

## *The Shofar Via Zoom?*

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With Rosh Hashanah 5781 approaching in this time of pandemic, it's unlikely that congregations will be able to assemble *en masse* for worship services. Most non-Orthodox synagogues will plan to conduct their High Holyday services via Zoom or other electronic format, continuing the practice they have adopted since the spring of this year. And this raises the problem of *t'ki'at shofar*. Although many congregations will conduct their *shofar* services in a suitable parking lot or other open space where individuals will be able to hear the *shofar* while maintaining social distance, others will find it necessary to perform the *mitzvah* online for the benefit of those who cannot attend the public event.

This makes it worthwhile to reconsider a not-so-new halakhic question: does one actually fulfill the *mitzvah* of hearing the *shofar* (לשמוע קול שופר) when the sound of the ram's horn is transmitted over the Internet? We say "not-so-new" because, while the Internet is a comparatively recent development, the question has been around for a long time with respect to other media (radio, telephone, etc.). The issues are similar, so given that we are making adjustments in our ritual practices at this time of urgency (*sha`at hadahak*), it's time we take another look.

The contemporary Orthodox opinion is that one does *not* fulfill the *mitzvah* by hearing the sound of the *shofar* through electronic transmission.[1] This *p'sak* is traced back to the Mishnah (*Rosh Hashanah* 3:7):

התוקע לתוך הבור או לתוך הדות או לתוך הפיטס אם קול שופר שמע יצא ואם קול הברה שמע לא יצא.

When the *shofar* is sounded in a pit, cistern or a barrel, one who hears the sound of the *shofar* itself has fulfilled one's obligation. But if one hears an echo (*kol havarah*), one does not fulfill one's obligation.

The point is that you must hear the actual sound of the *shofar* and not a distorted version thereof. In the Talmud (*B. Rosh Hashanah* 27b), Rav Huna restricts the issue to those standing outside the pit or the cistern; those who are standing inside that space certainly hear the sound of the *shofar* and not the *kol havarah*. This is the accepted rule,[2] although some are more stringent and say that even those standing inside the pit hear only the distorted sound and do not fulfill their obligation.[3] Not surprisingly, some *aharonim* rule that we should follow this stringency, for not everyone is able to distinguish in all cases between the sound of the *shofar* and an echo.[4] For our purposes, the relevant issue is that, in the opinion of most Orthodox *poskim*, an electric or electronic device that transmits a sound inevitably alters the nature of the sound so that one who hears the sound via the device is hearing a *kol havarah* and not the sound itself. Thus explains Rabbi Shlomo Braun:[5]

ובזמנם ודורם לא ידעו עוד ענין טיליפון ראדיו וקול-רם (מיקרופון), אבל בזמננו כבר ביררו והוכיחו דפעולת כל המכשירים מהפכים גלי קול אדם לגלי חשמל (אלעקטרי) וחוזר תיכף ומהפכו לגלי קול אדם, באופן שהמכשיר הקולט את הקול דומה לתקליט של הגראמופון שהשומע ממנו, קול תקליט שומע ולא קול אדם ואין זה בגדר איש ובר חיובא להוציא אחרים ידי חובתם.

In the past, [the *poskim*] were unfamiliar with the nature of the telephone, the radio, and the microphone. By now, however, the matter has been studied, and it has been shown that these devices work by changing the soundwaves of the human voice to electrical energy, which they immediately change back into the soundwaves of the human voice. The receiving device is comparable to a phonograph recording: one who hears it hears the sound of the recording and not the sound of the human voice itself. This [the recorded sound] is not to be defined as a human being who, because he is obligated to perform a *mitzvah*, may help others fulfill their obligation.

This is the substance of the Orthodox objection: the electronic reproduction of a sound transforms that sound (*kol*) into something other than that sound. When you hear the sound of a *shofar* transmitted via the airwaves or the Internet, you are by definition not hearing the *shofar* itself but a *kol havarah*, and you therefore do not fulfill the *mitzvah*. The eminent *posek* R. Shlomo Zalman Auerbach (d. 1995), who rules with the majority that hearing the *shofar* via electrical or electronic reproduction does not fulfill the *mitzvah*, explains the physics:[6]

החוט היוצא מן המיקרופון מוליך רק זרם משתנה של חשמל הגורם בסופו להניד את הממברנה הנותנת את הקול באותן התנודות של ממברנת המיקרופון ועל ידי זה נוצר הקול, אבל טעות גדולה היא לחשוב שהחוטים מוליכים ממש את הקול כמו שהם מוליכים זרם.

The wire that leads from the microphone conducts nothing other than an alternating electrical current that ultimately moves the diaphragm (“membrane”) of the speaker in exactly the same vibrations as the diaphragm of the microphone. This is how the sound is produced. But it is a serious error to think that the wires conduct the actual sound as well as the current.

We’re not about to debate Rabbi Auerbach’s take on the workings of the electrical transmission and reception of sound. But we can point out that his description is analogous to the way we hear sound in the everyday person-to-person context. When you speak to me, I do not hear your actual (*mamash*) “voice” but rather the vibrations that your voice causes in the air between us. The air is thus the medium that transmits the sound energy, in the same way that the wires conduct the electrical energy. The vibrations reach my hearing system - the eardrum serves as the diaphragm – which translates those vibrations into what I perceive as your voice. What I hear, in other words, is a reproduction of your voice, just as a microphone and speaker system reproduces your voice. Of course, the analogy isn’t perfect. In the case of radio transmission, there are two “media” in between the speaker and the hearer: the “natural” medium of voice that produces sound waves and the “artificial” medium that changes the sound waves into electrical energy and back again into sound. But then, *sof sof* (in the final analysis) in either case what the listener hears is the sound - in our case, the *shofar* blasts that were made by the *toke’a* (*toka`at*) - that is directly caused by the speaker’s words.

There's another reason why *poskim* regard the sound of the *shofar* blast transmitted by telephone, broadcast, or online as *kol havarah*. Their objection is based upon sound quality. Rabbi Hayyim Elazar Spira, the rebbe of Muncacs (d. 1937), who ruled that one does say "amen" upon hearing a *b'rakhah* recited over the telephone, did not extend the same reasoning to *t'ji'at shofar*. One does not fulfill one's *mitzvah* by hearing the *shofar* over the phone because "the sound coming from the telephone is mixed, unlike the human voice that one hears directly from the person who speaks. Moreover, the sound is strained. It is most certainly altered by the ambient noise (*havarah*) of the telephone" (בא הקול ע"י הטעלעפאן מעורב לא כמו קול האיש) [7] That's understandable, considering the quality of the sound transmitted by telephones back then. But does that description apply to the sound produced by today's online connections and audio software?

You'll have to be the judge of that, but we [8] think there's ample reason to regard the quality of the *shofar* sound heard over Zoom, Facebook Live, and other platforms as sufficient to fulfill the *mitzvah*. While it is preferable for many reasons to hear the *shofar* "live" – that is, directly, whether in a synagogue or (thanks to COVID) in a parking lot or other open space – those who cannot participate in those settings can fulfill the *mitzvah* when they hear the *shofar* during the services that, this year, will be carried online.

## NOTES

[1] We're not discussing here a second objection, the prohibition against using activating electrical devices on *yom tov*. Liberal Jews have long since decided that this prohibition is based upon shaky analogies and is irrelevant to our practice. Our interest here is the question whether hearing the *shofar* in this manner counts as fulfilling the *mitzvah*.

[2] *Shulhan Arukh Oraḥ Hayyim* 587:1.

[3] *Hilkhos HaRosh, Rosh Hashanah* 3:8.

[4] *Mishnah B'rurah*, 587, no. 7, following the *Turei Zahav*, no. 1.

[5] *Sha'arim M'tzuyanim B'halakhah*, vol. 3, p. 200.

[6] *Resp. Minḥat Shlomo* 1:9.

[7] *Resp. Minḥat Elazar* 2:72.

[8] Not just "we," either. Rabbi Eliezer Yehuda Waldenberg (*Resp. Tzitz Eliezer* 8:11) rules that when there is no alternative (his example: hospitalized patients) to hearing the *megillah* read on Purim except by way of a microphone and loudspeaker, then it is permissible to do so in order to fulfill that *mitzvah*. And see R. Moshe Feinstein, *Resp. Ig'rot Moshe, Oraḥ Hayyim* 2:108 (a voice transmitted by a microphone is not a case of *kol havarah*).