

Spontaneous Generation — Response to Rabbi Bleich

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A few months ago, I submitted a letter to the RCA journal *Tradition* in response to Rabbi J. David Bleich's article regarding spontaneous generation and Anisakis worms (which is included as an appendix to this document). The thrust of it was that Rabbi Bleich's refusal to admit to the Talmud's mistaken belief in spontaneous generation seriously hampers his analysis. The new issue of *Tradition* includes my letter, and a lengthy article by Rabbi Bleich in response. Here is my response to his response.

Is Spontaneous Generation Scientifically Defensible?

The most astonishing part of Rabbi Bleich's article is that he defends the belief in spontaneous generation as being scientifically valid! Although he admits to finding it more plausible to posit that the Sages were not discussing such a phenomenon (which I will later explain to be equally implausible), he argues at length for the scientific viability of spontaneous generation.

Rabbi Bleich writes that “any person who has even a passing familiarity with philosophy of science” will know that “Pasteur's rejection of spontaneous generation is an empirical generalization and hence not logically compelling.” In other words, the fact that all creatures that have been studied have been found to reproduce by conventional means does not categorically preclude the possibility that there are other species which spontaneously generate. Well, yes, it is true that we cannot *categorically* disprove the existence of spontaneously generating creatures. But how someone can raise this as a serious argument is beyond me. After all, we also cannot categorically disprove the existence of werewolves, vampires, leprechauns, or Santa Claus. But no reasonable person will believe in their existence, for reasons that I explain at length in my book *Sacred Monsters*.

Rabbi Bleich then claims that there is actual scientific support for spontaneous generation. He first states that “Physicists have demonstrated that a massless sub-atomic particle known as a Goldstone boson can be spontaneously created in a vacuum and do not regard the generation of life in a laboratory as merely grist for science fiction” with a footnote pointing towards the impressive-sounding *Path Integrals in Physics; Volume II: Quantum Field Theory Statistical Physics and other Modern Applications*. I am not a physicist and cannot comment on whether Rabbi Bleich's description of Goldstone bosons is accurate. However, I do know

that the generation of a massless sub-atomic particle has no bearing whatsoever on the spontaneous generation of lice from sweat, mice from dirt and salamanders from fire. Physicists, notwithstanding experiments regarding generating RNA in a lab, would indeed not regard such spontaneous generation of animals as grist for science fiction — they would regard it as grist for fantasy. Even science fiction has to at least have *some* basis in reality.

Rabbi Bleich continues to state that “Even more strikingly, evolutionists would have us believe that all life on planet Earth arose out of some type of primordial chemical soup.” Yes, they would have us believe that theory. Whether it is valid or not is up for dispute; I personally have no opinion on the matter. However, the theory of simple organic molecules evolving from primordial chemical soup and subsequently into rudimentary cellular life provides absolutely no reason to believe in the spontaneous generation of lice from sweat, mice from dirt and salamanders from fire. You might as well say that the metamorphosis of tadpoles into frogs provides evidence for werewolves.

Rabbi Bleich concludes by invoking *nishtaneh hateva* to account for why we no longer witness spontaneous generation. He insists that “there is no scientific reason to assume that an asexually reproducing species did not exist in Talmudic times but became extinct over the course of millennia or that members of that species metamorphosed into sexually reproducing lice through intra-species evolutionary processes.” In fact, there are numerous scientific reasons which converge to the conclusion that the spontaneous generation of lice, mice and salamanders has never occurred. They are:

- The complete absence of evidence for such phenomena, despite extensive attempts to find such evidence;
- The fact that such phenomena would run contrary to everything that we know about biology (which is quite a lot);
- The fact that the ancient belief in such phenomena can be easily accounted for, due to the lack of systematic study of the natural world in those days.
- The fact that situations formerly thought to provide evidence for these phenomena (such as rotting meat “producing” maggots) were shown by Louis Pasteur to provide no such evidence.

I have learned not to be surprised that there are still people who defend the belief in spontaneous generation. What surprises me is that such a view can be presented in a journal published by the RCA.

What Did Chazal Believe?

Rabbi Bleich presents his astounding claim that there is “no scientific reason” to reject spontaneous generation as part of an attempt to show that there are multiple legitimate ways of addressing Chazal’s statements about spontaneous generation without saying that they made a mistake. Rabbi Bleich presents another approach, which he describes as personally finding more plausible: that Chazal did not consider microscopic eggs to be halachically significant.

But while it may well be reasonable for a Posek today to rule that microscopic eggs are not halachically significant, there is overwhelming evidence against the claim that this is what Chazal themselves actually meant (which is what Rabbi Bleich claims). Let us consider the evidence, and assess Rabbi Bleich’s claim that “there is nothing contrived or anachronistic” in this explanation.

First of all, the words of the Talmud say nothing about the eggs being halachically insignificant due to their small size. It simply states that these insects do not reproduce sexually (and, in the case of fish-worms, that they develop from the flesh of the fish). While it is not impossible that this could be a shorthand reference for something else, the burden of proof is certainly upon those who would make such a claim. Especially since, in Talmudic times, the *entire world* believed that lice spontaneously generate, it is highly unreasonable to state that when the Sages spoke of lice as not reproducing sexually, they intended a different meaning entirely.

Second, such explanations are inconsistent with the views of the traditional Talmudic commentators. Rambam, Rashba, Ran, Tosafos and others all explain the Gemara to mean that lice spontaneously generate from sweat or dust. True, it is not impossible that they misunderstood the nature of the Talmud’s ruling — indeed, I posit that this occurred with Rashi’s explanation of the Talmud’s reference to *dolfins* as referring to mermaids. Yet in the case of mermaids, there was compelling textual evidence that the Talmud was referring to dolphins instead; here, no such evidence exists. Furthermore, Rabbi Bleich appears to generally adopt the approach of faithfully adhering to the views of the Rishonim and Acharonim, not claiming that they all misunderstood the Gemara. Is it not inconsistent for him to claim here that the Rishonim and Acharonim all misunderstood the Gemara? And what reason is there to believe that they misunderstood it?

Third, the eggs of head lice and body lice are *not* in fact microscopic; they are quite easy to see with the eye. Rabbi Bleich writes that we must therefore say that the Gemara is talking about a different type of lice than those that we find today. This is immensely problematic from both a scientific and rabbinic perspective. From a scientific perspective, there is no

reason to believe (and every reason not to believe) that the type of lice to afflict humans has changed, or that the lice eggs themselves have suddenly gotten much bigger. (I don't even think that the Goldstone boson provides evidence for it.) From a rabbinic perspective, the Rishonim and Acharonim, all the way through to the Chafetz Chaim, all presumed that the lice discussed by the Gemara are the same as those that we find today. When does Rabbi Bleich believe that they started to get it wrong?

Fourth, the Gemara discusses other cases of spontaneous generation, including the spontaneous generation of mice from dirt (*Sanhedrin* 91a), and of salamanders from fire (*Chagigah* 27a). Here, the actual process is not microscopic and there is no way of explaining it away in such a manner. Clearly, Chazal believed in spontaneous generation — as did the entire world in antiquity. I pointed this out in my letter to *Tradition*, making specific reference to mice and salamanders, but even though Rabbi Bleich wrote a *nine thousand* word response to a one thousand word letter, he did not respond to this.¹

Thus, the approach which Rabbi Bleich personally finds plausible, non-contrived and non-anachronistic, is in fact entirely implausible, utterly contrived, and wholly anachronistic, as well as going against all the Rishonim and Acharonim and clear evidence from other topics in the Gemara.

Acknowledging Dissenting Views

Rabbi Bleich begins the section on “Scientific error and halachic inerrancy” by making a passing mention of R. Sherira Gaon and R. Avraham ben HaRambam’s acknowledgement of

¹ Following is another, more technical, objection to Rabbi Bleich’s point. In my letter, I pointed out that when challenged with the phrase “God sits and sustains from the horns of *re'emim* to the eggs of lice,” the Gemara rejects the idea that there are eggs of lice, and says that there is a species called “eggs of lice” (I explain the intent of this in *Sacred Monsters*). But if the Sages were not denying the existence of lice eggs, why do they reject the simple meaning of the statement that speaks about God sustaining the eggs of lice, and resort to difficult explanations instead? Let them simply state that although lice do hatch from eggs, these are too small to be halachically significant! It therefore seems that they did not consider this possibility. Rabbi Bleich responds by claiming that the Gemara’s objection in any case requires reinterpretation: “even if the thesis of spontaneous generation is understood literally, there is no reason to presume that *kinim* arise spontaneously as *mature* creatures (emphasis added). Certainly, divine providence would perforce necessarily extend even to spontaneously generated *kinim*. If so, God’s providence would indeed be necessary... How then, does the cited dictum negate the assertion that *kinim* are the product of spontaneous generation?” He proceeds to claim that the Gemara’s objection must be that the providence over the development of the lice can be *visually* perceived, to which it responds that it can only be perceived with a different creature called “eggs of lice.” Yet, again, this is forcing a reading into the Gemara for which there is no evidence and which, for this reason, no Rishon or Acharon ever proposed. Furthermore, Rabbi Bleich’s question from the conventional understanding of the Gemara’s objection appears baseless. He asks that even spontaneously generated lice would be generated as infants rather than adults, and thus surely it would be obvious that providential care is required. But the point of the Talmud’s objection is that the phrase speaks of *eggs of lice*, which shows that lice are generated from eggs laid by other lice rather than from sweat.

the scientific errancy of Chazal, followed by a lengthy citation of Chazon Ish's position that one who posits such errancy is a heretic. On this, I have three comments. First, it is disturbing that in a footnote, Rabbi Bleich references Rabbi Moshe Meiselman's unfortunate theory regarding the "provenance and authority" of R. Avraham ben HaRambam's statement i.e. his belief that it is a forgery. Second, I am not sure why Chazon Ish merits a greater focus than Geonim and Rishonim. Third, there may well be here an instance of Rabbi Bleich revising the Chazon Ish's view to bring it more in line with his own, but from the opposite direction. Rabbi Bleich writes that although Chazon Ish held halachic statements of Chazal to be infallible, he assuredly "would not deny that certain aggadic statements are hyperbolic in nature and that others must be understood allegorically." In fact, this is far from clear. Rabbi Mordechai Shulman, Rosh Yeshivah of Slabodka Yeshiva in Bnei Brak, relates a story concerning the Chazon Ish (*Pe'er HaDor* p. 330). A student reported that he had seen a work that claimed that the account of Og involved exaggerations. The Chazon Ish told this student that such beliefs were forbidden, and did not allow that student to touch wine out of concern that it would become *yayin nesech*. While it is possible that this story should not be taken at face value, there is certainly no basis for being sure of it; Chazon Ish would not be the first or last to insist that Aggadata is all literally true.²

Rabbi Bleich then writes as follows:

The claim that "scores of Rishonim and Aharonim are of the view that the Sages were not infallible in such matters," i.e., in matters of Halakhah, is simply not true. Those authorities who ascribed error to Hazal did so only in the context of non-halakhic pronouncements. With the exception of *Pahad Yizhak*, I am hard pressed to identify any *rishon* or *aharon* who believes that, *properly understood*, Hazal were fallible in their specific halakhic pronouncements.

His "i.e." is somewhat disingenuous, since I was in fact referring to statements made in non-halachic contexts. However, I will let it go, since the bottom line is that I see no reason why they would not say the same in halachic contexts. The scores of authorities who said that Chazal were not infallible in matters such as basic astronomy clearly did not subscribe to the recent mystical view, itself strongly conflicting with the Gemara, that Chazal had *ruach hakodesh* in all matters. What basis is there for saying that they would all believe that *ruach hakodesh* would suddenly "kick in" when they were basing a halachah on this scientific knowledge? Besides, as Rabbi Aharon Marcus in *Keses HaSofer* to Bereishis 1:21 points out, we see cases (such as *Niddah* 22b, *Chullin* 63b and 77a) where Chazal relied on the opinion

² See eg. Shalom Shushan, "*Emunah BeMidrashi Chazal—Peshuto*," *Ohr Torah*, Cheshvan 5751, 2:33, p. 132, who cites this story regarding Chazon Ish as support for such an approach.

of scholars in the natural sciences for the purposes of halachah. Were those gentile scholars suddenly divinely inspired in such cases?

Furthermore, in at least one case there are indeed halachic ramifications of the cases where the Rishonim said that Chazal erred. The Tosafist R. Eliezer of Metz suggests that the reason why one must knead matzah dough only with water that had sat the night after being drawn is to prevent it from being heated during the night by the sun, which is passing beneath the earth at that time. He notes that this follows the view of the gentile scholars regarding the sun's path at night, as opposed to the view of the Jewish Sages which was mistaken. R. Eliezer's view is quoted, endorsed and further explained by Rosh, R. Yerucham ben Meshullam, Semag, and Ritva.

Rabbi Bleich then claims that R. Yosef Kappach, whom I cited as stating that Chazal's ruling on lice was based upon a mistaken belief in spontaneous generation, held no such thing; instead, he claims, R. Kappach believed that *nishtaneh hateva* (i.e. that although lice today do not spontaneously generate, the lice in Chazal's era really did spontaneously generate). But the evidence indicates that this is simply R. Bleich projecting his own views upon R. Kappach. As R. Kappach's disciples will attest, he had no problem saying that Chazal erred in scientific matters. R. Kappach (unlike Rabbi Bleich) elsewhere readily acknowledged that Chazal were mistaken in their belief in the spontaneous generation of mud-mice; presumably he would have acknowledged the same regarding their belief in the spontaneous generation of sweat-lice.

Rabbi Bleich likewise claims that Rav Herzog, whom I cited as stating that Chazal's ruling on lice was based upon a mistaken belief in spontaneous generation, was instead proposing that *nishtaneh hateva*. Yet, again, everything that we know about Rav Herzog indicates otherwise. Rabbi Herzog fully accepted that the Sages of the Talmud were fallible in scientific matters:

The attitude of the orthodox Jew towards the scientific matter embedded in this colossal mass of Jewish religious learning may be best summed up in the words of R. Abraham Maimuni, the great son of the greatest codifier of Jewish law and the foremost Jewish philosopher of the Middle Ages. "It does not at all follow," Abraham Maimuni declares in his classical introduction to the Haggadah, "that because we bow to the authority of the sages of the Talmud in all that appertains to the interpretation of the Torah in its principles and details, we must accept unquestionably all their dicta on scientific matters, such as medicine, physics and astronomy. We ought to be quite prepared to find that some of their statements coming within the purview of science are not borne out by the science of our times..." It is of importance to bear this in mind when we enter upon the study of science in the Talmud. (Rabbi Yitzchak Herzog, *Judaism: Law & Ethics*, p. 152)

In another context, he notes that a statement in the Talmud about physiology has been clearly demonstrated as false, and therefore could not have been a tradition from Sinai.³ In light of his ready acknowledgement of Chazal's fallibility in scientific matters, and his PhD in marine biology, it is surely absurd to claim that Rav Herzog believed that Chazal were correct in their beliefs regarding spontaneous generation.

Rabbi Bleich also completely ignores my citation of Rav Moshe Glasner, the *Dor Revi'i*, in this section. He does discuss it later, but why ignore it here, when he is denying the existence of authorities who stated that Chazal sometimes basing halachic rulings on erroneous scientific beliefs?

In summary: Rabbi Bleich refuses to acknowledge that anyone (other than *Pachad Yitzchak*) ever admitted to Chazal sometimes basing halachic rulings on erroneous scientific beliefs. This is opposed by all reason and evidence.

Like Pulling Teeth

We now reach Rav Moshe Shmuel Glasner, author of *Dor Revi'i*, who acknowledges that Chazal were mistaken about spontaneous generation, but considers their ruling to be nonetheless binding. In my letter, I voiced my surprise that Rabbi Bleich did not mention his position in his lengthy survey of halachic opinions in this matter. I added that Rav Glasner's position is particularly valuable because he acknowledges that Chazal were really talking about spontaneous generation (as all the Rishonim and Acharonim observed, but as Rabbi Bleich disputes), that there is no such thing as spontaneous generation (as is adequately scientifically proved, though not according to Rabbi Bleich), and yet maintains the halachah.

Rabbi Bleich begins his discussion of Rav Glasner by saying that "Rabbi Glasner's comments are similarly not apropos." However, he does not show this to be the case. Instead, he begins with a lengthy description of Rav Glasner's position. Then, Rabbi Bleich claims that according to Rav Glasner, the Oral Law could not possibly contain a false statement, such as that the moon is made of green cheese. As evidence for this, Rabbi Bleich engages in a lengthy presentation of Rav Glasner's idea that the Torah was given to the Jewish People due to their intellectual honesty, and concludes this presentation by saying that "Rabbi Glasner would claim that God bestowed upon the people of Israel the intelligence necessary to ensure that, in expounding the Oral Law and committing it to writing, they would not rely upon specious reasoning."

³ See the letter cited by Dov Frimer, "Jewish Law and Science in the Writings of Rabbi Isaac HaLevy Herzog." B.S. Jackson, ed. *Jewish Law Association Studies* V (Atlanta: Scholars Press 1991), pp. 33-47.

After all this, though, Rabbi Bleich is forced to admit the truth, since it is stated unambiguously in black-and-white in *Dor Revi'i*, and observes that “Rabbi Glasner, in the introduction to his *Dor Revi'i*, s.v. *u-temiha*, does concede that, were present-day scientific information available to the Sages, they would not have permitted the killing of *kinim* on Shabbat.” I.e., that Chazal based their ruling on a mistaken belief in spontaneous generation. Well, there you go! That is precisely the position I was reporting! Rav Glasner believed it to be the case that, in expounding the Oral Law and committing it to writing, the people of Israel relied upon mistaken scientific beliefs. Which makes all Rabbi Bleich’s discussion about the moon being made of green cheese and the people of Israel not relying on “specious reasoning” either irrelevant, misleading, or incorrect. And which means that, contrary to Rabbi Bleich’s claim, Rabbi Glasner’s comments are *entirely* apropos. And that Rabbi Bleich’s statement that “Even if the view of Dor Revi’i... would lead to the conclusion attributed to them in the letter to the editor...” is wrong — his view is exactly as I cited it.

Why does it take so much effort, distraction and apparent attempts at obfuscation before Rabbi Bleich actually admits that Rav Glasner says precisely what I reported him as saying?

On Presenting Opinions

Rabbi Bleich then explains that Rav Glasner’s view is a singular position, and that he is “rejecting the views of numerous highly-respected and more authoritative predecessors.” He adds that “Halakhic decision-making is not a matter of picking and choosing among precedents consigned to the cutting floor of Halakhah. It most certainly does not consist of seeking resolutions unencumbered by “unappealing consequences” and then engaging in sophistry to justify those resolutions.

First of all, I was not making any halachic decisions. My letter pointed out that in an article purportedly presenting a thorough discussion of this topic, the view of Rav Glasner and Rav Herzog should also be presented. Rabbi Hershel Schechter gives their view a prominent role in his discussion of this matter. I do not see how Rabbi Bleich has remotely justified leaving out a discussion of their view in his much lengthier discussions. He certainly discusses many other views that are even older and more obscure.

Second, while I was not making any halachic decisions, I did write that their approach is the most salient, cogent, historically accurate, and avoids the unappealing consequences of *Pachad Yitzchak* (who says that the halachah should change). Rabbi Bleich does not like “picking and choosing among precedents consigned to the cutting floor” — but Rav Glasner’s and Rav Herzog’s interpretation of the Gemara (i.e. that Chazal were talking about spontaneous generation of lice) has the precedent of *all* the Rishonim and Acharonim,

whereas Rabbi Bleich's favored interpretation (that Chazal knowingly dismissed microscopic lice eggs) has *zero* precedent! And unlike the other approach endorsed by Rabbi Bleich, Rav Glasner and Rav Herzog acknowledge that spontaneous generation does not and never did occur. Surely salience and cogency should be factors in evaluating halachic decisions! And I don't see why halachic decision-making does not consist of seeking resolutions unencumbered by unappealing consequences — the anarchy that would result from allowing halachah to be constantly re-evaluated is no different from the anarchy that Sefer HaChinnuch uses to justify *Lo Sasur*.

“Engaging in sophistry in order to justify seeking appealing resolutions”? To me, that sounds like a perfect description of someone who claims it cogent to believe that Chazal never believed in spontaneous generation, and who misrepresents those who observed otherwise.

The Red Herring

A major portion of Rabbi Bleich's article is devoted to challenging the notion that a ruling of Chazal based upon errant scientific beliefs would still be binding due to national acceptance of the canonization of the Talmud, which Rabbi Bleich describes as sounding “very much like a Reconstructionist reading of the Oral Law, absent the saving grace of an ethical purpose.” I am not going to respond to this because it is simply irrelevant. I am not at all committed to any particular explanation of the reasoning behind the position of Rav Herzog and Rav Glasner. I would, however, hesitate to describe them as “Reconstructionist.”

What Were Chazal Discussing?

At the very beginning of his article, Rabbi Bleich insists that any and all approaches to the issue of Chazal vs. science are irrelevant to the case of Anisakis, since Anisakis worms are demonstrably spawned outside fish and swallowed by them, and are thus clearly not the subject of Chazal's permissive ruling. At the very end of his article, Rabbi Bleich reiterates this claim, and then addresses the objection to it which I presented in my letter: If Chazal were not describing the Anisakis, what were they describing?

Rabbi Bleich first argues that he is under no obligation to answer this question; it is enough to establish that Chazal could not have been referring to Anisakis. I strongly disagree. The fact that *we* know that Anisakis worms are born outside of fish does not mean that *Chazal* knew that! If no viable alternative can be suggested, then the conclusion would be that Chazal were indeed describing the Anisakis worm.

Rabbi Bleich then says “Nevertheless, I did answer that question in my article and it is disingenuous to pretend that I did not.” Actually, it is disingenuous to pretend that I pretended that he did not — instead, I addressed his proposed answers and disputed them. Here are the possibilities that he presents in this article:

“Among the possibilities are: 1) the parasite they described is extinct; 2) it has mutated into the present-day sexually reproducing *Anisakis*; 3) some *Anisakis* may arise in the flesh of the fish and others spawn in water; 4) Hazal were referring to other piscatorial creatures of which there is no dearth.”

The first three approaches rest on the presumption that spontaneous generation does or has taken place. As I pointed out earlier, I think that there is more than adequate reason to reject this. I am, frankly, disturbed that a scholar at YU is presenting such claims as being viable.

The fourth approach appears to be that which Rabbi Bleich describes in greater detail in his original article, “Piscatorial Parasites”: that Chazal were referring to parasites that are imbibed by fish at a stage when they are microscopic and thus halachically insignificant, whereas *Anisakis* are imbibed at a stage when they are visible to the naked eye.

But there is no reason to think that this is what Chazal actually meant, and every reason to believe that they did not mean this. Chazal gave a blanket license (as did Shulchan Aruch) that worms found in the flesh of the fish are permitted without qualification — whereas according to Rabbi Bleich, no such permission exists in an overwhelming number of cases. Chazal did not insist that we determine where the worms were generated. They did not know the biological details of the life cycle of parasites. They believed that salamanders and mice spontaneously generated from fire and mud — and they likewise believed that insects are generated from sweat, fruit, and fish.

Rabbi Bleich claims that one who believes that Chazal were simply wrong “should be intellectually honest” and must necessarily conclude that all parasites are forbidden, “unless, of course, that person rejects the canons of halakhic methodology.” I do not think that either Rav Herzog or Rav Glasner, who were of the view that Chazal’s permissive rulings regarding the spontaneous generation of lice have been canonized, rejected the canons of halakhic methodology, or were intellectually dishonest.

(Let me be clear: I am not insisting that the only valid approach is that of Rav Herzog and Rav Glasner. I am certainly sympathetic to those who would follow Rav Lampronti’s approach and forbid them — as long as they face up to the ramifications of this for other areas of halachah.)

Rabbi Bleich concludes his article with an extremely revealing citation, from Maharal in *Be'er HaGolah*, where Maharal says that even if one does not accept his explanation of difficult passages in Chazal, one should not ascribe any defect to the words of the Sages. This is incredibly ironic, since Maharal's approach suffers from exactly the same drawbacks as Rabbi Bleich's article. In my monograph on *The Sun's Path At Night*,⁴ I showed how all the Geonim and Rishonim, bar none, understood the Gemara in *Pesachim* 94b according to its plain meaning, that Chazal believed the sun to travel behind the sky at night. Maharal, however, insists that Chazal were most definitively not talking about any such thing, due to his 16th century belief that they couldn't possibly have been wrong about such a matter, and simply does not address the fact that he is going against all the Geonim and Rishonim (amongst other problems with his approach). If Rabbi Bleich wishes to castigate me for my criticism of his article as being anachronistic and intellectually dishonest, then citing Maharal is hardly helping his case.

Appendix I: Why Lice Are A Matter Of Life And Death

I'd like to conclude my rejoinder by explaining some extremely significant ramifications of this debate. It's literally a matter of life and death, since it relates to brain death and organ donation.

If brain death is not death, then to take organs from a brain-dead person is murder. But if brain death *is* death, then to refrain from taking organs from a brain-dead person is needlessly allowing several other people to die.

Most people do not pasken this question for themselves; instead, they follow their Poskim. But the problem is that poskim on this issue are usually implementing a non-rationalist approach. For people in the charedi world, this is any case usually their own preferred approach. Non-charedim, on the other hand, will follow a posek such as Rav Bleich. Because he writes with sophisticated English (and Latin), has academic credentials, publishes in *Tradition*, and teaches in YU, these people assume that he reflects their own approach to Torah and Judaism and their own epistemology. But Rabbi Bleich's ruling against organ donation is fundamentally resulting from the same non-rationalist approach that makes him refuse to accept that Chazal mistakenly believed in spontaneous generation.

Rabbi Bleich's methodology for paskening brain death and organ donation is based upon drawing inferences from Chazal, Rishonim and Acharonim. But this only makes sense if Chazal, Rishonim and Acharonim dealt with the relative significance of the neurological and

⁴ Available for download at <http://www.rationalistjudaism.com/2010/11/key-to-everything.html>.

cardiopulmonary systems, and understood the roles of each. Only then could we determine whether they believed life to depend upon the action of the heart or the action of the brain.

But Chazal, Rishonim and Acharonim did not and could not have dealt with the relative significance of the neurological and cardiopulmonary systems. For until very recently, the systems were inseparable. There was no such thing as being brain-dead but having your heart still beating. And furthermore, even if Chazal, Rishonim and Acharonim were to have dealt with the relative significance of the neurological and cardiopulmonary systems, this would be hampered by the fact that they mistakenly believed significant components of the mind to be housed in the heart.

Someone who acknowledges that Chazal only possessed the limited scientific knowledge of their era will (hopefully) take this into account. But if someone believes that Chazal could not have been mistaken about scientific matters — as demonstrated by their refusing to accept that Chazal mistakenly believed in spontaneous generation — then they will refuse to consider that brain death cannot be resolved via drawing inferences from the statements of Chazal.

If a person accepts that all the Rishonim, Acharonim and contemporary non-fundamentalist Talmud scholars are correct in understanding Chazal as describing spontaneous generation, and he accepts that spontaneous generation has been adequately disproved, then he should not be following a ruling regarding being an organ donor from someone who does not acknowledge these points, or who does not incorporate them into his analysis of the issue.

Appendix II: A Contemporary Posek on Spontaneous Generation

A reader, Joseph, submitted the following comments:

Regarding the claim by R. Bleich that there are no poskim who subscribe to R. Slifkin's thesis regarding halachos based on mistaken factual premises, this is certainly mistaken. Just to give one example, Rav Hershel Schachter, in a recent Q&A session in London (in front of at least 50 people), discussed this exact case, and made reference to the Dor Revi'i. I asked him about the anisakis question, and he said that Chazal believed in spontaneous generation, in accordance with the common belief in that era, and that this is the basis for why they allowed anisakis worms.

He went on to say that despite the fact that we now know this belief to be false the halacha stands, because, as the Dor Revi'i explains, Chazal had the authority to establish the halacha for all generations. He said that the position some report in the name of Rav Elyashiv,

namely that worms in the past used to spontaneously generate, and hence were muttar, but have since stopped doing so, and are now *assur*, is a 'joke'.

Rav Schachter also mentioned that when R. Moshe Feinstein was asked this question, he refused to discuss it, and said that it was ridiculous that anyone should even ask about something that the Shulchan Aruch explicitly permits.

I would add that there are numerous areas of halacha that are based on scientific premises that are now known to be invalid, such as the various *se'ifim* in Shulchan Aruch allowing certain worms in fruit or cheese for consumption, or the rules of shabbos which allow putting uncooked food in a *kli sheni* full of boiling water, or many of the *dinim* of 'belios' in kashrus, and yet we generally do not suggest we should change the established halacha.

To go back to the example of killing lice on Shabbos, if one does not accept the apologetics that Chazal would have allowed this even if they understood how lice reproduce (which R. Slifkin provides cogent reasons for rejecting), then there is no difference between this case and that of the anisakis. In both, one is subscribing to the codified rule to do something which would be considered forbidden according to the principles that Chazal were using to propagate that law.

A parallel for this can be found in the case of '*okimtos*' that the gemara makes on tannaitic statements, even though these explanations are often plainly not in accord with the underlying reasoning behind a given Tanna's ruling. To quote R. David Foldes' elucidation of Rav Shlomo Fisher's drasha on the topic, "the kabalah that later generations would not argue on the Sages of the Mishna, which is mentioned by the Kesef Mishneh, is only regarding the formal halacha but not regarding content and rationale. The amoraim frequently add *svaros* (rationales) and *derashos* (homiletics) to the teachings of the tannaim, and similarly they can argue with the legalistic logic applied by the tannaim. The amora is thus bound by the formal teaching of the Mishna, which he cannot dismiss completely. In case he disagrees with the tannaitic rationale (which he is allowed to) he may accept the ruling of the Mishna in a very specific case, and maintain his own ruling as the principle. As with the biblical covenant regarding *mitzvos derabanan*, which differentiated between biblical and rabbinic law, so too here the kabalah extends only as far as the terms of the original agreement, namely the formal acceptance of the final rulings of the tannaim."

Rav Eitam Henkin recently published a Sefer on the issue of bugs in fruit. In the introduction, on pages 10 and 11, he makes a point that is very similar to the one made by R. Slifkin: <http://www.michtavim.com/EitamHenkin5770.pdf>

The other source is a fascinating line in a teshuva in Igros Moshe, which although coming from a totally different perspective to R. Slifkin, still serves to illustrate that R. Moshe would certainly not have agreed with R. Bleich, and accords with his comments on the anisakis issue, as reported by Rav Schachter. It also serves to help us understand one reason why it would be important for the halacha to be 'fixed'. He writes that it is inconceivable

that the great tzadikim of yesteryear transgressed *issurim* even *'be'oness'* due to mistaken scientific beliefs (and therefore we do not take into account certain recent scientific developments when paskening Halacha). According to R. Bleich, when R. Moshe ate the same fish as we do without checking for worms, he was doing exactly that: <http://www.hebrewbooks.org/pdfpager.aspx?req=919&st=&pgnum=246>.

Appendix III: My Letter To Tradition

To the Editor:

In Rabbi J. David Bleich's "Survey of Recent Halachic Literature: Piscatorial Parasites" (Tradition 44:1, Spring 2011) he presents a lengthy and erudite discussion of a variety of halachic positions regarding whether fish infested with anisakis worms is permissible to be eaten. Much to my surprise, however, he did not discuss the position of Rav Herzog and Rav Glasner to such topics which is, to my mind, by far the most salient and cogent. Furthermore, as I shall endeavor to demonstrate, this assists with confronting the Gemara in a way that is more accurate from a historical perspective.

Rabbi Bleich observes that the Gemara's reason for permitting worms that are found in the flesh of the fish "certainly appears to reflect reliance upon a notion of spontaneous generation. Whether that statement is to be understood literally and, if so, whether rejection of that concept by modern science has any bearing upon Halakhah, or whether the Gemara's statement should be understood as expressing a concept that is compatible with contemporary scientific theory are intriguing questions. Resolution of those questions is, however, irrelevant to the points that have been made herein." I beg to differ; I would argue that resolving these questions is extremely relevant.

There is certainly no reason to think that the Gemara's statement is not intended literally. And spontaneous generation was an absolutely normative belief in antiquity. The Gemara discusses several other such cases, including the spontaneous generation of mice from dirt, that of salamanders from fire, and that of lice (where the Gemara specifically rules out the possibility that there could be any such thing as lice eggs). Before modern times, nobody ever claimed that the Gemara in these cases was referring to anything other than spontaneous generation. An honest reading of all these topics in the Gemara results in the clear conclusion that the Gemara is referring to a belief in spontaneous generation, which has since been discredited.

Rabbi Bleich spells out his objection to such an interpretation of the Gemara as follows: "...If the notion of spontaneous generation is rejected and the various theories advanced to reconcile the apparently contradictory talmudic statements with contemporary science are rejected, the resulting conclusion that, contra unequivocal dicta and precedents spanning more than two millennia, all worms and piscatorial parasites found in the flesh of fish are

forbidden is compelled. To date, no rabbinic scholar has espoused such a conclusion with regard to piscatorial parasites.” Yet surely even if R. Bleich were correct that this would result in two millennia of error, this is simply an appeal to consequences; it would not mean that this reading of the Gemara is not historically correct. The claim that no rabbinic scholar has espoused such a conclusion with regard to piscatorial parasites is likewise not a reason why this reading of the Gemara is not historically correct. It is also misleading; as Rabbi Bleich acknowledges in a footnote, R. Isaac Lampronti did indeed posit such an approach in the case of lice (where he argues that the Gemara’s permission to kill lice on Shabbos is based on an erroneous belief and should not be maintained), and there is no reason to think that he would not posit the same approach here. This approach was also taken by Rabbi Yosef Kappach (commentary to the Mishneh Torah, Hilchot Shabbat 11:4).

In any case, there is another approach that Rabbi Bleich does not mention, which both acknowledges that the Gemara is recording an erroneous belief regarding spontaneous generation, and yet avoids concluding that Jews were sinning for two millennia. It is the approach of Rav Herzog (*Heichal Yitzchak, Orach Chaim 29*) and Rav Moshe Shmuel Glasner (*Dor Revi’i, Chullin, introduction*), as stated with regard to the case of lice. They acknowledge that the Gemara is relying upon an erroneous belief in spontaneous generation to permit killing lice on Shabbos, but they maintain that the halachah remains valid, due to the authority of Chazal. In my book *Sacred Monsters* I explained at length why this position is both cogent and important. As Rabbi Shlomo Fischer explains, based upon Kesef Mishnah to *Hilchot Mamrim 2:1*, we follow all Chazal’s rulings not because they are necessarily infallible, but because of a nationwide acceptance of their authority (*Derashos Beis Yishai 15*).

In Rabbi Bleich’s concluding observations, he lists several approaches for dealing with confrontations between the Sages and modern science. Conspicuously absent from this list is the possibility that the Sages were simply mistaken—despite the fact that scores of Rishonim and Acharonim were of the view that the Sages were not infallible in such matters. Instead, Rabbi Bleich presents an explanation according to which the blanket license given in the Gemara (and Shulchan Aruch), that worms found in the flesh of the fish are permitted without qualification, does not actually apply in an overwhelming number of cases. Furthermore, if the Gemara is not permitting anisakis parasites, then what exactly is it permitting? Some say that it is permitting species that actually do spontaneously generate in the fish—but we know that no such species ever existed. Others say that it is permitting parasites that were ingested from outside of the fish but which were too small at that time to be halachically significant—yet this is anachronistic, hardly seems to be the meaning of the Gemara or the Rishonim, and is an obvious apologetic being performed in order to attempt to avoid a conflict with science.

Ironically, although many avoid saying that Chazal erred in science in order to uphold their authority, it can have precisely the opposite effect. Aside from sounding unconvincing,

there is a potential for drastic halachic consequences. For example, it could be argued that the Sages only permitted the consumption of honey on the premise that it is only nectar and does not contain anything created by the bee; but now that we see that bees inject enzymes into it, then it must be that the Sages were referring to a different kind of bee honey, and our honey should be prohibited! And so on. We should be extremely wary of diverging from Chazal's rulings based on science, even under the guise of upholding their authority.

Surely in a scholarly discussion, we should never avoid adopting a historically accurate understanding of the Gemara, such as that taken by R. Isaac Lampronti. And with the approach of Rav Herzog and Rav Glasner, we can avoid the unappealing consequences.

Natan Slifkin

Ramat Bet Shemesh