it is quite challenging to describe the Moon sighting as the legal cause of fasting (*al-sabab al-sharai'*) and then explain the fact that why the Lawgiver specified it as a cause only for the twenty ninth day of the month and not for the thirtieth day or why the Lawgiver gave the choices between sighting, completion or estimation. On the other hand, if we confirm the objective of certainty about arrival of the new month as the real reason for the Prophetic insistence upon the physical Moon sighting on the 29th day, we can fully understand why he did not require the physical Moon sighting on the 30th day's evening (to confirm the fasting of Ramadan). It is also exceedingly important to understand this specific Prophetic insistence, upon actual Moon sighting, in the background of the real challenges and confusions caused by the arbitrary intercalations and, also in light of the *Ummah's* unlettered status.

Shaikhs Rashi'd Rida, Mustafa al-Zarqa, Ahmad Shakir and many others have highlighted this fact that the Lawgiver has asked for sighting the Moon as a mean to know the fixed sacred timings, such as Ramadan and, not to worship this act of sighting in itself. The Prophet (PBUH) has connected both the methods (sighting and completion) with the reason that the *Ummah* is unlettered. The objective of his Prophet-hood has been to bring the *Ummah* out of its unlettered status and not to push it more into illiteracy.

Actual Moon sighting with naked eyes is also not the only mechanism to affirm the month of Ramadan. The Lawgiver has given us alternates of *Ikmaal* (completing 30 days in case of cloudy weather) or, just completing 30 days if the new Moon was not sighted on the twenty ninth day of Sha'aban even if it was not cloudy on the 29th day of the month. In the later case nobody is required to even look for the Moon on the 30th day or wait for the Moon sighting reports. The Lawgiver would have not given us alternates if Moon sighting was the only legal cause or mean of determining Ramadan.

The Qura'nic phrase "*al-ahillah*", is the plural of "*al-hilal*." The word "*hilal*", in the Arabic language, denotes "beginning part of something like rain, announcement, cry of joy, raising out loud voices". Muhammad bin Ya'qub al-Fayrozabadi, the renowned philologist, informs us that the male snake, spearhead, a small amount of water, a feeble camel, the dust, a handsome young man, the paved stones, the first gush of rain, all are called "*hilal*" in Arabic language.¹³

Al-hilal has also been culturally and metaphorically used to symbolize the new Moon of the first two to seven nights and then the last two nights of the month because people used to raise their voices while informing others about the beginning or end of the month as the Arabic lexicon authority Jamal al-Din Ibn Manzur emphatically states:

وسمي الهلال هلالاً لأن الناس يرفعون أصواتهم بالإخبار عنه.¹⁴

"The *Hilal* (new Moon) is named *Hilal* because the people raise their voices to inform each other about it (arrival or coming to an end of the new Moon)."

Imam Abu al-Abba's Taqi al-Din Ahmad Ibn Taymiyyah (1263-1328 AD; 661-728 AH) makes this point clear to us when he explains:

وذلك أنّ الهلال أمر مشهود مرئي بالابصار . ومن أصحّ المعلومات ما شوهد بالابصار ولهذا سمّوه هلالاً ؛ لأنّ هذه المادّة تدلّ على الظهور والبيان : إمّا سمعاً وإمّا بصراً كما يقال : أهل بالعمرة وأهل بالديبحة لغير الله إذا رفع صوته ويقال لوقع المطر الهلّل . ويقال

¹² Ibid, 18

¹³ Al-Fayrozabadi, Qamu's al-Muhi't, Muassat al-Ris'alah, 3, 183

¹⁴ Ibn Manzur, Lisan al-'Arab, Dar Ihyaa al-Turath al-Islami

: اسْتَهْلَ الْجَنِينَ إِذَا خَرَجَ صَارِحًا . وَيُقَالُ : تَهَلَّلَ وَجْهَهُ إِذَا اسْتَنَارَ وَأَضَاءَ . وَقِيلَ : إِنَّ أَوَّلَهُ رَفَعُ الصَّوْتِ . ثُمَّ لَمَّا كَانُوا يَرَفَعُونَ أَصْوَاتَهُمْ عِنْدَ رُؤْيَيْهِ سَمَوْهُ هِلَالًا.¹⁵

(It is called *hilal*) because “the new Moon is a matter witnessed and sighted by the eyes. As the information obtained through eyes is the most accurate, that is why (the new sighted Moon) is called a “*hilal*”. Because its root word leads to appearance (conspicuousness) and announcement (manifestation) either through listening or through sighting as it is said: “*ahalla*” for Umrah and “*ahalla*” with the slaughtered animal (raised one’s voice to chant the name of other than Allah at the time of slaughter) meaning that (he) raised his voice. Pouring rain is called *al-halall* and when the new born baby comes out crying it is referred to as “*istahalla*”. It is said: his face “*tahallala*” when the face gleams and glitters. It is said that the origin of this (root) is raising the voice and as the people used to raise their voices at sighting the new Moon, they called (the new Moon) a *hilal*.”

There are conflicting reports about the actual Prophetic response when he (PBUH) first time looked at the new Moon. One Hadith states that the Prophet (PBUH) used to turn his face away from the new Moon and seek Allah’s protection from its evils. The other popular report indicates that the Prophet (PBUH) would recite specific supplications at sighting the crescent Moon. The Hadith authorities such as Imams al-Bukhari and Muslim never reported any such supplications. Imam Abu Dawu’d, after reporting the conflicting narrations, clearly stated that both the above mentioned purported Prophetic reports were untrustworthy.

The claims that, the method of completing thirty days in case of obscurities (*ikmaal*), is the only normative alternate (second only to actual sighting), is also debatable. Many known Companions like ‘Umar, Anas bin Malik, Abdilllah bin ‘Umar and many others known *Sahabah* (May Allah be Pleased with them) used to fast the next day if it was cloudy on the 29th day of Sha’abaa and the possible new Moon was not sighted because of obscurities. Imam Ahmad bin Hanbal requires fasting of such a day as part of obligatory fasting of Ramadan and not as a supplementary day of fasting. This proves that starting Ramadan neither with actual Moon sighting nor with *Ikmaal* but by mere estimation is another valid method practiced by the first generation of Muslims. These righteous ancestors interpreted the word “*faqdiru*” narrated in the authentic *Ahadith* to mean “counting, estimation and computation”, especially in case of atmospheric obscurities. Had the ruling of *Ikmaal* (completing 30 days in case of obscurities) been the only established alternate fixed by the Prophet (PBUH) himself then his own beloved Companions such as Caliph ‘Umar and his personal servant such as Anas bin Malik would have not violated that Prophetic commandment by fasting after the 29th day of Sha’abaa because the new Moon was not sighted on 29th day’s evening due to obscurities. The fact that some Companions such as Ammar bin Yasir, Ibn Abbas, Abu Hurayrah (May Allah be Please with all of them) did not fast on such a day of cloudy weather and others such as Ibn ‘Umar, Anas bin Malik fasted that day indicates that the *Ikmaal* principle was not a solitary established rule during the times of *Sahabah* but, actually a matter of choice.

There is no *Ijama’a* (consensus of the scholars of the Muslim *Ummah*) that using astronomical calculation in confirming or negating the month of Ramadan is absolutely illegal (*Haram*), especially in case of obscurities. There are several claims of such an *Ijma’a* in our *Fiqhi* literature but, it does not exist in reality. The debate about validity and non-validity of the mathematical calculations vis-à-vis Ramadan has been going on since the Successors times i.e., since the time of the first generation Muslims. The majority of the classical jurists have aggressively opposed use of mathematical calculations due to multiple reasons. There is a long list of possible valid reasons for which the classical juristic discourse has been so roundly against the use of calculations, especially in the matters concerning faith and *Ibadah*. The list includes and is not confined to inadequacy of calculations in the past, their production mainly by the astrologers, the claims of many astrologers to knowledge of unseen, the confinement of calculation knowledge mostly to a few individuals living in the metropolitan areas, the unlettered status of majority of the *Ummah* and the hardship factor.

¹⁵ Ibn Taymiyyah, Abu al-Abba’s Taqi al-Din Ahmad, Majmu’a Fatawa Ibn Taymiyyah, www.al-islam.com 6, 69; see also ; Fatawa al-Kubra’, Dar al-Kutub al-‘Ilmiyyah,

It must also be stated that the classical jurists took such a staunch position against calculations because of the historical realities of their times. They had tried to protect common Muslim's *Aqidah* or belief from degradation and dereliction as Qadi Abu Bakr ibn al-Arabi has clearly stated: "As for the second reason, *it is not permissible to rely on astronomers and mathematicians, not because their findings are not true but because people's beliefs must be protected from an association with celestial motions and future occurrences of conjunctions and separations. Indeed, that is a vast ocean should people be pulled into it.*"¹⁶

In spite of these concerns, there are instances in our history when, in case of atmospheric obscurities, righteous people like Mutarrif bin Abdillab Ibn al-Shikhir, Imam Ibn Surayj (d. 306 AH), Ibn Qutaybah, Imam Taj al-Din al-Subki (d. 683- 756 AH) and others have actually deployed mathematical calculations either in confirming or negating the month of Ramadan. These pious individuals have considered the obscurities as a legal cause to determine Ramadan by mere calculations. They were rebuked for such a progressive step by many of their colleagues and the later classical jurists for multiple reasons.

The list of pro-calculation scholars is ever increasing in our times and includes contemporary scholars like Sheikh Yusuf Al-Qaradawi, Director of the Center of Researches on the Sunnah and the Sirah, University of Qatar, Dr. Muhammad Mustafa al-Maraghi, (Grand Imam of Al-Azhar, 1935-1945), the celebrated Egyptian and encyclopedic authority and 1984 King Faisal International Prize winner, the modern Hadith authority Shaikh Ahmad M. Shakir (1891–1957), the Syrian-born judge, broadcaster, author, editor, and also 1990 King Faisal International Prize winner Shaikh Mustafa al-Zarqa (1901-1999), Shaikh Ali al-Tantawi (1908 – 1999), Dr. Sharaf al-Quda, a contemporary Jordanian jurist, and many others.

The use of mathematically computed astronomical calculations, in matters of religion, has been dubbed as a Jewish innovation. The fact of the matter is that the fixed Jewish calendar is an intercalated calendar. The Jewish Rabbis exerted their efforts to synchronize their lunar calendar with the solar calendar for the purpose of celebrating their religious festivals during specific seasons of the year and, also to harmonize their holidays with the civil holidays.

The Jewish calculations vis-à-vis these pre-determined calendars were based upon a fixed average lunar month and not upon the astronomical calculations of actual Moon births. Tracy R. Rich presents this point in a nutshell: "Note that the calculated *molad* does not necessarily correspond precisely to the astronomical new moon. The length of time from one astronomical new moon to the next varies somewhat because of the eccentric orbits of the Earth and Moon; however, the *moladot* of Rabbi Hillel's calendar are set using a fixed average length of time: 29 days, 12 hours, and 793 parts (or in Hebrew, *chalakim*). The amount of time is commonly written in an abbreviated form: 29d 12h 793p."¹⁷ That was the main reason that the Noble Qur'an and the Beloved Prophet (PBUH) rejected this very approach to the lunar months.

The pre-Qur'anic Arabs did the same. They used to intercalate extra days and an extra thirteenth month to their lunar calendar almost after every three years so as to force the dates of Hajj fall during specific seasons that were good for their traveling and business. This way the sacred time of Hajj got compromised and the Hajj was performed in those lunar months which actually were not the months of Hajj. The Prophet (PBUH) insisted upon bringing the time back to its original form and stipulated that the new month be started with actual sighting of the crescent Moon and not with the arbitrarily intercalated mathematical calculations. The Prophet (PBUH) openly emphasized this fact in his Last Sermon when he said, "Today, certainly the time has returned to its original form as God had created it to be at the times of creation of the heavens and the earth." Imam Al-Razi states that by doing so the Prophet (PBUH) brought the sacred months back to their original timings.

« ألا إن الزمان قد استدار كهيئته يوم خلق السموات والأرض السنة إثنا عشر شهراً » وأراد أن الأشهر الحرم رجعت إلى مواضعها¹⁸

¹⁶ Hamza Yusuf, Ibid, Part I, P: 17-18. Note: italics are added for emphasize.

¹⁷ Tracy R. Rich, The Jewish Calendar: A Closer Look, www.webmaster@JewFAQ.org

¹⁸ Ibid, 8, 21

Therefore, implying scientifically developed precise astronomical calculations to confirm or negate the actual new Moon of the Islamic lunar months (hence the original sacred time) would not come under the rhetoric of Jewish imitation in the matters of Din. It does not change the sacred time of the established lunar months. In reality it helps us determine them with precision and certainty. Moreover, the science of astronomy has tremendously developed over the past few centuries. The old Ptolemaic Geo centric theory of the universe, which ruled the world since the 2nd century, was founded on wrong footing in the first place. Nicolaus Copernicus in 1543, propounded the modern astronomy by advancing the Solo centric theory of the universe which explains that the earth and all other moving planets are revolving around the Sun and not around the earth. These two hypotheses superseded the Ptolemaic system, which had been the basis of astronomical theory until that time.

The Fiqhi debates regarding the issues of Moon sighting are not new. They are healthy as long as they remain within ethical boundaries without labeling the opponents with misguidance. For instance, the early authorities in almost all the known Fiqhi schools of thought deduced unity of horizons from the *Ahadith* that required sighting. All the known Imams required global fasting by local Moon sighting. To many of them, local sighting was the legal cause for obligating Muslims all over the globe to start fasting for Ramadan.

ذَهَبَ الْحَنْفِيَّةُ وَالْمَالِكِيَّةُ وَالْحَنَابِلَةُ وَهُوَ قَوْلٌ عِنْدَ الشَّافِعِيَّةِ : إِلَى عَدَمِ اعْتِبَارِ اخْتِلَافِ الْمَطَالِعِ فِي إِثْبَاتِ شَهْرِ رَمَضَانَ , فَإِذَا ثَبَتَ رُؤْيَا هِلَالِ رَمَضَانَ فِي بَلَدٍ لَزِمَ الصَّوْمُ جَمِيعِ الْمُسْلِمِينَ فِي جَمِيعِ الْبِلَادِ , وَذَلِكَ لِقَوْلِهِ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ : { صَوْمُوا لِرُؤْيَيْهِ } وَهُوَ خَطَابٌ لِلأُمَّةِ كَأُمَّةٍ¹⁹

“According to Hanafi, Maliki, Hanbali (and according to one report from the Shafa’ee school of thought), no consideration is given to the diversity of horizons in regards to confirming the month of Ramadan. The entire Muslim world is obligated to begin fasting if the new Moon is sighted anywhere in the world. This is in line with the Prophetic tradition “start fasting by seeing the new Moon.” The Hadith is addressed to the entire Muslim nation.”

These earlier jurists declared the local sighting as the binding legal cause (*sabab*) for the rest of the Muslims to start fasting globally. Imam Abu al-Abbas Shihab al-Din al-Qarrafi stated that:

«أَنَّ الْمَالِكِيَّةَ جَعَلُوا رُؤْيَا الْهِلَالِ فِي بَلَدٍ مِنْ الْبِلَادِ سَبَبًا لَوْجُوبِ الصَّوْمِ عَلَى جَمِيعِ أَقْطَارِ الْأَرْضِ وَوَأَقْفَتْهُمُ الْحَنَابِلَةُ رَحِمَهُمُ اللَّهُ عَلَى ذَلِكَ»²⁰
 “The Maliki’s made the local Moon sighting a legal cause for the entire globe to fast and the Hanbali’s (may Allah shower His mercy upon them) agreed to that.”

The majority of later jurists including Imam al-Qarrafi went against these established positions of their Fiqhi schools by deriving ruling of variety of horizons from the *Ahadith* also. Al-Qarrafi (d 1285 AH) contends:

وَإِذَا كَانَ الْهِلَالُ يَخْتَلِفُ بِاخْتِلَافِ الْبِلَادِ وَجَبَ أَنْ يَكُونَ لِكُلِّ قَوْمٍ رُؤْيَاهُمْ فِي الْبِلَادِ كَمَا أَنَّ لِكُلِّ قَوْمٍ فَجْرَهُمْ وَغَيْرَ ذَلِكَ مِنْ أَوْقَاتِ الصَّلَوَاتِ ، وَهَذَا حَقٌّ ظَاهِرٌ وَصَوَابٌ مُتَعَيَّنٌ أَمَّا وَجُوبُ الصَّوْمِ عَلَى جَمِيعِ الْأَقَالِيمِ بِرُؤْيَا الْهِلَالِ بِفِطْرٍ مِنْهَا فَبَعِيدٌ عَنِ الْقَوَاعِدِ ، وَالنَّادِيَةُ لَمْ تَقْتَضِ ذَلِكَ فَاعْلَمُوا²¹.

“If the crescent Moon differs with difference in horizons then it becomes incumbent that each locality must go with its own Moon (sighting). Each locality has its own prayer timings such as Fajr (prayer). This is a crystal clear truth and an exactly righteous position. On the other hand, obligating global fasting with local Moon sighting is far from the (established Islamic) rules. One needs to know that the (Islamic) texts did not require such an obligation.”

The earlier jurists such as Imam Ahmad (780-855 AD) and Ibn Rajab al-Hanbali (1336-1393 AD) considered use of calculations to determine Qiblah directions as tantamount to slandering the first generation of Muslims, as the *Sahabah* did not use precise Qiblah directions for their daily prayers.

¹⁹ Encyclopedia of Fiqh, (published by the Ministry of Religious Affairs and Aowqaaf) Kuwait, Vol: 23, P: 142 اختِلافِ الْمَطَالِعِ

²⁰ Al-Qarrafi, Ahmad bin Idrees, Anwa’r al-Buru’q fi Anwa’a al-Furuq, A’lam al-Kutub, 4, 142

²¹ Al-Qarrafi, Ibid, 4, 143

“وكذلك القبلة ، لا تحتاج إلى حساب ولا كتاب”²²
“Likewise the Qiblah does not need calculation or writing”
وهذا يفضي إلى تضليل سلف الأمة ، والطعن في صلاتهم.²³

“This leads to (saying) that the worthy ancestors of the *Ummah* were misguided and also to slandering their prayers.”

The later jurists not only permitted such a use but obligated Muslims to learn about how to compute these calculations.

Likewise, deploying calculations for daily prayer timings were prohibited by many early jurists. The otherwise very meticulous jurist, Shafai’ stalwart Taqi al-Di’n Muhammad bin ‘Ali Ibn Daqi’q al-‘Aid, also opposed the use of calculations in fixing prayer timings:

”وقال ابن دقيق العيد : الحساب لا يجوز الاعتماد عليه في الصلاة”²⁴

Later on the same was advocated by the other jurists so much so that presently the fixed prayer schedules have become a norm in all the Muslim countries. There is a clear cut pattern of historical development in our Fiqhi discourse. The local realities, customs and scientific developments have played their part in this developmental process. Imam al-Qarrafi, talking about customs (*urf*), describes that:

وعلى هذا القانون تُراعى الفتاوى على طول الأيام فمهما تجدد في العرف اعتبره ومهما سقط أسقطه ولا تجمذ على المسطور في الكتب طول عمرك بل إذا جاءك رجل من غير أهل إقليمك يستفتيك لا تجره على عرف بلدك وأسأله عن عرف بلده واجره عليه وأفته به دون عرف بلدك والمقرر في كتبك فهذا هو الحق الواضح والجمود على المنقولات أبداً ضلال في الدين وجهل بمقاصد علماء المسلمين والسلف الماضين²⁵

“Based upon this rule, *fatawa* (religious edicts) must be reviewed with the passage of time. The changes in *Urf* (customs) should be reflected in *fatawa* (the renewed customs should be incorporated and the discarded customs should be dropped). Do not always get stuck with the *fatawa* written in the books (throughout your life). You should not answer a questioner based upon your customs if the questioner belonged to a different province. You should ask him about the norms of his area and give *fatawa* not based upon your customs and what is decided in the (Fiqhi) books but according to the questioner’s customs. This is exactly the right way. It is an act of clear misguidance in religion to keep sticking to (the *fatawa*) transmitted in the books as it reflects ignorance about the real intent of the Muslim scholarship and also intent of the past ancestors (*salaf*).”

I am not blaming the early jurists for anything. These were the righteous ancestors who sincerely tried to implement the *Shari’ah* to the best of their ability and in accordance with their realities. The later jurists changed these established positions also in accordance with their changing circumstances. This is the miracle of Islamic texts that they lend themselves to multiple interpretations so that Islam remains relevant to the changing times and realities. The issue of use of astronomical calculations in affirming Islamic lunar months is relatively a new debate and gradually will become a norm within the Muslim community with more education, awareness and passage of time.

I am also not accusing the early jurists that they did injustice to the Prophetic *Ahadith* by emphasizing their literal meanings and fixing their narrow interpretations. Their selective insistence was based upon a variety of external historical reasons. Our righteous ancestors were faced with a number of challenges. One of the leading challenges for the first and second generation Muslim scholarship was to encounter the extreme literalist and narrow approaches of Kharjites and Hashwiyyah on the one hand and metaphorical and allegorical approaches (*t’aw’il*) of Jahmiyyah and Mu’tazilah on the other hand. They also had to face the harsh realities of the Mu’tazilite’s speculative theological interpretations which rendered many of the

²² ²² Ibn Rajab al-Hanbali, Fath al-Ba’ari’, 3, 142, (electronic copy, www.alwarraq.com); also see Maktab Tahqi’q Dar al-Haramayn, Maktabah al-Athariyyah, 1417 AH

²³ Ibid, 3, 142

²⁴ Ibn ‘Aabidi’n, Muhammad Ami’n bin ‘Umar, Radd al-Mukhtaar ‘alaa al-Durr al-Mukhtaar, www.shamela.ws/, 7, 366

²⁵ Al-Qarrafi, Anwa’r al-Buru’q, 2, 229

Islamic texts to almost nil. The aforementioned magisterial Sunni personalities such as the four known Imams defended the spirit of the Qur'an and Sunnah to its letter in an effort to nip in the bud the possible evils of allegorical interpretations of the Islamic texts which had already played havoc to the texts of other faith groups such as Christianity and Judaism. The Biblical text was done extreme violence by the classical Jewish and Christian scholarship. The original Biblical text lost its meanings and integrity due to intellectualization and mystification of its text.

In spite of their great contributions to the intellectual life of Islam and being "founders of the discipline of speculative or philosophical theology", the Mu'atazilites went far from the spirit of Islamic revelation and hence from the outlook of the ordinary Muslim. "To insist on the bare unity of God", argues M. Watt, "was a tidy rational theory, but it did not do justice to the fullness of religious experience. The negative statements of Dirar and an-Nazzam are unsatisfactory to the ordinary worshipper..."²⁶ The Mu'atazilites and the later philosophers reduced the vivid and living God of Muhammad (PBUH), as D. B. Macdonald argues, to "a spirit, and a spirit, too, of the vaguest kind."²⁷ The Mu'atazilites, to Fazlur Rahman, "denuded God of all content and rendered Him unsatisfactory for religious consciousness."²⁸ They, observes I. Netton, "made God more unknowable rather than less, and dug a wider gulf between man and his Creator. A dry hermeneutic intellectualism restricted the farmer's mental image of his Deity..."²⁹ Such a concept, observes Watt, "leads to an abstract, bare and featureless conception of God, which robs the religious consciousness of much that is precious to it."³⁰ Or in the words of Gibb the Mu'atazilites turned Islamic concept of God into "a vast old monument, beneath which the element of personal religious experience seemed to be crushed out of existence. Fortunately for Islam, it was not to be so."³¹

In addition to that, Mu'atazila got militant once given the political authority during the times of Abbasid caliphs like Harun ar Rashid (fifth caliph (786-809 AD) of the Abbasid dynasty of Baghdād, and his son Abdullah al-Mamun (Mamun ar Rashid). F. M. Denny observes, that the Mu'atazilites "far from being liberal intellectuals who wanted to accommodate the world to vision of rationality and cooperation, were proponents of a strict and militant Islam which they sought to impose uniformly on their wayward coreligionists and to spread to the non-Muslims by means of propaganda."³²

The mainstream scholarship stood in the face of this allegorical mystification of the Islamic texts. Imam Ahmad bin Hanbal (780-855 AD; 241 AH) had to pay almost with his life to oppose this liberalization of the Islamic texts by some Mu'atazilites. He was severely tortured, imprisoned and humiliated by Abbasid caliph Abdullah al-Mamun in 202 AH during the trial whether the Noble Qur'an was created or eternal (and hence not created) known as the "*khulqi al-Qur'an*" trial. The Imam stuck to his position that the Holy Qur'an was the non-created eternal Word of God. This way he protected the textual sanctity of both the Qur'an and Sunnah from potential violence by allegorical interpretations.

Following the lead of early *Salaf*, Imams like Ibn Taymiyyah and Ibn al-Qayyim also vehemently opposed metaphorical interpretations (*ta'wi'l*) of the Qur'anic and Prophetic texts. They emphasized upon the apparent and literal sense of the religious texts and tried to preserve the religious texts all the way to its letter. The selective insistence of the *Salaf* upon the primary linguistic meanings of the Qur'anic and Sunnah text to the exclusion of the secondary linguistic meanings must be understood in the backdrop of their thorny challenges and not as sheer literalism. Again, the later theologians like the later Asha'rites opposed this over emphasize upon literalism and adopted metaphorical interpretations within the established rules of Arabic language.

²⁶ M. Watt, *The Formative Period of Islamic Thought*, UP, Edinburgh, 1973, 24

²⁷ Macdonald, D. B., *Muslim Theology, Jurisprudence and Constitutional theory*, Khayats, Beirut, 1965, 14

²⁸ Fazlur Rahman, *Islam*, U of Chicago Press, Chicago and London, 1979, 8

²⁹ Netton, *Ibid*

³⁰ Watt, M., "Early Discussions about the Qur'an", *Muslim World*, XL (1950), 3

³¹ H. A. R. Gibb, *Modern Trends in Islam*, Otagon Books, NY, 1972, 19-2

³² Denny, F., *An Introduction to Islam*, 2nd Edition, 1994, 18

In conclusion it is observed that both the aforementioned trends, which have been prevalent among the Muslim scholarship throughout Islamic history, are acceptable as long as they do not lead to mutual discard and accusations of misguidance. They both reflect the sincere efforts to implement the intent of the Lawgiver to best of human abilities. The Prophet (PBUH) approved both of them as is narrated in the following incident.

Imam Abu Abdillah al-Bukhari reports on the authority of Ibn ‘Umar that after the battle of Confederates, the Prophet (PBUH) commanded a group of Companions not to offer the ‘Asr prayer until they had reached the *Banu Qurayzah* area (a Jewish tribe in the outskirts of *Madinah*). A group of the Companions offered the ‘Asr prayer on the way thinking that the Prophet (PBUH) intended them to quickly reach the *Banu Qurayzah* area and did not want them to miss the ‘Asr prayer. The second group insisted to implement the Prophetic commandment in letter and did not offer the prayer until they had reached the *Banu Qurayzah* quarters though after the time of ‘Asr prayer. The Prophet (PBUH) understood the intention of both the groups and did not disapprove any of them. Here is al-Bukhari’s report:

حَدَّثَنَا عَبْدُ اللَّهِ بْنُ مُحَمَّدِ بْنِ أَسْمَاءَ قَالَ حَدَّثَنَا جُوَيْرِيَةُ عَنْ نَافِعٍ عَنْ ابْنِ عُمَرَ قَالَ قَالَ النَّبِيُّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ لَنَا لَمَّا رَجَعْنَا مِنَ الْأَحْزَابِ لَا يُصَلُّونَ أَحَدٌ الْعَصْرَ إِلَّا فِي بَيْتِي فَرِيضَةٌ فَأَذْرِكُ بَعْضُهُمُ الْعَصْرَ فِي الطَّرِيقِ فَقَالَ بَعْضُهُمْ لَا نُصَلِّي حَتَّى نَأْتِيَهَا وَقَالَ بَعْضُهُمْ بَلْ نُصَلِّي لَمْ يُرَدِّ مِنَّا ذَلِكَ فَذَكَرَ لِلنَّبِيِّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ فَلَمْ يُعَنَّفْ وَاحِدًا مِنْهُمْ³³

May Allah SWT forgive us all.

³³ Al-Bukhari, Abu Abdillah Muhammad bin Ismail, *Sahih al-Bukhari*, www.shamela.ws/, 3, 499