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Halakhah Across Time and Space

Keren Stearns

Introduction

What would happen if a Rabbi went to the North Pole for a visit in early October, and the sun set on Friday night for about six months? What if he went to the North Pole in the summer, and the sun did not set on Friday evening? Would the Rabbi be obligated to keep his Jewish traditions of Shabbat, or would he be exempt? These are questions that are minimally discussed in classical Jewish literature, likely because populations in the Arctic regions are so sparse. In this paper, I explore a range of *halakhic* responses to these unusual situations, considering how Jewish discourse adapts as society changes.

Genesis begins with the creation story. When God created day and night, the Torah says, “וַיְהִי-עֶרֶב וַיְהִי-בֹקֶר יוֹם אֶחָד,” “And there was evening, and there was morning, one day.”

Many have interpreted this quote to mean that a day begins with the evening; therefore, Jewish holidays begin at sunset.¹ On the seventh day, God finished his work, declaring the day a holy one. Later, in the book of Exodus, God proclaimed that the Israelites should keep Shabbat. Today, the Jewish people rest just as God rested, in *imitatio dei*, from Friday at sunset until Saturday at sunset.² During Shabbat, other holidays, and as much as possible throughout the rest of the year, religious Jewish people follow *halakhah*, Jewish law.

Halakhah is originally prescribed in the Torah, and Rabbinic interpretations have become a traditional element to the ways Jewish people

practice the law today. *Minhag* is a term used to describe the customs and traditions tied into *halakhah*. The Torah has 613 *mitzvot*, or commandments; some commandments only apply to specific people, and others are not relevant today because of changes within our modern world, such as the Temple destruction.³ After the destruction of the Second Temple, sacrifices were replaced with daily prayer; this prayer is recited in the morning, afternoon, and evening.⁴ These adjustments allow those who want to maintain *halakhah* to do so as best they can. However, there are still laws today that are difficult to adapt because they are applicable to so few people.

It makes sense to have holidays last from sunset to sunset in locations that historically had a lot of Jewish people, considering that the time span is approximately twenty-four to twenty-five hours. However, the geographic areas north of the Arctic circle and south of the Antarctic circle experience the midnight sun, periods of daylight for over twenty-four hours, and polar nights, periods of darkness for over twenty-four hours.⁵ When rabbis interpreted the Torah's text and delineated the beginning and end of Shabbat based on the position of the sun, it is likely that they did not consider regions of the world where the sun follows a different schedule. Due to this anomaly, it seems unclear how rabbis would classify Shabbat in areas where a whole sun and moon cycle spans well over twenty-four hours. It becomes difficult for Jewish people to keep *halakhah* in the northern regions. For example, the people would not know when to recite the prayers, and they would not know when to begin holidays, including Yom Kippur, which involves fasting from sunset to sunset.

While it is true that not many people live in the Arctic regions, there still are people who do. More so, there are people who live in other northern regions that experience more, or less, sunlight during the solstices. This paper will therefore discuss the potential difficulties associated with *halakhah*, especially regarding Shabbat, in different contexts. This paper focuses on the edges of several *halakhic* rules. While the Jewish people try to be consistent

with keeping laws, there are interesting and important exceptions to consider. Judaism is distinct in its laws and traditions, but it does overlap with Islam by following the lunar calendar and sharing similar values. The paper will begin by discussing *halakhah* in space and during travel, then adjustments during daylight savings and, finally, recommendations for people following a lunar calendar living in northern regions.

***Halakhah* and Flight**

As our world develops, new issues arise for the Jewish people in terms of keeping *halakhah*. For example, advances in automation have brought up questions about how to consider the law when traveling. One relevant question is what the proper ways are to abstain from travel on the Sabbath according to Jewish Law. Growing up, I have heard news stories of observant Jews like Deena Yellin who needed her flight to land early after a delay in order to avoid flying or being stuck in an airport during Shabbat. In many cases, local rabbis in the location of the emergency landing offer to host the observant passengers.⁶ Yellin's story shows how important strictly keeping Shabbat it is for many people, and why different, potentially problematic, situations should be discussed in order to lend clarity to ambiguous cases.

After traveling between time zones, people either lose or gain several hours in the day. When traveling west, people experience longer days since they are travelling with the sun; when traveling East, people jump ahead in time and therefore could miss certain prayers.⁷ Rabbi David Pahmer says that if someone crossing the date line goes from one day to the next, skipping several hours, the person should repeat the daily prayers for the next day without waiting the normal amount of time between prayers.⁸ Presenting a more complex solution than Pahmer, Rabbi Dovid Heber prescribes time recommendations to recite morning, afternoon, and evening prayers based on the time spent in the air, time of takeoff, and time of year.⁹

Other important Jewish practices that depend on the sun's orbit are Yom

Kippur and other fasting holidays where the fasting begins and ends at sunset. If an individual is traveling west during a fast day, he or she should technically wait until the sun sets in the destination, extending the fast to beyond the normal expected length of a fast.¹⁰ However, the Gemara considers fasting days a *minhag*, so Jews in Stockholm received permission to break the fast at 9:30 p.m., well before sunset. Therefore, several rabbis say that those traveling west during a minor fast day may break the fast when their travel place of origin reaches 9:30 p.m.¹¹ Rabbi Heber's and David Pahmer's logic of flying between time zones is similar to Rabbi Bleich's interpretation of hovering over different regions while flying in space.

***Halakhah* and Space**

In more recent years, space travel has entered the debate of *halakhah*. When orbiting the earth, each ninety-minute orbit constitutes a day. Gartenberg says this would mean that, if a Jewish astronaut were observing Shabbat based on the ninety-minute days, the astronaut would need to pray three daily services every ninety minutes, and observe Shabbat every nine hours, for ninety minutes.¹² Conversely, if an astronaut chooses to observe the Sabbath according to the time on earth instead of the perceived time in their spacecraft, and if the astronaut were orbiting the earth every ninety minutes, he or she would be constantly traveling over different areas of the earth, thereby experiencing different time zones and different stages of Shabbat very rapidly.¹³ According to Rabbi Bleich, the astronaut would be required to refrain from doing work while hovering over the regions in which it is still Shabbat but would be able to do work while hovering over the regions in which Shabbat has already ended. However, since the astronaut would be re-entering a single day several times throughout a twenty-four-hour period, he or she would not need to recite *Kiddush* or *Havdalah* every ninety minutes.¹⁴ The contrast between Gartenberg's hypothetical situation and Bleich's recommendations reveals that the question is not one of settled precedent but

rather an ongoing debate.

***Halakhab* and Time Zones**

Since the lunar and solar calendars are not aligned, Jewish holidays could potentially fall at different times in the secular year. With the helpful addition of leap years, which add a month in the Jewish calendar, Yom Kippur always falls in Autumn, when the days are shorter and the time between two sunsets is less than twenty-four hours.¹⁵ If, however, Yom Kippur did fall in the late Spring, fasting would be more difficult because the time between two sunsets would be greater than twenty-four hours.¹⁶

Shabbat in the summer is very different from Shabbat in the winter. When the days get shorter or longer, the clock also changes an hour forward or backward. Here, we see a variety of practices among Jewish communities. In most congregations, Friday night services begin well after the start of Shabbat in the winter because the sun sets so early, and services begin well before the start of Shabbat in the summer because the sun sets so late. Many orthodox communities, however, adjust their schedules according to the onset of Shabbat.¹⁷ As a result, it becomes very demanding to prepare for Shabbat meticulously during the wintertime.¹⁸ While the timing of Shabbat is adjusted to account for the hour change during daylight savings, there are situations where it is unclear how to manipulate the timing to practice Shabbat. There is even more ambiguity for astronauts and for people living in polar regions.

***Halakhab* in Northern Regions**

In cases when the sun is completely visible or completely invisible for twenty-four hours, the debate is whether a *halakhic* day is based on a twenty-four-hour day, or on the visible motions of the sun.¹⁹ In *Tiferet Yisra'el*, a commentary on the Mishnah, Rabbi Israel Lipschutz points out that while northern countries such as Denmark often have twenty-four-hour days, they often do experience a brief dusk; otherwise, in even northern places,

the sun completes a visible full cycle around the horizon. Rabbi Lipschutz therefore says to rely on this brief dusk, or the complete cycle, to determine when Shabbat begins and ends.²⁰ He also interprets the day objectively, rather than individually, meaning that Shabbat falls on the same day of the week everywhere. Therefore, the North Pole would witness a day's completion based on the complete cycle of the sun in the sky.²¹

Today, many people actually live in northern regions such as Scandinavia, Finland, and Alaska. Nikolaj Kahn, a Jewish resident of Trondheim, Norway, which is located two hundred miles south of the Arctic circle, says he faces a major problem every summer, when the sun does not set, even around midnight. Nikolaj says that Jewish residents in Trondheim do not tend to adhere to *halakhah*, and instead classify their Judaism as a meaningful connection to the faith. Because of the difficulty of keeping *halakhah*, the chief rabbi does not actually live in Trondheim and, instead, visits a few times a year from Israel.²²

There have been cases in which rabbis and other religious Jews, who are not local to these areas, have considered the ways Jewish people should observe Shabbat. Several rabbis have simply advised against living in these regions because observers would be unaware of what day is truly Shabbat, and it would lead to such complex ambiguities regarding *halakhic* practice.²³ Other rabbis suggest that Jewish people do not need to practice Shabbat at the North Pole, since Shabbat is related to the transition from night to day, and the North Pole has many periods in which it experiences no day, and other periods in which it experiences no night.²⁴

When Cyril Domb had to attend several conferences in Scandinavia, he turned to Rabbi Shlomo Goren for advice. Because observant Jews usually recite three prayers daily, based on the time of day, Domb wondered when to recite *shaharit* when there is no sunlight.²⁵ The Rabbi proposes several possible approaches to choosing which prayers to say and when to say them. His first suggestion is to pray based on the current time in Jerusalem.²⁶ Pahmer

implies this same suggestion when he says that the first ever Shabbat began in Israel, and other regions had their first Shabbat the next week.²⁷ Domb's second proposal is to consider the situation an emergency and recite *shaharit* before dawn. His next proposition is to only consider *ma'ariv* relevant given the circumstances. The Rabbi's final suggestion is to frame the three prayers around when the individual wakes up, beginning with *shaharit* and base the time of the following prayers accordingly.²⁸

In contrast with these rabbis' beliefs, Rabbi Azriel Rosenfeld cites Leviticus, in which God proclaims, "It is Shabbat ... in all your places of settlement!"²⁹ He therefore suggests that it is important to observe Shabbat, even if there is no visible sunrise or sunset. He says that it is most practical to follow the twenty-four-hour day to determine when to begin and end Shabbat. Rabbi Rosenfeld adds that the local community in the northern region should be in charge of determining the definitive start and stop time of Shabbat.³⁰

In terms of observing Shabbat when there is not sunset during the summer, Rabbi Shlomo also advises that people rely on the twenty-four-hour day rather than the sun positioning of another location to determine the beginning. Slightly different than Rabbi Rosenfeld, however, Rabbi Shlomo constitutes the astronomical midnight, which is the definitive divide between two days, as the beginning of the evening.³¹ However, since Shabbat begins before the sun is fully set, the Rabbi says that thirty minutes before midnight on Friday night should be considered the beginning of the day of rest. Moreover, constituting for the time it would take for the sun to rise, Shabbat would end forty minutes after midnight early Sunday morning.³² Then, during the winter months when there is no sunrise, Rabbi Goren recommends beginning Shabbat thirty minutes before noon on Friday, and ending Shabbat forty minutes after noon on Saturday.³³ Finally, since the literature does not offer a single, definitive answer for how to observe time-based *halakhic* traditions in polar regions, it may be best for people in these

situations to check with their congregation's rabbi for their specific needs.³⁴

Sharia and Time

So far, this paper has posited several issues that Jewish people face in relation to unusual time paradigms. These topics are rarely discussed because they apply to such a small group of people. However, Islam faces many of the same problems as Judaism since both religions rely on the lunar calendar. Since the lunar calendar does not line up with the solar calendar, religious holidays can fall in different months each year and can be affected by different amounts of sunlight.

Islam is fundamentally organized around Five Pillars, which are basic acts in Islam; two of the Pillars rely on the location of the sun. One Pillar, Ramadan, is a fast in the ninth month of the Islamic calendar. During Ramadan, Muslims fast during the day and eat after sunset.

Therefore, observing Ramadan when there are more hours of darkness means that followers have more time to eat, and less time to fast. According to a lunar calculation, the lunar year is less than 365.25 days (which explains why leap years on secular calendars are one day every four years), and Ramadan occurs about eleven days earlier each year.³⁵ When the month of Ramadan takes place in the summer, the days are longer and hotter, and it is more challenging for devout Muslims to refrain from eating and drinking. When Ramadan is in the winter, the nights are longer and the days are cooler, so fasting is less strenuous.³⁶

If observant Muslims were in the Arctic circle during the summer, they would face an impossible task: fasting for thirty days with no sunset. Because people would die if they had to fast this long, Muslims truly cannot live in Arctic regions and practice this Pillar in the standard manner.³⁷ Muslims, can, however, find ways to practice Salat, the Pillar of obligatory prayer that occurs five times daily. The prayers should be performed during certain times of day based on the positioning of the sun.³⁸ Just as rabbis have suggested

that observant Jews can follow the prayer times of Jerusalem while in Arctic regions, practicing Muslims can follow the times of Mecca.³⁹

Conclusion

There are a variety of different interpretations on how to observe rituals centered around the rising and setting of the sun, especially when there is no sunrise or sunset. This paper has shown that rabbis have several suggestions for keeping tradition in these rare circumstances. For example, when considering unusual travel issues with respect to *halakhah* and Shabbat, Bleich says that an astronaut would need to observe Shabbat according to the part of Earth he is orbiting over, rather than according to the perceived day length in the astronaut's spacecraft. When flying, Pahmer says that losing hours in a day does not mean a person can skip the next day's prayers. Although the details differ, the authors reviewed in this paper generally expect travelers to base their practice on the area they are flying over or flying to, rather than the perceived time while in their aircraft. Generally, rabbis and scholars agree that people should observe Shabbat based on their location or destination, even if this means they lose or gain extra hours of the holiday.

While there is research on the subject, it seems that this topic of traditional observance in northern regions is not often discussed, and has not reached as definitive a conclusion as the travel-based issues in regard to *halakhah*. Traveling to Arctic regions is a rare occurrence for observant Jews, especially close to Shabbat; this is likely due both to the low necessity to travel to these regions, and to the lack of understanding of how to maintain religious practices.

Several rabbis, in fact, recommend against such travel. The rabbis who do not take this stance posit several suggestions for practicing Judaism in the north. Some suggest basing Shabbat time on the time in the person's hometown or the time in Jerusalem. Others suggest basing Shabbat time on the twenty-four-hour day, by considering midnight the start and end, or by

allowing the local community to determine the start and end.

Although many of these cases seem speculative, it is at least interesting, and arguably quite illuminating, to consider what would happen in terms of observing *halakhic* traditions if humans decide to colonize on the moon. Since Jewish practices follow the lunar calendar, they rely on the location of the sun and moon from the perspective of being on Earth. However, if people lived on the moon, they would always be in the presence of the moon, and some may say that it is always night. Another potential issue would be if future generations were to live on planets with different day lengths than Earth; if the day were shorter or longer than on Earth, would people base practices on the sunrise and sunset on that planet, or base them on the sunrise and sunset on Earth?

There is not much research on whether or how rabbis are presently focusing on ways to adapt traditional rules for people based on the seemingly remote prospects of such future situations. We have accommodated changes in the past, including when sacrifice was replaced with prayer following the destruction of the Second Temple. Rabbi Rosenfeld, similarly, notes that some *halakhah* is applicable only to those in Israel, so perhaps some *halakhah* should be considered terrestrial-based only, when the matter is relevant.⁴⁰ Authors have suggested that people consult their rabbis for advice if they have a specific case like any of the ones described in this paper. Hopefully those who have actually been in circumstances related to visiting northern regions have received help and have been able to make the appropriate adaptations.

When considering the origin of the laws centering around the lunar calendar and positioning of the sun, we refer to the story of creation, when God made the earth in six days and rested on the seventh day. This creation includes all regions of the earth, so rabbis should be considering these more northern regions alongside the more populous regions. Some rabbis suggest that it is not worth the complications of traveling to the Arctic or Antarctic circles. Even so, there are likely some genuine benefits, especially in scientific

research, associated with exploring these areas, and these opportunities might benefit observant Jews. Thus, perhaps it would be more reasonable for rabbis to propose several more specific recommendations and guidelines for traveling to and within these areas. Yet, despite the fact that traveling in these areas seems to be taboo for many rabbis, one interesting question could be posited: What did God mean by night and day, if He created regions that have differing amounts of night and day?

Keren Stearns is a sophomore from Baltimore majoring in criminology and minoring in psychology. If you have a crime-based show or podcast to recommend, please do share, but it has probably been recommended to her before!

Endnotes

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