

Principles

It may be useful to outline the ethical imperatives to which Rabbi Auerbach subscribes and which emerge from this discussion.

- (1) Life is of immeasurable value—
 - the sanctity of life is a paramount ethical consideration; and
 - extending life is desirable in all circumstances, as it allows for repentance and Torah study.
- (2) A patient has a right of autonomy, defined as a right to choose among treatment options, including the right to decline treatment in certain circumstances.
- (3) Mitigating patient suffering—correlating with the value of beneficence in the vernacular of

medical ethics—is a valid halachic treatment consideration.

In cases where these principles conflict, there is room for different halachic outcomes depending on individual circumstance and preference.

Conclusion

Rabbi Shlomo Zalman Auerbach addressed end-of-life treatment in a number of responsa. He employed a variety of principles to adjudicate the very difficult and heart-rending cases that often arise in this area. What is striking about Rabbi Auerbach's approach is the significance he ascribes to the wishes of the patient, what has been called patient autonomy. Rabbi Auerbach's approach evidences at once a fierce commitment to the halachic system as well as a keen sensitivity to the human condition.

The Hazon Ish and The Science of Grafting and Crossbreeding

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I. Resolving Doubt in the Understanding of Reality

The opinion of the Gaon of Vilna regarding the importance of mastering science in order to understand Torah “because Torah and science are bound up together”¹ is of great relevance when studying the laws of grafting plants. Rabbi Y.Y. Weiss quoted a question he received:²

Question: There is a new kind of grain being grown today by taking the flower of one species and inserting the pollen of another species. Is this prohibited like grafting? This is similar to artificial insemination between species and it is unclear to me whether the question can be answered on the basis of the opinion of the *Hazon Ish* (*Kela'im* 2:16).

Rabbi Weiss's answer:

¹ Rabbi B. Shick of Shklov (nephew of the author of the *Sha'agat Arye*) quoted the Gaon of Vilna in the introduction to his *Yesodot of Euclides* (den Haag, 5540): “Anyone who lacks a single measure of scientific knowledge outside the realm of Torah lacks one hundred measures of knowledge within the realm of Torah because Torah and science are bound up together.”

² *Resp. Minhat Yitshaq* 7:12b.

He seems to mean that it is permitted if instead of growing it becomes part of the tree and improves it. Since there is some doubt regarding the facts, one ought to be strict.

II. The Opinion of the *Hazon Ish*

In order to understand this matter, we must study the opinion of the *Hazon Ish*, who was dealing with a case where the facts are clear to any professional in the field although laymen might not be familiar with them.

This is what the *Hazon Ish* (*Kela'im* 2:16) wrote:

Infusing resin is unlike prohibited crossbreeding because there is no prohibition in inserting the seed of one species into another species. Crossbreeding is prohibited only in living creatures, not in organs separated from them. On the other hand, every cell of a shoot of a plant can potentially become a whole plant. Any resin that similarly can grow into a plant also has the status of being a plant itself and therefore may not be infused into another plant.

The *Hazon Ish* added in a response to Rabbi Chanoch Z. Grossberg that grafting resin into a crack of a tree is prohibited “only is the liquid turns into a shoot afterward.”³

III. The Opinion of the *Hazon Ish* and Reality

Every creature, whether animal or vegetable, consists of many interconnected cells. In plants, a shoot can be removed and transplanted, thus producing a new plant that will be genetically identical (*viz.* a clone) to the original. Instead of transplanting the shoot in the earth, it can be grafted into the crack of a tree. Such

³ *Huqqot ha-Sadeh, be-Talmei Sadeh* 14, quoted in *Ma'adanei Erets: Hilchot Kela'im, Kela'im* 1:5, note 84, ed.: Rabbi Sh.Z. Auerbach (Jerusalem, 5763). See also *Derech Emuna, Kela'im* 1:5, note 82,

transplantation violates the prohibition against interspecies grafting.

A shoot planted in the earth will develop into a whole plant. On the other hand, planting a single cell in the earth will not produce a plant at all; the cell will die. Nonetheless, it is possible today to take a single cell and grow it in laboratory conditions producing plant tissue or a small shoot that in turn can be planted in the earth. In the resin of a single tree, there are such cells that can be grafted by placement in the crack of a tree. If the conditions in the crack correspond to the proper laboratory conditions, such a cell from the resin will grow into a whole shoot, which will be genetically identical to the plant from which it was taken. The shoot will grow from the crack in the tree exactly as any other shoot that was grafted there. All this was indeed possible in the past and this is what the *Hazon Ish* was referring to.

Torah and science are bound up together

Although infusing a certain resin into the earth will not produce a shoot, the *Hazon Ish* developed the idea that infusing it into the crack of a tree is still prohibited since in that environment it could indeed produce a shoot. This prohibition is the same as grafting the shoot of one species of tree onto another.⁴

In any event, the *Hazon Ish* explained that inseminating a germ cell of one animal into an animal of a different species is permitted because the germ cell is not considered a whole creature, unlike a shoot or resin containing cells that can potentially become a whole plant. The prohibition of interspecies grafting is violated only when a

⁴ Despite the decision of the *Hazon Ish*, Rabbi Sh.Z. Auerbach remained in doubt on this issue. He tended to be lenient as long as sowing in the earth would not lead to sprouting (*Ma'adanei Erets: Hilchot Kela'im, Jerusalem, 5763, 1:5, sect. 10. s.v. kemo ken*). It seems, however, that he reversed his position in a letter to Prof. Avraham because “in reality the field is sown with two diverse species.” Further, the resin applied to the crack in the tree would not have sprouted if sown in the earth (quoted in Prof. Avraham’s *Nishmat Avraham*, second ed., *Hoshen Mishpat* 425:2 and in *Minhat Shlomo*, second ed., 97:27). It seems reasonable that the manuscript underlying *Ma'adanei Erets: Hilchot Kela'im* antedates the letter to Prof. Avraham.

potentially whole plant is grafted onto a plant of a different species. A similar principle applies in crossbreeding animals, which is the source from which we derive the principles governing prohibited grafting.⁵

The seed of a male animal or plant is of course not a complete creature capable of producing offspring unless it fertilizes a female's egg. Only after fertilization is a **new** cell formed that does indeed have the potential to become a whole creature. Inserting the male seed into another species is therefore not a violation of the prohibition of grafting as the *Hazon Ish* explained that the prohibition is not violated when only "the [male] seed of one species is placed into another."

If so, it is clear that Rabbi Shaul Yisraeli was right when he permitted cross-pollinating plants⁶ because the prohibition of crossbreeding applies only to crossbreeding two potentially whole creatures, such as shoots or resin. On the other hand, inseminating a male seed into a plant of another species is permitted.

IV. When the Facts are Unclear

Even the great rabbinic authorities are not always familiar with the facts. For example, Rabbi Weiss wrote (*Minhat Yitshaq* 7:12b) in connection with grafting that the facts were unclear. He was not sure whether pollen is absorbed by the tree it fertilizes, in which case the procedure is permitted, or whether it is not absorbed but rather grows as it is, in which case the procedure is prohibited. His doubt regarding the facts forced him to be strict.

⁵ *Kiddushin* 39a according to Lev. 19:19.

⁶ *ASSIA* 65-66, p. 67 (5759).

Rabbi Wosner was also strict in this matter⁷ because he equated pollen with resin, believing both to be capable of producing a new plant.⁸

Begging his forgiveness, Rabbi Wosner's opinion is problematic because male pollen is incapable of independently producing a new plant as resin or a shoot can. Pollen does have the ability to fertilize a female egg producing a new fertilized cell that in turn can produce a whole plant. Before fertilization, the pollen is merely half a plant, incapable of reproduction as the *Hazon Ish* explained. In this key distinction between whole and half creatures, there is no difference between animal and vegetable life as the *Hazon Ish* clearly wrote: "There is no prohibition in placing the [male] seed of one species into another."⁹

The prohibition of interspecies grafting is violated only when a potentially whole plant is grafted onto a plant of a different species

⁷ *Resp. Shevet ha-Levi* 9:224.

⁸ *Resp. Shevet ha-Levi, ibid.*: "In my opinion the matter requires study for even so the male seed has the capacity to produce offspring and we perform an act that produces a different species just like the resin mentioned by the *Hazon Ish*."

⁹ This is the decision of Rabbi Sh.Z. Auerbach: cross-pollinating is not an example of prohibited grafting because the pollen has no capacity to sprout by itself. His nephew, Rabbi Y. M. Stern, quoted his view in his *Kashrut Araba'at ha-Minim*, p. 182. This is also the opinion of Rabbi Amar, the Chief Sefardic Rabbi of Israel, in his *Kerem Shlomo* 2:1.