



# World Full of Sensors

#### Sensors Everywhere

- In today's technologically advanced world, it is nearly impossible to go around on the streets and in public places without passing various types of sensors which activate electric devices, e.g., lights, cameras, doors, and the like. There are also satellites that constantly capture people's movement in the world. This presents an issue on Shabbos. Thus, we saw a need to bring up the issues and suggest heterim and solutions to avoid violating the issurim of Shabbos, 1"n.
- Vacation houses in Chutz l'Aretz. This problem is also relevant in many vacation houses in Chutz l'Aretz and Europe belonging to non-Jews who build their houses with all the newest innovations in various sensors. During the vacation season, they rent their houses to Jews, creating issues around staying there for Shabbos.
- Hotels. Similarly, hotels and hospitals throughout the world often operate with sensors everywhere. This makes it difficult for someone who keeps Torah and mitzvos to stay in these places.

### **Classification of Electricity**

- 4. As an introduction to all the halachos we will discuss in the current issue and in the coming issues, we must understand some principles of the issur of melachah on Shabbos involved in operating electric appliances and devices. Electricity itself is not considered fire. Rather, it is something that actualizes energy innate in the world. Over time, scientists discovered ways of producing electricity, transferring electricity from one place to another, and creating electric currents to operate all sorts of devices by sending electricity to them via wires, etc.
- 5. **Two categories of electric appliances.** There are primarily two categories of electric appliances. There are those that are related to fire, e.g., when electricity flows through a heating element, it creates a sort of "fire" that heats up until the metal is like an actual fire. Also, when electricity passes through a thin, metallic filament, the filament heats up like fire and gives off light. An example of this is the old type of light bulbs [incandescent], as opposed to LED bulbs, which do not heat up and are not considered fire.
- 6. There are other electric appliances unrelated to fire. Electricity causes these things to activate using all sorts of methods, e.g., a motor spinning, sound waves, light waves, etc. The poskim discuss which melachos are involved in turning these on on Shabbos, as will be explained ( ה"ג סי' בס" בח"ב ס" בח"ב ס" ע"א והלאה, שו"ת מנחת יצחק ח"ג סי' ל"ט, שו"ת מנחת שלמה חלקת יעקב ח"א סי' ע"א והלאה, שו"ת מנחת יצחק ח"ג סי' ט".
- 7. Using electricity in Israel from Chevrat HaChashmal [Israel Electric Corporation]. It should be noted that we are not discussing here the general use of electricity on Shabbos in Eretz Yisroel. The poskim have already discussed the possible issurim of Shabbos involved in using electricity generated by chillul Shabbos of non-Jews, and sometimes also Jews, at the power plants. There is also a potential general issue of chillul Hashem involved. Because of this, many scrupulous people with yiras Shomayim do not use electricity generated by Chevrat HaChashmal on Shabbos. They suffice with consuming electricity from a local generator, batteries, paraffin lamps, or the like [as the Chazon Ish ruled].

# Melachos in Turning on Electric Devices on Shabbos Electric Appliances with a Heating Element

- 8. All poskim agree when one turns on an electric device which creates glowing sparks that have the ability to burn something or a glowing fire, he violates the issur d'oraisa of mav'ir [kindling] [besides for the melachos mentioned below]. After all, he made a fire on Shabbos it makes no difference whether he lit an actual fire or something considered fire using electricity ("do n'a considered fire using electricity").
- 9. Turning off electric device. Additionally, turning off one of these devices that cause fire and entail mav'ir violates mechabeh [extinguishing]. This is despite the fact that doing this just prevents the constantly renewing electric current from reaching its destination and does not actually extinguish a fire (בשי"ת מנחת שלמה ח"א ס" י"ב).

#### **Electric Devices Unrelated to Fire**

- 10. There is another category of electric devices that are unrelated to fire and do not produce a flame that can burn things. They receive electric energy to operate machines and spin rotors with the electromagnetic force. Sometimes they activate various lights which don't have any red-hot metal, but work using special gases, e.g., fluorescent bulbs or LED lights which do not heat up at all; or, for example, an air conditioner. All poskim agree the issur of using these on Shabbos is not mav'ir, as there is no fire involved. Rather, it is boneh [building] or mesakein mana [lit., fixing an item], but the poskim argue whether it is a d'oraisa or d'rabanan violation.
- 11. Boneh d'oraisa. Some poskim hold turning on these devices on Shabbos violates the issurim d'oraisa of boneh and makeh b'patish, as it enables them to function properly with a steady electric current. The device without electricity within it is useless as a physical item. Only when one turns it on and sends electricity to it by closing an electric circuit does it become a proper item with a purpose and life that can be fulfilled (סק״ט).
- 12. Although electricity is only within it temporarily until it is turned off, so there should theoretically be no issur d'oraisa of boneh, nevertheless, without electricity it is like there is nothing there; its whole existence and purpose is for its particular usage. The fact that the electricity will be interrupted is viewed as a separate point going forward (אי מנחת שלמה ה׳ אי מי
- 13. If we view turning something on as boneh, then turning it off is soseir [dismantling]. However, if turning it on is makeh b'patish, there is no melachah involved in turning it off.
- 14. D'rabanan. However, most poskim hold there is no d'oraisa issur of boneh. Turning a device on does not do anything to the device itself, which was already considered a usable item when it was fashioned even before it was activated. Sending electricity into a device is just how it is used, like pouring water into a pipe to make it flow to another point. There is no change in the device itself. There is also no change in the physical wires; there is just an invisible force flowing through them. The "fixing" that is achieved by enabling it to operate with electricity only lasts temporarily, while electricity flows to it (, ארשיד, אנד, שניד, אנד, שניד, אנד, שניד, שנ
- Consequently, most poskim hold turning on something electric that does not have "fire" is only an issur d'rabanan ( פוסקים הנ"ל, שו"ת מנחת פוסקים הנ"ל, שו"ת מנחת).
- Nevertheless, there are poskim who are concerned for the opinion that it is assur d'oraisa as per the Chazon Ish ( עיי שו״ת אג״מ ח״ד סי׳ פ״ד, ח״ד סי׳ ע״ז
  (שו״ת מנחת יצחק ח״א סי׳ ק״ז, ח״ג סי׳ כ׳ וסי׳ ע״ז).

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# Changing the Level of a Device's Electric Current

- 18. The poskim also discuss what is the issur of increasing or decreasing the electric current of a device that already has electricity flowing to it.
- 19. Impact on consumption at the power plant. When a person increases or decreases the electric current to a device next to him, we do not need to worry about causing additional electricity at the power plant where the electricity is generated. We do not need to worry that perhaps he is causing them to add fuel or coal to the furnace that powers the turbines, as the little bit of electricity he is using - a few hundred watts maximum - has no impact whatsoever on the power plant, whose electricity consumption and changes are measured with the megawatt, i.e., one million watts. At any moment, there are probably also devices in other places being turned off, minimizing and balancing electricity consumption. Thus, an individual's actions do not necessarily impact a power station whatsoever, and anything done is a distant effect of his actions (see below, 27). He does not have any intent for this; he is just using the device next to him. This is a davar she'eino miskavein that is not a psik reisha, which is mutar (הגרשז"א, שש"כ פכ"ג הע' קל"ז, ארחות שבת פכ"ו הע' נ"ז).
- 20. Impact on the device at hand. The poskim discuss which issur one violates if he increases on Shabbos the electricity consumption of a device in front of him and it is a significant change from a significant action of his.
- 21. Device related to fire. Obviously, changing the level of electricity of a device related to fire (above, 8) is an issur of mav'ir or mechabeh.
- 22. Device unrelated to fire. As far as a device unrelated to fire, it would seem that according to the poskim who say closing an electric circuit on Shabbos is a d'oraisa violation of boneh or makeh b'patish (above, 11), changing the electricity consumption of a device would seemingly not be an issur, as no extra building or dismantling is done. [Nevertheless, we find that the Chazon Ish himself forbade using an electric device that caused changes in the intensity of the current with relation to a hearing device.] (ארחות) רבינו ח״א עמ׳ קמ״ו, שו״ת מנחת יצחק ח״ב סי׳ ט״ז אות ט״ז ואילך)
- 23. Even according to the poskim who say there is no boneh or makeh b'patish d'oraisa (above, 14), the poskim discuss if there is perhaps an issue of molid (17), as the person's actions in changing the electric current create a new force to operate the device in its proper, working way (שו"ת מנחת יצחק ח"ז סי כ"א). Others reject the possibility of an issur of molid (הגרשז"א בשו"ת מנחת שלמה ח"א סי' ט').
- 24. Others discuss various different d'rabanan issurim, e.g., the issur of making noise [אוושא מילתא], potential mesakein mana on something that commonly breaks down, or a general disgrace of Shabbos [ זלזול שבת (שו״ת חלקת יעקב ח״א סי׳ ע״א ואילך, שו״ת מנחת יצחק ח״ג סי׳ ל״ח).

## Activating Electric Appliances via an Electric Eye

## Action or Grama?

- 25. Winnowing with the help of wind. The Gemara (ב"ק דף ס' ע"א) says one who winnows the chaff of wheat kernels with the aid of the wind is chavav even though his small action is secondary to the main work, which is done by the wind. This is because to Torah forbids intentional, constructive actions], and since the מלאכת מחשבת action of winnowing is normally done through a combination of one's action and wind's force, for the purposes of Shabbos it is like the person himself did the melachah.
- 26. Electric eye. The poskim use this concept in their view of a system activated with an electric eye, e.g., a door that opens when one approaches or a light that goes on when one passes the sensor or through some sort of detector. Although the person does not actively do something like turning on a light by pushing a button, if he intentionally activates it by moving near the sensor and he needs the result, it is like he did the action directly or caused it to be done. Since the way these systems operate is through an electric eye, for the purposes of Shabbos it is like one did the action himself even if from the perspective of the system's operation, he only indirectly caused the action (ארחות שבת פכ״ו אות כ״ה)

נפטרה ה׳ תמוז תשפ״ג

27. An important rule in these halachos is that the act of turning on needs to be attributed to a person – his action with his intention. Thus, if the thing a person caused to turn on is far away from him, he had no intention to turn it on, and there is no benefit attributed to him, it is not a מלאכת מחשבת and the Torah did not forbid that action. This is certainly true if one does not even know for sure that his action caused some sort of reaction which created an electric current (פוסקי זמנינו).

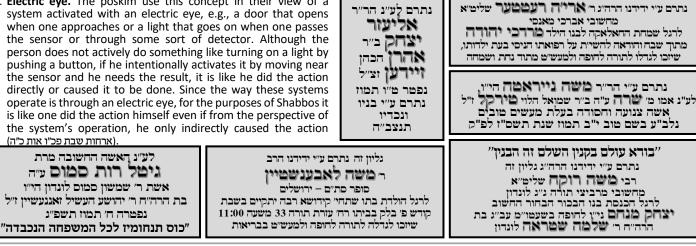
Action Needs to Be Attributed to the Person

28. Satellite. When a person walks on the street, it is very likely that his movement is captured on some satellite in space or there is some camera on the city streets capturing his movement from a far distance. [See the coming issue בעזהשי"ת regarding a person's own private closed-circuit cameras.] However, since that does not have any value for him and he is at a great enough distance that his body's movements seemingly do not directly relate to the device's operation, it is not considered his action enough to be chayav for Shabbos issurim (הגריש״א, הגר״ש וואזנר, הגר״נ קרליץ ועוד פוסקי דורנו).

## Door Opened with an Electric Eye

- 29. One should not approach a door that is opened with an electric eye, e.g., at the entrance to a hotel or hospital. This is like actively completing an electric circuit and activating the motor that opens the door. This action is attributed to the person.
- 30. Opened by a non-Jew. If a non-Jew approached the door and it opened, one may enter after him as long as the door is still open. One should try to get ahead of the non-Jew or go in at the same time, not after, so as not to prevent the door from closing, thereby activating the timer that closes the door after a few seconds. If this is not possible, one may walk in after the non-Jew without worrying about what he is causing when he leaves. This is because he has no need for the door to close and has no intention for it whatsoever. The closing of the door is of no interest to him. Thus, the action of closing is not attributed to him (see above, 27).
- 31. Opened by a child. If a child approached the door and it opened, and he did not do so on behalf of a gadol, one may enter the doorway. This is because there is no issur of benefiting from melachah done on Shabbos [מעשה שבת] when a child does melachah for himself (ארחות שבת פכ״ו אות כ״ו).
- 32. Opened by a medical staff member. If a medical staff member needed in a ward for dangerously ill patients enters the hospital door, one may enter right after him, as he entered permissibly (שם).
- Opened by mechallel Shabbos. Some poskim say if a Jew who is mechallel Shabbos ל״ע enters this type of door, one may walk in with him, as that is not considered a positive benefit from the aveirah action. Opening the door is merely getting the door, which was preventing entry, out of the way; entering the room is just a beneficial result. It is not comparable to a melachah like bishul, where one benefits by actually eating the food cooked through melachah on Shabbos (הגריש״א, ספר מלכים אומניך עמ׳ תקכ״ה).
- 34. Other poskim forbid even the side result of a forbidden melachah action. Accordingly, one would not be allowed to enter the room after a mechallel Shabbos (אג״מ או״ח ח״ב סי׳ עא, הגרשז״א שש״כ פ״י הע׳ מד).
- 35. Accidentally opened. If one was walking and accidentally caused the door to open with no intention, he may be allowed to enter the doorway. This is because some poskim allow walking through a door opened by a Jew since the benefit does not come directly from the aveirah (above, 33). Additionally, the poskim reason that there is no penalty of maaseh Shabbos when it was misaseik (פמ״ג סי שי״ח משב״ז סק״ב). This is certainly the case when a person is innocently walking, not doing any action whatsoever, and unaware he was doing a melachah at all - that is likely considered less than misaseik (הגר"ש אויערבאך, ארחות שבת פכ"ו הע׳ ל׳ח).

## Next Issue: Sensors for Lights, Security Cameras, and More



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