

Section 2

Sanctifying the Month

The first topic addressed in *Adderet Eliyahu* concerns the proper setting of the calendar, including the setting of the day, the month, and the year. A major part of that section deals with astronomical details (some of which may be used to predict the visibility of the crescent moon) that I have chosen not to include in this abridgement. I have also omitted most of Rav Bashyatzi's extensive rebuttals of Rabbanite claims against the Karaite position. Furthermore, I do not include *Adderet Eliyahu's* explanation of the Rabbanite 19 year cycle. The topics I will cover are listed below:

1. Defining the term "erev" ("evening")
2. Determining the start of the biblical day
3. How we know the month is set according to the new moon
4. How the month is set when the moon may be spotted visually
5. The Method of Approximation (*i.e.*, how the month is set when the moon may not be spotted visually and why when we cannot perform the mitzvot in their ideal form we nevertheless do our best to fulfill them via the method of approximation)
6. Qualifications of the witnesses involved in setting the month
7. Qualifications of the judges involved in setting the month
8. The aviv and the leap month

Finally, I would like to recommend Karaite-Korner.org's article on the *aviv* as a fitting supplement to this section.

"It is so that the [proper observance of] the mitzvot are dependent on set times such as morning, evening, day, night, month, week, and year. It is therefore proper that we first expound on these times before we begin to expound on the mitzvot of the Torah " – Prelude to *Adderet Eliyahu's* section on sanctifying the month.

§2.1 Defining the term "Erev" ("evening")

Many of the Karaite sages, including Rav Bashyatzi, held that there are three astronomical events that are called "erev" ("evening").

- The "1st erev" is when the sun begins to disappear behind the horizon;
- The "2nd erev" is when the sun has just disappeared behind the horizon and its rays of light start to disappear, and;
- The "3rd erev" is when the rays of the sun's light disappear completely behind the horizon and darkness begins.¹

The term "*bein ha'arbayim*" means literally "between the evenings" and refers to the time between the "1st erev" and the "3rd erev."²

¹ The time between the "1st erev" and the "2nd erev" is commonly referred to as "sunset." The time between the "2nd erev" and "3rd erev" is commonly referred to as "twilight."

The term “*erev*” also has a fourth meaning. It is used synonymously to mean “*bein ha’arbayim*” since we find written in Deuteronomy 16:6 that the Passover sacrifice³ is to be given in the evening and then in Exodus 12:6 that it is to be given “*bein ha’arbayim*.” It therefore seems that both these terms refer to the same period of time.

The meaning of the term “*erev*” is related to the verb “*lehitarev*” (“to mix”) since it is during the evening that the forms of objects become mixed together and difficult to distinguish visually.

Notes on §2.1:

The reader may find it odd that the term “*erev*” can have any one of four meanings (*i.e.*, start of sunset, start of twilight, end of twilight, and *bein ha’arbayim* which is sunset+twilight). Yet there is reason to believe that most of these four definitions are valid:

1. The term “*bein ha’arbayim*,” which literally means “between the evenings,” implies that there are at least two astronomical events referred to as “*erev*.” Defining “*bein ha’arbayim*” as the time between the “1st *erev*” and the “3rd *erev*” is consistent with the Torah’s usage of this term (this will be discussed further in the laws of the Passover sacrifice).
2. The fact that the Passover sacrifice is described as occurring both in the “*erev*” and “*bein ha’arbayim*” suggests that the fourth definition of *erev* (sunset+twilight) has merit.
3. At the same time, we know that certain impurities are annulled at “*erev*.” This suggests that *erev* is not only a span of time as in the fourth definition but in some cases also a specific point in time as in the first three definitions.
4. I am unaware of any biblical verse strongly suggesting that the second astronomical event, *i.e.* the start of twilight, is referred to as “*erev*.” Some of the Karaite sages held that there were only two astronomical events referred to as “*erev*.” In the view of those sages, “*erev*” refers only to the first astronomical event (*i.e.*, the start of sunset) and the third astronomical event (*i.e.*, the start of darkness). As far as I know, whether the second astronomical event is called “*erev*” has no *halakhic* ramifications. Thus, this is a purely linguistic point.

I should note that no verse or collection of verses will definitively prove the meaning of the word “*erev*.” We learn the meaning of the Torah from our knowledge of the Hebrew language not *vice versa*.⁴ Thus, we must to some extent rely on our linguistic tradition to know the definition of “*erev*.” We can confirm that this particular tradition is plausible by showing (as we have above) that our definition is consistent with how the word is used in *Tanach* but we can offer no absolute textual proof. We will discuss many precise definitions of Hebrew words throughout this work, so this is an important distinction to keep in mind.

² Rav Bashyatzki does not seem to have been concerned with whether “*bein ha’arbayim*” was between the “1st *erev*” and “3rd *erev*” or between the “2nd *erev*” and “3rd *erev*.” Because sunset is so short, for practical purposes the two opinions are equivalent. His word choice when discussing “*bein ha’arbayim*” in the laws of *Pesach* (*Inyan Pesach* Ch. 3) arguably suggests that he held it was between the “1st *erev*” and the “3rd *erev*,” but the language is somewhat ambiguous and I am uncertain which position he actually held. The term “between the evenings” is discussed further in the section on the *Pesach* sacrifice and I used some of that information in my abridgement here.

³ In the *Tanakh*, the word *Pesach* (usually translated as “Passover”) refers specifically to the Passover sacrifice. The week-long holiday we call “Passover” in English is called *Chag Hamatzot* (the “Feast of Unleavened Bread”) in the *Tanakh*.

⁴ The exception to this general rule is terms introduced to the Hebrew language at Sinai. For example we expect to learn the meaning of the word *Shabbat* in the Torah because *Shabbat* (as commanded in the Torah) did not exist before Sinai. These terms are called “Torah terms” and will be discussed further in the Section on *Shabbat*.

§2.2 Determining the start of the biblical day

§2.2A *The day begins in the evening*

The Torah prefers to use clear and unambiguous signs and it is for this reason that the biblical day begins in the evening. A starting point for the day such as midnight is undesirable because it is not easily identified without the aid of special measurements or technology, but the evening can more easily be identified with the naked eye.

Numerous verses demonstrate that the biblical day begins in the evening. First, we find written regarding the first day of creation: “and there was evening and there was morning: one day” (Genesis 1:5) as opposed to “and there was evening and there was morning, the first day”. This is because the Bible is on the first day defining one complete day as an ordered sequence of evening and morning. This is in contrast with the other days of creation about which we find written “and there was evening and there was morning a second day”, “a third day”, *etc.* Thus, after the defining a day as an ordered sequence of evening and morning, the Torah refers to the events on the subsequent days only by numbering the days of creation.⁵

Furthermore, we see that *Yom Kippur* starts in the evening and ends in the evening as it is written “from evening to evening you shall keep your Sabbath” (Leviticus 23:32). Since *Yom Kippur* means literally “day of atonement”, this implies that any day begins and ends in the evening. Similarly we find written that, “on the fourteenth day of the month in the evening you shall eat *matzot* until the 21st day of the month in the evening” (Exodus 12:18) and also “seven days you will eat *matzot*” (Exodus 12:15). The first of these two verses shows that the “seven days” mentioned in the latter verse begin and end in the evening.

Finally, we see that day long impurities are annulled in the evening (e.g., Leviticus 22:6) suggesting that the day begins and ends in the evening.

Notes on §2.2A:

The reader may have noticed that even though *Hag Hamatzot* begins on the 15th day of the month, Exodus 12:18 reads “on the 14th day of the month in the evening you shall eat *matzot* ...”. Similarly, *Yom Kippur* is described as beginning on the evening of the 9th day of the month (Leviticus 23:32) even though it is known to be on the 10th of the month (Leviticus 23:27).

The sages held that whereas regular days begin at “3^d *erev*” (see §2.2B below), holidays begin at “1st *erev*” so that we might prolong the holiness of the day. Some of the sages argued that this practice of prolonging holidays was biblically sanctioned because of the wording of the verses above. In their eyes, the verse tells us to start *Yom Kippur* on the 9th day because we are meant to start the holiday early at “1st *erev*” the day before.

⁵ I have found a potential weakness in this proof. We find written: “the one lamb you shall offer in the morning and the second lamb you shall offer *bein ha'arbayim*” (Numbers 28:4) as opposed to “the first lamb...”. This suggests that saying “one” may simply be alternative way of saying “first” and that the special meaning assigned to the description of the first day is misplaced.

I think a more likely explanation is that biblical Hebrew considers the “3rd erev” as being part of the day before just as much as it is part of the new day. After all, the “border” between two days can just as easily belong to the 1st day as to the 2nd.

Not all of the sages maintained that the practice of starting the holidays on the “1st erev” was derived from the verses discussed above. Thus, my suggested interpretation should not be understood as a refutation of this practice.

§2.2B The day begins at “3rd erev”

The Karaite sages hold that the day begins at “3rd erev”, that is it occurs at nightfall when the light of the sun is no longer visible (*i.e.*, the end of twilight). Rav Bashyatzi offers the following proof of their position:

We find written that the Passover sacrifice was given on the 14th of the month during “*bein ha’arbayim*” (Exodus 12:6) and further that the morning after the Passover sacrifice was referred to as the 15th of the month (Numbers 33:3)⁶. If “*bein ha’arbayim*”, the time between the “1st erev” and “3rd erev”, is on the 14th of the month and the day begins on one of the astronomical events referred to as “erev,” then it follows that the day must begin on the third erev. Otherwise, the morning after the “*bein ha’arbayim*” of the 14th day of the month would still be the 14th day establishing a contradiction with Numbers 33:3 which claims the morrow after the Passover is the 15th day.

I have provided the figures on the following page to help clarify the logic of this proof. Both figures depict the Passover as being on the 14th day of the month at twilight in accordance with Exodus 12:6. Figure A depicts the hypothesis that the day begins on the first evening. Figure A contradicts Numbers 33:3 which states that the morning after the Passover is the 15th. Figure B depicts the hypothesis that the day begins on the third evening and is consistent with all relevant bible verses.

Furthermore, as already noted, the Torah prefers to use clear and unambiguous signs. It is difficult in valleys and places of low elevations to tell when the first two evenings (sunset) occur. However, the third evening (nightfall) is clearly visible to all.

⁶ Translations of Numbers 33:3 tend to read “on the fifteenth day of the month; on the morrow after the Passover”. It is important to note, however, that the term “*machorat*” in Hebrew means “morning after” not “following day”.

Figure A:

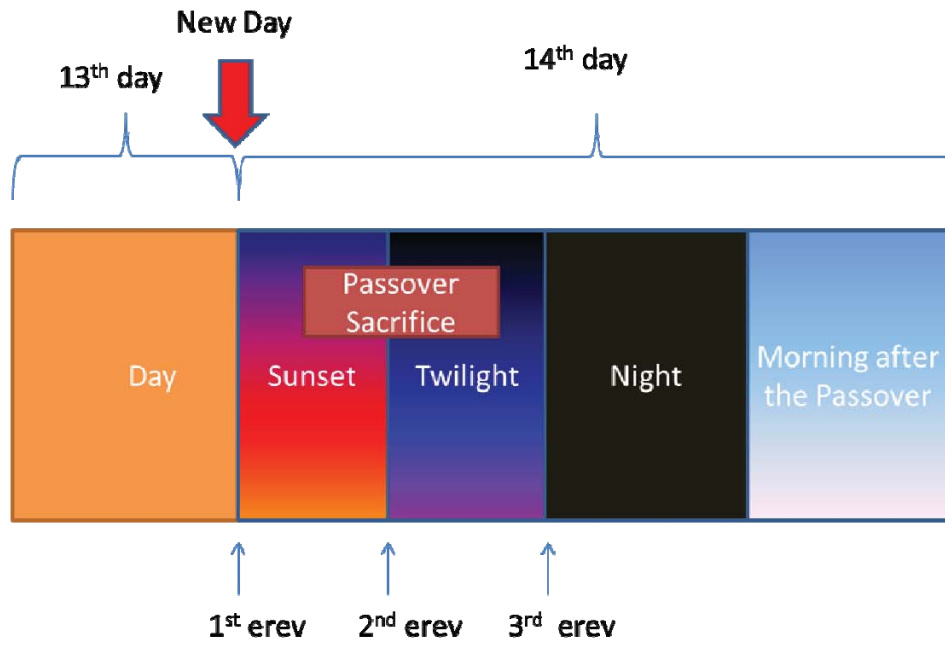
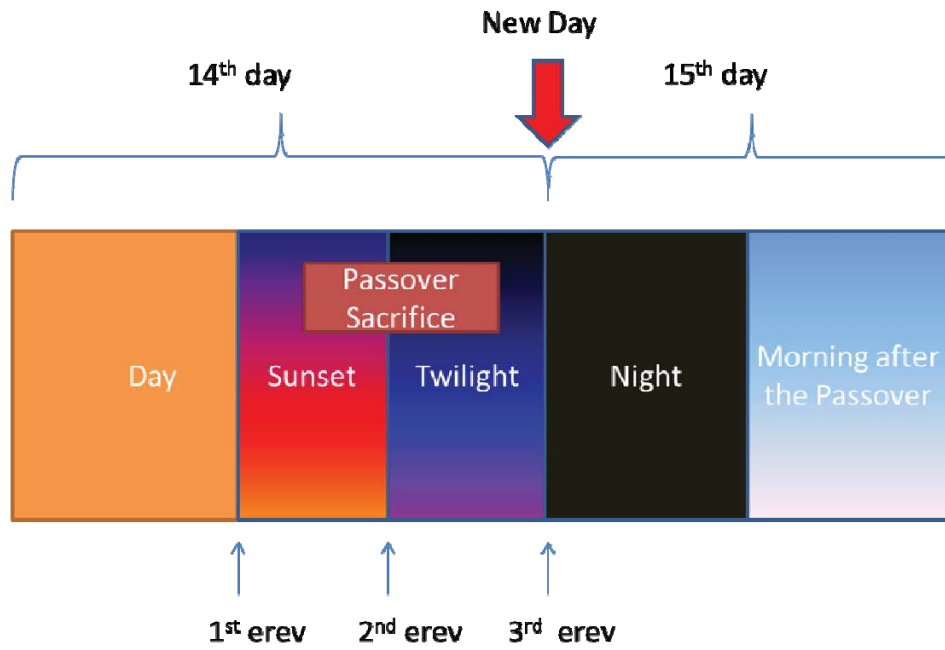


Figure B:



Notes on §2.2B

I offer an alternative proof that the day begins at “3rd erev”. Regarding the two daily offerings, we find written that “the one lamb you shall offer in the morning and the second lamb you shall offer *bein ha’arbayim*” (Numbers 28:4). If the day were to start on the “1st erev” or the “2nd erev,” then the lamb offered *bein ha’arbayim* (between the “1st erev” and “3rd erev”) should have been labeled the “first lamb” since it would be the first lamb offered after the start of the day. However, because the day starts at “3rd erev”, it is labeled the 2nd lamb since the first lamb to be sacrificed after the “3rd erev” is the morning lamb.

Why did Rav Bashiatzki not use this proof? Some of the sages believed there was a difference between “days of creation” (regular calendar days) and “sacrifice days” in that “sacrifice days” begin in the morning not the evening. To someone who holds by this distinction the proof above would be meaningless. The daily offerings would naturally be numbered according to the start of the sacrifice day (the morning), thus the morning lamb would be the first lamb regardless of whether or not the calendar day begins on the third evening. Indeed, the discussion of this verse in *Gan Eden* suggests that the sages must have been aware of this potential proof but rejected it for this very reason (*Gan Eden, Inyan Pesach* Ch 2).

§2.3 How we know that the month is set according to the moon

There is no explicit commandment confirming that the month is set according to the moon; but there are several methods by which we can deduce this. First, according to many of the sages, the method for setting the months existed pre-Sinai and the Torah upheld the practice implicitly by making numerous references to the month without explicitly re-commanding the practice, since the Israelites already knew how to set the month. This is an example of *Sevel Hayerusha*⁷.

We also know that the calendar is set according to the celestial objects as it is written “let there be lights in the expanse of the heavens to divide day from night and let them be as signs [for] appointed times and for days and for years” (Genesis 1:14). The fact that the month is called “*chodesh*” (from the verb “*lechadesh*” meaning “to renew”) implies that it is set according to the renewal of one of these celestial objects. Neither the sun nor the stars are seen to experience any sort of periodic renewal. This means the month must be set according to the moon. This method uses linguistic analysis (a Form-6 *hekeish*).

We see that the month is sometimes called moon, as in Exodus 2:2, suggesting that the month is directly related to the moon. This method of deduction also uses linguistic analysis.

⁷See §1.6 and the corresponding notes for more on *Sevel Hayerusha*.

§2.4 When the month begins

§2.4a *The sign that marks the beginning of the month*

The new crescent moon being first visible after sunset is the sign that marks the beginning of the month. If the new crescent is first visible after sunset,⁸ the new month then begins when the new day begins, *i.e.*, at “3rd *erev*.” The sages discuss seven different potential points in the moon’s cycle from which the month could begin but reject all but the new crescent moon being first visible after sunset. Rav Bashyatzi notes that for the sake of brevity, he will not discuss the details of why the sages preferred this one over the other six and refers the reader to Rav Levi ben Rav Yefet’s compilation of Karaite law which apparently discusses this in depth.

Rav Bashyatzi does note, however, that the month is composed of complete days⁹ and that therefore it must begin at the start of the biblical day (*i.e.*, in the “3rd *erev*”). Further, as we have previously noted, the Torah prefers to use clear signs. The new moon is most clearly visible when darkness begins and there is no sunlight to interfere with the light of the moon.

§2.4b *Using the local moon as opposed to the moon in Israel*

The Karaite sages maintained that the month should begin according to the visibility of the local moon.¹⁰ Thus, depending on one’s geographic location, the month can begin on different days. This contrasts with the Rabbanite opinion which states that the *beit din* in Jerusalem (sometimes called the Sanhedrin) would set the calendar globally according to the moon there.

A major reason supporting the Karaite position is that they believed the practice of keeping the month according to the new moon existed before Sinai and was the same system was used by many non-Israelites. The Torah then implicitly upheld this practice (see §2.3). Prior to Sinai there would have been no reason to prefer Jerusalem as the location from which the month was set. Therefore it stands to reason that the month was set according to the local moon.

Another argument for the Karaite position is that the day begins according to the local evening. Thus, we already know that the calendar is sometimes dependent on local astronomical events and the claim that we should use the local moon to set the month is less surprising.

Yet another argument is that in the Babylonian Exile the Jews would set the moon according to the moon in Babylon. In those days, there was no *beit din* in Jerusalem; so the Rabbanite position was

⁸Note that the sages hold the new crescent must be first visible after sunset. What if the new crescent is first visible before sunset? Will it not then, as a consequence, also be visible after sunset? According to the sages it is an astronomical fact that first seeing the moon before sunset indicates that one missed seeing the new moon after sunset the day before although it was theoretically visible. Thus if one sees the moon before sunset, one knows that the present day is the start of the month and the upcoming day is already the 2nd day (*Adderet Eliyahu Inyan Kidush Hachodesh* Ch 16).

⁹The phrase “a month’s worth of days” (as in Genesis 29:14 and 2 Kings 15:13) further supports Rav Bashyatzi’s already very strong assumption that the month is composed of complete days.

¹⁰This is also the current majority view of the Karaite Council of Sages in Israel.

certainly not adopted by the exilic community.¹¹ There were among the Jews in Babylon prophets¹² thereby confirming that the practice of the Babylonian exiles was correct.

Furthermore, the Rabbanites themselves say that “Rabbi Akiva set months and intercalated [leap months for the] year while outside of Israel”¹³. Clearly, Rabbi Akiva did not act according to the *Beit Din* in Jerusalem, nor did he act according to the pre-calculated calendar which had yet to be implemented. This suggests that even amongst Rabbanites it was once the practice of some exilic communities to set the months according to the moon in their location.

In order to keep the calendar according to the *Beit Din* in Jerusalem, the Rabbanites claim that Jews living far from Jerusalem should keep two days for all of the Mosaic holidays (except *Yom Kippur*) because they would not know in time for the holiday what the *Beit Din* had declared. However, a community more than 30 days travel from Jerusalem would have already begun a second month by the time they heard the *Beit Din's* report regarding the first month in question¹⁴. This would lead them to become impossibly confused regarding the calendar. We know that the *mitzvot* were given only according to our ability to complete them (see §1.1), so the Rabbanite system cannot be correct. However, if the month is set according to the local moon this problem is resolved.

Notes on §2.4b

The classical Karaite system of setting the month according to the local moon necessitates communities in different geographical locations keeping months that differ by up to a few days. Especially today when these geographically distant communities are brought in close contact by near-instantaneous communication with each other, this may seem unusual to modern Karaites.

Perhaps for this reason the theory that the month should be set globally according to the observation of the moon in Jerusalem has become popular in recent years amongst American Karaites. I am not very familiar with the arguments usually brought forth to promote this theory, but I will try my best to explore whether this theory has potential below.

While the Tanakh tends to be Israel-centric which might reasonably lead one to suspect that the global calendar should be set from Israel, we cannot derive halakha from a mere thematic tendency. A more concrete proof is

¹¹ Central to the Rabbanite position is that the Sanhedrin would declare the month. *Usually* they declared it according to the moon in Jerusalem. However, the Rabbanites held that the declaration of the *beit din* was both necessary and sufficient to begin the new month. If the Sanhedrin chose to declare the month knowing full well it was not in accordance to the moon, its declaration alone was *sufficient* to begin the month. The declaration of the Sanhedrin was also *necessary*, which is why the lack of a Sanhedrin in Jerusalem is a critique of the Rabbanite position. Without a Sanhedrin, the Babylonian community could not have kept the Rabbanite system. Furthermore the Rabbanite pre-calculated calendar in force today had yet to be established so they could not have relied on any known Rabbanite system.

Rav Bashyatzki's point is not necessarily a valid criticism of the position that the moon should be set according to its visibility in Jerusalem irrespective of the *beit din's* declaration. Presumably, the Babylonian community could in some way have obtained the new moon information from Jerusalem even without an operational *beit din*.

¹² Such as Ezekiel.

¹³ Talmud Bavli Berachot 63a.

¹⁴ I think Rav Bashyatzki's point is that they would have to keep more than 2 days of *Yom Tov* to be sure they were keeping the right day. Since every month is either 29 or 30 days, a Rabbanite community less than one month away from Jerusalem is uncertain of at most one day (the 30th day of the previous month). However, a community living more than 1 month away would be uncertain of at most 2 days (the 30th day of the previous month and the 30th day of the 1st month of travel). Thus, the further one travels from Jerusalem, the more days of *yom tov* one must theoretically keep to be sure that one is keeping the “right” day according to the declaration of the Beit Din in Jerusalem.

required. Furthermore, such a proof must explain why there is no explicit description of how to set the month in the five books. Although we can guess that the month was set using the moon through roundabout methods such as parsing the word “*chodesh*”, this method is not definitive. The fact that “*chodesh*” comes from the Hebrew verb meaning “to renew”, does not definitively prove that the month must be set according to the renewal of the moon. Furthermore, it seems unusual that God would “hide” a commandment in the Torah by expecting us to parse the word “*chodesh*”. Finally, Israelites presumably first began using the word “*chodesh*” to describe the month only because they were already setting the month according to the renewal of the moon. They certainly would not have adopted the name “*chodesh*” in anticipation of the month being redefined at Sinai.

The classical Karaite theory for setting the month explains the absence of an explicit commandment by claiming that the method of setting month was already contextual information known to the Israelites before Sinai and thus not written down. It has, however, been remembered through *sevel hayersusha*. It seems to me that any Israel-centric theory would similarly have to utilize *sevel hayerusha* to explain the lack of an explicit commandment regarding the month. Keeping this in mind, I can think of two potential ways to prove an Israel-centric theory:

1. Prove that the pre-Sinaitic tradition of using the moon that the Karaite sages inherited was somewhat corrupted over time. Namely, show that although the month was indeed set using the moon before Sinai, it was set using the moon in Israel not the local moon. In other words, revise *sevel hayerusha* by checking it for consistency with Scripture. If the part about the local moon contradicts scripture, reject that parts and keep the rest.
2. Alternatively, one could maintain that pre-Sinai the local moon was used, but that some aspects of the biblical legal code implicitly required that the system post-Sinai globally use the Israeli moon. In other words, prove that in order to avoid a contradiction in the biblical legal code, the Israelites must have changed the way they set the month to use the Israeli moon.

If the Israel-centric system can be proved then I imagine the second method is more likely to be fruitful. Perhaps, there are alternative ways of proving such a system that I cannot think of. I would be very grateful if someone supporting the Israel-centric system could thoroughly and rigorously explain the theory behind their practice.

§2.5 The Method of Approximation

§2.5a Justification of the Method of Approximation as a General Principle

When we cannot know or complete something in its ideal form we must strive to know or complete it as best we can through the “method of approximation”¹⁵ (“*da’at hahakrava*”). For example, when we cannot set the month by an actual sighting of the new moon due to complications (*i.e.*, cloudy weather), we may rely on astronomical calculations to set the month. We have found the method of approximation to be a general rule applying to secular matters and also as a general rule applying to *mitzvoth*. The Karaite sages provide examples of the “method of approximation” being used for both secular matters and *mitzvoth*.

We begin by discussing the examples pertaining to secular matters. *First*, one generally eats food prepared by others without knowing absolutely that it is free of deadly or poisonous substances. In this case, one is guessing as to the present state of some matter.

¹⁵ As previously discussed in §1.1

Second, people will immigrate to some far away country in the hopes of improving their economic well-being, having heard that there are economic opportunities in that country. In this case, one is guessing as to the future state of some matter, because one does not know for sure that they will accumulate wealth once having arrived in that country.

Third, if a man sends his sons or his property ahead of him to some place, he may rest easy that they arrived at that place by seeing signs that they arrived there or evidence that they had been there. In this case, one is guessing as to the past state of some matter.

We may now discuss the examples of the method of approximation being used in *mitzvot*. *First*, we find that one may eat from a *shelamim* offering the day the offering is made or on the morrow but not later than that (Leviticus 19:6). Only people who are ritually impure may eat from a sacrifice¹⁶. Thus, the Torah permits us to eat of this certain sacrifice on the day it is made or the on the morrow, because we likely remained pure during the first night while we were sleeping, although having been unconscious we cannot be sure of this. However, by the third day we are forbidden from eating it because we have in all likelihood become impure by then. In this case, the Torah is using the method of approximation to guess that one is not impure after one night but likely impure by the third day¹⁷.

Second, we eat meat that has been slaughtered by others whose expertise we trust. In this case we, are using the method of approximation to justify that the slaughtering was done properly, even though we cannot be certain of this.

Finally, the strongest example of the method of approximation used by the Torah is that judges must base their ruling for any transgression on the testimony of at least two witnesses¹⁸. If witness testimony were a perfect indicator of guilt or innocence then only one witness should be required. However, because the Torah is expecting the judge to use the method of approximation to determine guilt, it requires the testimony of at least two witnesses so that the conjecture he makes is strong.

Therefore, we may conclude that the method of approximation should be used to fulfill the mitzvot when they cannot be fulfilled in their ideal form.

In the conclusion of the Karaite sages, this general principle also applies to the setting of the month.

§2.5b Setting the Month with The Method of Approximation

The method of approximation allows us to declare the beginning of the month according to astronomical calculations when actual sightings of the new moon are not possible. These calculations allow us to know when the moon would be visible, even if it is obstructed by clouds or not visible for some other reason. Even if the calculations do not allow us to know for certain when the moon will be

¹⁶ Leviticus 7:19

¹⁷ The Torah does not give potential impurity as the reason for the prohibition to eat the sacrifice on the third day. The sages assume that it is due to the risk of having become impure. This assumption is strengthened, however, by the fact that in Leviticus 7:18-19 both impurity and leaving the sacrifice until the third day are discussed together and given the same solution (burning the remainder of the sacrifice in fire).

¹⁸ Deuteronomy 19:15

visible on some day, if they suggest that the moon will be more likely than not visible on a given day we should declare said day to be the beginning of the month until it is shown to be some other day. There are observations we can make after the first day of the month to determine with precision when the first day occurred.

In the event that we cannot determine when the month begins in time for a biblical holiday, then we should keep two days for that holiday to be sure we do not sin by desecrating a holiday (you need only keep at most 2 days because every month is either 29 or 30 days). This happens from time to time, especially for *Yom Teruah* which is on the first day of the Seventh Month.

§2.6 Qualifications of the Witnesses and Judges setting the month

§2.6a The permissibility of relying on a single witness

Although we find written that we must rely on at least two witnesses:

“One witness shall not rise up against another person for any iniquity, or for any sin in any sin that he commits, according to two witnesses, or according to three witnesses, shall a matter be established” (Deuteronomy 19:15).

In the case of setting the month, we may rely on only one witness. This is for several reasons.

First, we find that the verse specifies that “one witness shall not rise up against another person.” Setting the month is not a case of one person accusing another, so this requirement does not here apply.

Second, not only is this not a case between two people, but the act of setting the month does not inherently involve an evil act. Two witnesses are required only when an evil act is in question. We see this when the requirement of having two witnesses is repeated in the case of someone being accused of Idol Worship (Deuteronomy 17:6)¹⁹.

Third, when the case involves a matter of life or money, then it is likely that some party stands to gain by giving false testimony or bribing the witnesses. However, in the case of setting the month no one stands to gain from the testimony of the witnesses because the whole community keeps the same month. There are some exceptions to this, for example, if one is known to enjoy the attention received when reporting a new development he may stand to gain by claiming he saw the new moon a day before it is actually visible.

¹⁹ I'm not entirely sure why Rav Bashyatzi is concerned with whether the witnesses are testifying in a case involving “an act that is inherently evil” (I am here directly translating Rav Bashyatzi's phrasing: “*Sheetzem hape'ulah ra'ah*”). Perhaps his argument is that the requirement of two witnesses exists to protect the accused from punishment. Punishment is only used in cases where some evil act was allegedly performed. Therefore, the requirement for two witnesses is only for cases involving some evil act.

§2.6b Requirements of the witness

The witness must be a man or woman who satisfies these criteria:

1. He must be of sound mind and capable of observing the moon.
2. He should not differ in opinion from our sages regarding how to set the month. For this reason, Rabbanite testimony should not be accepted. However, Rav Levi notes that we should accept the testimony of anyone who is known to be reliable and inclined to tell the truth (including Rabbanites). We may accept testimony from Muslims regarding the month, because in almost all cases their months align with ours.
3. He must take the mitzvot seriously.
4. He must not be haughty or hold his own opinion in such high regard such that he would try and force his fellow community members to keep the month according to his opinion by giving false testimony.
5. He should not be someone who likes the attention given to those who report new developments.
6. He should not be a liar.

Further, a testimony is rendered invalid if the witness' claims as to the timing, location, or orientation of the moon are known to be astronomically impossible. If a judge is uncertain as to whether a testimony is valid, he may ask for details if the witness' claims are astronomically plausible. For example, he might ask for the precise time and location in the sky where the witness allegedly saw the moon to determine whether his testimony is valid.

§2.6c Testimony of the new moon on Shabbat

One should not travel and violate Shabbat in order to give testimony regarding the new moon. In such cases, one should hold according to the method of approximation.

§2.7 Qualification of the judges setting the month*§2.7a The need for Judges*

Rav Bashyatzi notes that he has not found any previous Karaite sage who explicitly discusses the qualifications of the judges who are involved in setting the month. However, he believes that the need for judges setting the month and their qualifications are hinted at in their works.

Rav Bashyatzi argues that judges are essential to setting the month because someone well versed in how to set the month is needed to critically analyze the testimony of the witnesses. This is especially true if the method of approximation is being invoked since it often requires astronomical knowledge. Furthermore, he argues that, without judges, the month would simply be kept according to the majority opinion of the uneducated laymen in a given community. Rav Bashyatzi brings quotations and other forms of evidence to demonstrate that his opinion is consistent with that of previous sages.

§2.7b Requirements of the Judges

The following are the requirements of the judges:

1. There should be at least three judges. This is just as Rav Yeshua ben Yehuda said that “[testimony regarding the month should] be brought to those well versed in the matter”. Since Rav Yeshua is speaking in the plural, there must be at least two judges. Further, we must add a third judge to act as a “tie breaker” because the first two judges might disagree with each other. From this we may conclude that we need three judges for all matters (not just setting the month). This is in accordance with the Rabbanite saying: “There is no judgment at the hands of one person”²⁰.
2. The judges should be knowledgeable and well-versed in setting the month. This condition further implies that they should have knowledge of mathematics because when using the method of approximation one must have a strong basis in mathematics.
3. The judges should know how to read and investigate the *Tanakh*. They should also know should the methods of *hekeish*.
4. They should be well-versed in the various approximations used to set the month when the method of approximation is invoked.
5. They should fear God and accept the Torah. They should not be arrogant nor desire to see their words upheld simply for the sake of personal glory.
6. If it is possible to find judges who are also well versed in astronomy, they should be selected to set the month.

Notes on §2.7:

There are two weaknesses with Rav Bashyatzi’s argument that a court of three judges is required. First, Although Rav Bashyatzi arguably shows that the requirement of having at least three judges (a *beit din*) is consistent with Rav Yeshua’s beliefs, he does not offer a biblical justification for this concept. Second, his reading of Rav Yeshua is unconvincing. It seems odd that if Rav Yeshua intended there to be at least three judges he would have expressed this by saying that the matter be brought to “those well versed in the matter” and assumed that the reader would understand this means at least three judges. It would have been easier for him to simply say “there should be at least three judges”. Rav Yeshua’s work is today extant only in fragments to which I do not have access. Therefore, I cannot verify Rav Bashyatzi’s reading of Rav Yeshua.

§2.8 Setting the year and The Aviv

If the aviv (the ripening barley) is ready by the time of the new moon, we declare a new year when the new month begins at the time of the new moon. If it is not, we add a 13th month to the previous year.

§2.8a How the Year is set after Sinai vs. How the year was set Before Sinai

It is clear that from the time we received the Torah at Sinai, we were required to declare the first month of our year according to the *aviv*. First, we find written “keep the month of the *aviv* and observe the Passover sacrifice, for in the month of *aviv Hashem* your God brought you out from Egypt at night time”

(Deuteronomy 16:1).²¹ The commandment to “keep the month of the *aviv*” is a commandment to declare the first month according to the *aviv*. Second, we know that in order for the *omer* offering to be offered at the correct time (on the Sunday of *Chag Hamatzot*), the barley must have been ripe and ready to offer. Thus the first month should happen on the first new moon when the barley is ripening, so that the barley would be ready in time for the *omer*.

It is less clear how the year was kept before Sinai. In Genesis we find written regarding the sun, moon, and stars “and they shall be as signs for season, for days, and for years” (Genesis 1:16). Some of the sages believe that when the verse talks of the celestial objects setting the “years” it is referring to the calendar in use before Sinai. According to these sages, prior to Sinai the year was set according to the motion of the sun²². Others believe that the *aviv* was used even before Sinai.

Still others believe that while the year was set according to the motion of the sun before Sinai, Genesis 1:16 is equally applicable to both the pre-Sinai calendar and the post-Sinai calendar. Since the *aviv* ripening is dependent on the seasons, the *aviv* based calendar is indirectly based on the sun and Genesis 1:16 thus refers to both calendars. In any case, all agree that today the year must be set according to the *aviv*.

§2.8b Where the *Aviv* must be seen

Although Moses tells the Israelites “today you are leaving in the month of the *aviv*” (Exodus 13:4) while they are still in Egypt, the *aviv* must be found in the Land of Israel not in Egypt. Moses is here informing the Israelites that the barley has become *aviv* in Israel, and this verse should not be taken to mean that the *aviv* should be observed outside the Land of Israel. Indeed, the passage continues by saying “and it shall be when *Hashem* shall bring you into the land of the Canaanite, the Hittite, the Amorite, the Hivite, and the Jebusite, which he swore unto your fathers to give to you, a land flowing with milk and honey, you shall keep this service [*i.e.*, the redemption of the first born] in this month [*i.e.*, the month of *aviv*]” (Exodus 13:5). This suggests that when Moses is mentioning “the month of *aviv*” he is referring to the *aviv* in the Land of Israel.

Furthermore, the purpose of keeping the first month according to the *aviv* is so that the *omer* offering (which is an offering of barley) can be brought during *Hag Hamatzot* and so that the calendar is in sync with Israel’s agricultural cycle. This can only happen if the new year is set according to the *aviv* in Israel as the *aviv* in Egypt is often out of sync with the agricultural calendar in Israel.

Notes on §2.8b

The reader may find it surprising that whereas the month is set according to the local moon, the year is set according to the *aviv* in Israel. Since the Torah gives no explicit command for setting the month, the sages assume it is set according to the system in place pre-Sinai. It is not surprising then that it should be set according to the local moon since the secular practice accepted prior to Sinai had no reason to single out Israel. Regarding the year, however, we find an explicit verse commanding us to keep the year according to the *aviv* (Deuteronomy

²¹ We are told elsewhere that the month we left Egypt shall be the first month of our year (Exodus 12:2).

²² Of course today we would describe this as the motion of the earth around the sun not vice versa.

16:1). This allows for the possibility that the setting of the year was redefined at Sinai. This is why the Karaite sages have no issue claiming that the month is set according to the local moon but that the year is set according to the barley in Israel.

§2.8c *The precise form of the Aviv*

The word “*aviv*” describes the barley stalk at specific stage in its development. Barley goes through three stages of maturation. First, the barley is green and relatively moist. Second, the barley begins to turn goldish and loses some of its moisture. The barley in this stage is known as *aviv*. Finally, the barley turns completely gold and becomes dry. At this stage, the barley is ripe and ready to harvest.

The Definition of *aviv* as the second stage of development is consistent with the usage of the term “*aviv*” in *Tanach*. For example, the seventh plague to hit Egypt was hail. The Torah tells us that, because of the hail, “the flax and the barley were smitten, for the barley was *aviv* and the flax was in the bloom. But the wheat and the spelt were not smitten; for they ripen late” (Exodus 9:31-32). It is known that if the barley were struck while still green (the 1st stage) it would fall to the ground and then grow back. The same is true for other crops, and the Torah records that the wheat and the spelt survived the hail because they were not yet ripe. If struck in the second stage (*aviv*) or third stage (*i.e.*, full ripeness), however, the barley would be unable to grow back. The term *aviv* thus refers to either the 2nd or 3rd stage.

Furthermore, we see that barley in the state of *aviv* can have its seed parched in fire and given as a meal offering (Leviticus 2:14). It is known that parched barley seeds are best when the barley is parched in the second stage of its development.

The third stage is when the barley is ready for harvest. It takes two to three weeks for the barley to change from the second stage to the third stage. Furthermore, the barley must be *aviv* around the beginning of the first month (two or so weeks before *Hag Hamatzot* which begins on the 15th). All this suggests that the second stage of development is the *aviv*. In this way, the barley will reach the 3rd stage by the time of *Hag Hamatzot*.

§2.8d The Rabbanite Calendar

Rav Bashyatzi notes that in his day in places far from Israel it had become too difficult to set the year according to the *aviv*. According to Rav Bashyatzi Karaite communities throughout the world had begun using the Rabbanite 19 year cycle to intercalate the leap month. He does note, however, that Karaite communities in Israel or in nearby countries such as Egypt set the year according to the *aviv*.

Notes on §2.8d:

By the 20th century the use of the *aviv* amongst Karaites fell into disuse even in Egypt. In Israel today, Egyptian Karaites look for the *aviv* but generally do not set their month according to it. The potential of being a month off the rest of the Israeli population is perceived as too radical or inconvenient by much of the Karaite community. If the Council of Sages were to declare the year according to the *aviv*, they would risk fracturing the community.

There is also pressure from within the community to abandon the setting of the month according the Karaite system (even in the Israeli community). Some Karaites do not feel comfortable celebrating the holidays days apart from their Rabbanite brethren. In these difficult times, it is hard to tell what should be done. May the Karaite community soon see days when it will be able to keep the biblical calendar with ease.