Sanctifying the New Moon

When the new moon first appears in the sky, that night (and the next day) is *Rosh Chodesh* - the first day of the new month. If the new moon appears on the 30th night (i.e. the night before the 30th day) then the old month is 29 days long. If the new moon appears on the 31st night then the old month is 30 days long.

The *Chachamim* had remarkably accurate mathematical models to predict precisely when the new moon was due to appear each month. The *Chachamim* from the tribe of *Issaschar* were particularly renowned for being experts in astronomy[1]. However, the *Beit Din* decided what day was *Rosh Chodesh* based on witnesses who actually saw the new moon and came to Jerusalem to testify. Why then did the *Chachamim* need their mathematical models?

There are at least 3 reasons.

Firstly, in our time we do not have a *Beit Din* that is qualified to receive the testimony of witnesses. Therefore, we are forced to rely on a fixed calendar that is calculated based on those mathematical models. In fact, today we are still using the calendar that was calculated by *Hillel* II about 1600 years ago.

Secondly, the *Beit Din* would test the witnesses by asking them various questions[2]. Through using the mathematical models the *Beit Din* could calculate at what time the new moon would appear, where it would be located in the sky and which way the crescent would be facing. By asking each witness some basic questions about the moon's appearance and location the *Beit Din* could establish the veracity of the witness.

Thirdly, as the *Rambam* explains[3], the mathematical models were used to ensure that the calendar remained in sync with the actual phase of the moon. This is explained as follows. The phase of the moon is slightly more than 29.5 days long. A calendar month can only be 29 or 30 days long. Slightly more than half of all months should have 30 days and slightly less than half should have 29 days (thus averaging out to slightly more than 29.5 days per month i.e. the length of the phase of the moon).

If valid witnesses saw the new moon on the 30th night and they testified in time, the *Beit Din* would declare that day to be *Rosh Chodesh* and the old month would be a short month of 29 days. If witnesses did not turn up in a particular month, then that month would automatically be a long month of 30 days. If witnesses did not turn up for a number of consecutive months (eg if the moon was not visible due to cloud coverage) then each of those months would by default be 30 days long and after a short while the calendar would no longer be synchronised with the phase of the moon. After a number of months a new moon might eventually be sighted on the 25th or 26th night of the month.

In order to avoid this outcome and to keep the calendar in sync with the moon, the *Beit Din* would sometimes designate short months of 29 days even if witnesses did not turn up. This was done if the new moon was not sighted for a number of months in a row. These short months were inserted based on calculations using the mathematical models to ensure that if the new moon was sighted on the next month it would appear on the 30th or 31st night, but not earlier.

Given the accuracy of the mathematical models, it seems that the question that we posed at the beginning of this article could be asked the other way around. That is, instead of asking why the *Beit Din* needed the mathematical models, a better question might be - why was the *Beit Din* required to rely on witnesses who took the trouble of travelling to Jerusalem to testify? The journey could be dangerous[4] and witnesses were even given permission to desecrate *Shabbat* in order to testify. Why couldn't the *Beit Din* simply rely on their mathematical models to determine when *Rosh Chodesh* should be?

As was noted in last week's *Mishnah Yomit,* sanctifying the new moon allows the Jewish people to have a part in determining what day *Yom Tov* will be. We are literally partners with *Hashem* in bringing *kedusha* to the world. When the witnesses embarked on the journey to Jerusalem to testify they were actively participating in this partnership. Perhaps the lesson that we can learn is the importance of actions. *Hashem* wants us to be actively involved in carrying out His work in this world.

Allon Ledder

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[1] See *Rashi* to *Bereishit* 49:15
[2] See *Mishnah* 6 of *Perek* 2

[3] *Hilchot Kiddush Hachodesh* 18:5-9
[4] As we see in *Mishnah* 9 of *Perek* 1

Revision Questions

ראש השנה ב' :א' – ג' :ה'

- How would they verify the trustworthiness of the witnesses? (ב' :א')
- Why was this verification necessary? (ב' :א')
- Initially, how did the *Beit Din* inform everyone of *Rosh Chodesh*? (ב' :ב'- ג')
- Why was this system changed and with what was it replaced? (ב' :ב')
- What were the contents of the *masu'ot*? (ב' :ג')
- How many mountain tops were involved in the *masu'ot*? (ב' :ד')
- What was the name of the courtyard in *Yerushalaim* where all the witness of the new moon would gather? (ב' :ה')
- What decree did *Rabban Gamliel* institute for the benefit of those witnesses? (ב' :ה')
- How would they interrogate the witnesses? (ב' :ו')
- What were the four questions that they were asked? (ב' :ו')
- After two witness testimonies were confirmed, why would they interrogate more witnesses? (ב' :ו')
- Explain the debate regarding when the *Beit Din* would not declare "*mekudah*" for a new month. (ב' :ז')
- What innovation did *Rabban Gamliel* employ to assist in interrogating the witnesses? (ב' :ח')
- What were the two cases of apparent "*edut sheker*" that *Rabban Gamliel* accepted? (ב' :ח')
- Describe the event that occurred following *R' Yehoshua*'s disputing the ruling of *Rabban Gamliel* to sanctify the month based on apparently questionable testimony. (ב' :ט')
- What is the law if the entire nation saw the new moon, yet *Beit Din* did not have enough time to say "*mekudash*" before night fall? (ג' :א')
- How would *Beit Din* proceed if they alone saw the new moon? (ג' :א')
- What qualifies as a *shofar*? (ג' :ב')
- Describe the ideal *shofar*? (ג' :ג')
- Explain how the *shofar* would coordinate with the *chatzotzrot* in the *Beit Ha'Mikdash* on *Rosh Hashanah*. (ג' :ג')
- Explain how the *shofar* would coordinate with the *chatzotzrot* in the *Beit Ha'Mikdash* on a *ta'anit*. (ג' :ד')
- In what respects was the *tekiyot* on *yovel* similar to those on *Rosh Hashanah*? (ג' :ה')

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Next Week's Mishnayot…

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	שבת קודש
4th June ח' סיון Rosh Hashanah 3:6-7	5th June ט' סיון Rosh Hashanah 3:8-4:1	6th June י' סיון Rosh Hashanah 4:2-3	7th June י"א סיון Rosh Hashanah 4:4-5	8th June י"ב סיון Rosh Hashanah 4:6-7	9th June י"ג סיון Rosh Hashanah 4:8-9	10th June י"ד סיון **Taanit 1:1**