

HALOCHOSCOPE

This week's question:

Often one inadvertently passes a motion sensor and turns on a light. On Shabbos, is it necessary to avoid walking through the possible range of the sensor, or even avoiding the street? What is the status of automatic doors, faucets and toilet flushers, common in hotel rooms? May one pass by unintentionally, or may one actually use them on Shabbos?

The issues:

A) Motion sensors

B) Electricity on Shabbos

C) Meleches machasheves, requirements of intent in melacha on Shabbos: *davar sheaino miskavain* and *psik raisha*, unintended melacha; *grama*, indirectness

D) Kavod habriyos, human dignity

A) Motion sensors

Motion detector devices could be categorized into two general types, passive and active. Active devices emit energy, while passive devices do not. Sensors measure different properties of their environment, such as light, electromagnetic field, temperature, vibration and the like. They react to certain patterns and ignore others. It is increasingly common to combine several types of sensor in one device to reduce false alarms. Sensors using a beam of light with a photo-sensor at the other end are less common nowadays. Other sensors could use heat, specifically human body heat. The body emits infrared rays that can be detected by sensors. Others might use ultrasound waves, that are bounced back from a body. Most other motion sensors use an electromagnetic field. This can be directed to a specific spot or it can cover a range. Radar detects by emitting energy and timing its travel to and from the body. Passive sensors can produce a field around them or in a specific direction, or might just detect vibrations.

Electromagnetic fields exist all over, and are affected by bodies in their range. Thus, a radio transmission can change, sometimes audibly, when someone moves in the vicinity of the receiver. Electromagnetic fields are created around almost every electrical appliance. Moving bodies in the area affect the field. If one moves around under light-bulbs, he changes the field. Most of these changes are small and can not be measured without good equipment. A motion sensor has such equipment. It is set to determine the size of the body moving around in the field, based on measuring the changes in the field. Thus, it will not bother changing the electrical circuitry due to the presence of a cat or ant, but it will bother with a human presence. [Thanks to AE of XX Switch and Signal.]

B) Meleches machasheves

From a *halachic* perspective, one may assume that a sensor is not of the photo-sensitive type, due to its infrequency. When encountering a sensor, one may assume that it is either infrared, radar, an electromagnetic field or a combination. Infrared is emitted natu-

neath his dignity, he is exempt. One may not venture out of the two thousand cubit boundaries of his home base on *Shabbos*. This law, *techumin*, is Rabbinical. If one was taken out of his *techum*, he has no choice but to remain put until *Shabbos* is over. However, if he needs to relieve himself, he may venture forth to find a suitable private place. The poskim debate whether this applies to all forms of relieving oneself, or only solid waste. Having relieved himself, he may move away from the spot, until he can no longer smell it. As the Talmud puts, human dignity is so important that it overrides the Scriptural prohibition against wavering from the instructions of the Rabbis. Similar rulings permit moving otherwise *muktzeh* pebbles for wiping, moving a corpse out due to the smell, attending to the burial of an anonymous person rather than reading *megillah* and to continue wearing clothing with invalid *tzitzis* on *Shabbos*. [Since they are invalid, the item is not fit to wear, and is being 'carried'. However, to remove it in public is embarrassing. Therefore, one need not alert the wearer in public, if he is in a domain where carrying is Rabbinically forbidden.]

In our case, one cannot be expected to relieve himself anywhere but in the restroom. Once there, he cannot be expected to stay in the vicinity, especially if it smells. Leaving the spot will activate the automatic flusher. If we can determine that the violation is no more than a Rabbinical prohibition, it would be permissible for *kavod habriyos*. Based on our discussion, the mechanism is activated as a *koach shaini*. The entire issue of electricity might not be considered Scriptural *melacha* to begin with. [See Brochos 19b Shabbos 81b 94b Eruvin 41b Megillah 3b, Poskim. Tur Sh Ar OC 406, commentaries.]

In conclusion, one should avoid activating any automatic switch unnecessarily. If it might not be activated by his presence, it is a *davar shaino miskavain*, and permitted. Otherwise, if it is absolutely unavoidable and the situation is pressing, one need not avoid it. One may not activate these switches with intent. One should not use automatic faucets, but should rather prepare water before *Shabbos*. The toilet may be used as needed.

On the Parsha ... The wise woman builds her house, this refers to the wife of On ben Peles, the foolish woman tears it down with her hands, this refers to the wife of Korach ... [Sanhedrin 110a] We know that the house of Korach was destroyed, and that it came as a result of the initial advice that his wife gave to him. However, can this be considered tearing it down 'with her hands'? Furthermore, we know that the house of On was not destroyed, as a result of his wife's intervention. She sat at her doorway with her hair uncovered, so that the conspirators with *Korach* would leave. Is this considered actively building a house? The Talmud is teaching us that when there is proper intent, though the result is removed from the indirect action, or even passive inaction, or even words alone, it is attributed to the one who did it.

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Chaim ben David z"l, whose *yahrzeit* was on the 26th of Sivan. ❧

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rally. Changing electromagnetic fields is inevitable nowadays. Sleeping in bed all day on *Shabbos* will not prevent one from somehow affecting an electromagnetic field, or maybe even thousands of them, by his every movement. Is it possible that this is forbidden?

Usually, a modern question is an updated version of ancient situations. If there is no precedent to forbid something, it is difficult to introduce a new prohibition. We have little precedent in Talmudic literature for our issues. The person does nothing active, and his mere presence causes the reaction. In miraculous situations, such as the splitting of the sea, the coffin of Yosef caused the waters to part. In terms of spirituality, there are many instances where the presence or absence of a body causes a result, including a lifeless corpse, or the high priest wearing an item of clothing. In physical situations, such as the laws of damages or even murder, a person is held liable for an 'action', except in the case of *bor*, a hazard left in public. This also involves some intent, at least passively. *Oness*, where the person is unable to control a situation, absolves the liability.

The closest to a precedent in Talmudic literature is a lamp flame. This is affected by air movement. One may not open and close doors and windows in its immediate vicinity. However, moving in its vicinity is not forbidden. As long as it is not noticeable, the inevitable change in the burning of the fuel seems to have no impact. Closing a window slows the burning process, or 'extinguishes' slightly, at the same time extending the time it will burn, causing 'burning' indirectly. Yet it is permitted to close the window. Blocking light from plants affects their growth. One is permitted to walk past a plant, and even to sit down blocking its light, provided he does not do it intentionally. In modern applications, putting warm food into a refrigerator changes the equilibrium. A warm body in a room causes heat that makes the air-conditioner work harder. [See *Shabbos* 120b, Poskim Tur Sh Ar OC 177:1-2, commentaries.]

The problem with motion sensors is that these specific fields are using those tiny changes to affect the flow of electricity, quite directly. Thus, there is a visible effect produced by the motion. Unwittingly causing *melacha*, or *misasaik*, could not be forbidden. However, there is some question whether one who knows that it might occur should avoid it. This problem arises with regard to motion sensors that turn on security lights as one passes them on the street. Actively and intentionally causing the *melacha* would be forbidden. However, how does one avoid flushing an automatic toilet?

Regarding *melacha* on *Shabbos*, the Torah requires certain conditions. These are derived from the term *melech machasheves*. For our purposes, this means that the activity complies with some basic intent for certain results. *Misasaik* means that there was no awareness of an activity, or the activity that was done was not the one intended. [As opposed to *shogaig*, where the activity was done with full awareness, but one was unaware that it was forbidden.] *Davar sheaino miskavain* refers to an activity that might produce an unintended secondary result. *Psik raisha* means that the secondary result is inevitable. *Psik raisha denicha lai*, secondary intent for the other result, is decidedly forbidden. Otherwise, it has some leniencies. *Grama*, means indirectly causing the activity. This usually means doing a physical act, that will lead to the *melacha*, perhaps after a time delay, and perhaps dependent on something else happening that one did not cause himself. Often a regular activity can be caused indirectly, but with no outside help. This can result from *kocho*, one's own effort, including *koach rishon*, one step removed from the action, and

koach shaini, two steps removed from the action. For example, pouring water into a private domain, that will eventually flow into the public domain, involves *hotza'ah*, carrying or transferring. It might flow directly, or it might need to flow indirectly. *Koach rishon* is forbidden. *Koach shaini* is subject to debate. *Shinuy* means doing the usual *melacha* in an unusual manner. Actually, most of these mitigating conditions apply to areas of *halacha* as well. [See e.g. Rambam *Shabbos*, 1, commentaries.]

Where does our case fit in? In the case where one has no intent or need for the activity, but simply cannot avoid it, he is doing a *psik raisha delo nicha lai*. Using the automatic faucet is an intended act. While one does nothing with his fingers to make it work, his activity is direct. He should rather prepare a water supply before *Shabbos*. The flusher poses a bigger problem. One would rather use a manual flusher, or flush the toilet by pouring water in manually. The preference not to use electricity, is considered by some to qualify as *lo nicha lai*. In some hotels, there is no way to disable the automatic flusher. The sensor will activate as soon as the person moves away from the toilet. This can be considered a *grama* at best. However, in a similar situation, some say that if one caused an automatic door to open, he should not move away. If a second person arrives and the first person leaves, the door will not close as a result of the first person's leaving. This is not practical with regard to an automatic flusher, due to *kavod habriyos* [see below]. For similar reasons, one could not occupy the space until the end of *Shabbos*.

C) Electricity on Shabbos

The poskim debate which *melacha*, if any, is violated when operating an electrical item. If there is a light filament, the *melacha* is Scriptural *havarah*, igniting. The light is a glowing coal. If there is no filament, the user still consumes the energy. However, this energy has already been produced, and is moving through the wires toward ground. The user taps into the current and diverts it through his appliance to the ground in his home. He does not burn fresh energy. The appliance might perform a function that involves a *melacha* in its own right. Some maintain that completing the circuit is like adding a tiny addition to a building, a Scriptural case of *boneh*. Or, that by causing the current to pass through the wire one 'builds' it by bringing it to its full potential function. Others suggest that one could be considered fixing or finishing a utensil, by making the appliance work in its intended way. Many maintain that when no obvious Scriptural *melacha* is involved, electricity is forbidden as a Rabbinical extension of *havarah*. When turning on an alternating current, one might actually simply connect the wires. Due to its pulsating nature, the current might be absent just then. One definitely causes it to eventually flow through his own wires, and may not do it intentionally. However, in a case where it happens automatically against his will, this possibility reduces it to *davar sheaino miskavain*. His activity was never intended to produce this result. It was not inevitable and direct. In our case, it could be considered a double *grama*, something like *koach kocho*, or *koach shaini*. In modern digital devices, there is even more time that the current is absent. [See Encyclopedia Talmudis, Nispach Chashmal for comprehensive references.]

D) Kavod habriyos

The Talmud discusses a special dispensation from Rabbinic decrees in cases of *kavod habriyos*, human dignity. This is derived from a dispensation from the *mitzvos* to return lost articles, for a dignified elder. If occupying himself with the item will be be-