

# Communications

## COJOINED TWINS

TO THE EDITOR:

Rabbi J. David Bleich (“Cojoined Twins,” *Tradition* 31:1, Fall 1996) notes the opinion of Rabbi Moshe Feinstein z”l, who permitted separating two twins in order to save one even if it necessitated sacrificing the other. There is oral evidence of the reasoning behind Rabbi Feinstein’s ruling, but no written record.

My mentor, Rabbi Y. Kaminetsky z”l, was aware of Rabbi Feinstein’s ruling and differed strongly with him. He felt that a doctor who operated and sacrificed one of the twins could be accused of homicide. Rabbi Kaminetsky came to the conclusion that nature should take its course, allowing both children to die.

I should like to add that Rabbi Bleich’s analogy of each of the twins being a pursuer is somewhat erroneous. Each twin is being pursued, but neither is a pursuer nor has any intention of being a pursuer. It is one’s mere existence that threatens the other. The halakhic inference is obvious.

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J. DAVID BLEICH REPLIES:

Professor Low’s report that Rabbi Jacob Kamenetzky rejected Rabbi Feinstein’s ruling in the case of the dicephalus twins is not at all surprising. Indeed, I would be hard pressed to name any rabbinic authority of stature who was in agreement. Unfortunately, those who disagreed did not commit their objections to writing. In part, this was because, in the absence of a written responsum, they found Rabbi Feinstein’s position to be elusive and baffling. The entire point of my article was that Rabbi Feinstein’s oral ruling is, at first blush, incomprehensible and can be understood only in light of his own recorded innovative position regarding another matter.

Let me take this opportunity to explain why I made no reference to the differing oral opinion of Rabbi Kamenetzky and others regarding this matter by relating an anecdote involving Rabbi Kamenetzky, who was my mentor as well as the mentor of Professor Low. One Shabbat morning, when I was one of the younger students in Mesivta Torah Vo-

daath and relatively new in the Yeshiva, a senior student entered my room while I was tying my tie. He proceeded to upbraid me and declared in no uncertain terms that it was absolutely forbidden to do so. When I expressed amazement and incredulity he informed me that Rabbi Kamenetzky had so ruled in an unequivocal manner. Seeking to understand why, I spent every free moment during the ensuing week studying sources defining the parameters of the prohibited activities of both *kosher* and *makke be-patish*. I remained totally puzzled. On Friday morning I had the temerity to approach Rabbi Kamenetzky in his office and told him I wanted to discuss the issue of tying neckties on Shabbat. Since I did not phrase the issue as a question but expressed a desire for discussion he indicated that I should proceed. I proceeded, with what I now recognize must have been quite a bit of *chutzpah*, to deliver myself of a disquisition outlining the views of the various *rishonim* and concluded by stating that it seemed to me that there were no grounds to regard the act in question as prohibited by any of those authorities. Rabbi Kamenetzky listened in total and stony-faced silence. When I finished he looked at me and uttered only one word: “*Avade*—Certainly.” Unable to contain myself, I blurted out, “Then why do they say the *Rosh Yeshiva* forbade it?” With utter serenity he responded, “I will tell you something—and remember it: Never believe anything that is said in my name unless you hear it from me yourself.” He then proceeded to relate what he had said and explained how his comments had apparently been distorted.

At the time I could not have understood the profundity of Rabbi Kamenetzky’s comment. Oral rulings on matters of halakha, proffered without citation of sources, unaccompanied by reasoned explanations and unqualified by exceptions and limitations are, in themselves, of limited value. The hearer will perforce interpret what he has heard in accordance with the framework and limitations of his own knowledge and scholarship. His understanding may be correct or it may be incorrect; it may be complete and profound or incomplete and superficial—or somewhere in between. Accordingly, such *Torah she-be-al-Pe*, cannot be assigned the same weight as a written statement in which the text, together with its omissions and ambiguities, speaks for itself. Hence, my reluctance to quote even matters that I have heard personally. The caption that generally appears above my *Tradition* column is appropriately worded “Survey of Recent Halakhic Periodical *Literature*.”

Professor Low’s final paragraph leaves me somewhat perplexed. It is absolutely certain that the twins under discussion had no “intention to be pursuers.” But intent is not an element of the halakhic category of

pursuit. It is also true that “their mere existence threatens the other” (sic). The contention that “each twin is not a pursuer but each twin is being pursued” is precisely the crux of the controversy between Rabbi Feinstein and Rabbi Kamenetzky. If Professor Low’s statement is intended as a synopsis of Rabbi Kamenetzky’s view it is entirely accurate and “the halakhic inference is obvious.” I might add that it also reflects the generally accepted interpretation of “*me-shemaya ka radfi la.*” The purpose of my article was to explain Rabbi Feinstein’s dissenting view, and its entire thesis is that elsewhere Rabbi Feinstein did assert quite explicitly that mere existence can constitute pursuit. Professor Low is certainly at liberty to disagree and, if he does, he will find himself in illustrious company. My purpose was to explain Rabbi Feinstein’s view, not to endorse it. For that reason I concluded with the observation that “disagreement with any element in [Rabbi Feinstein’s] analysis of the discussion of the Palestinian Talmud, including the rationale underlying R. Simeon ben Lakish’s disagreement with R. Yohanan with regard to the sufficiency of specification alone, would in all likelihood result in a different conclusion regarding separation of dicephalus twins.”

I do believe that my article makes it quite clear that Rabbi Feinstein’s view is novel and that it accurately presents the generally accepted position against which that view must be examined.

## MIKVE AND PHILOSOPHY OF HALAKHA

TO THE EDITOR:

Hillel Goldberg’s meditation (“Philosophy of Halakha: The Many Worlds of *Mikve*,” *Tradition* 30:2, Winter 1996) presents a refreshingly original contribution to the science-religion *oeuvre*. But it also suffers from both specific error and general objection, about which I would like to comment. (I am a *musmah* of YU and a theoretical physicist and Chief Scientist, Nuclear Phenomenology Division, at an agency of the Department of Defense.)

1. R. Goldberg’s description of the halakhic power of *hashaka* to ritually purify (apparently instantaneously) a volume of water, when a *hibbur* to another already pure volume is forged, as both acausal and refracting the same action-at-a-distance non-locality exhibited in Quantum Mechanics (QM) by an Einstein-Podolsky-Rosen type experiment, is seriously misleading. QM non-locality is profoundly causal in the common sense that neither can messages be transmitted nor paradoxes exhibited through this type of non-local interaction. In QM this “causal” non-

locality arises entirely from the prior entanglement of the quantum state of the now separated components of the measurements. (Though a certain ambiguity does pertain to the order of events with space-like separations, this has nothing to do with quantum mechanics *per se*.) The key to QM non-locality, then, is a necessary prior entanglement, a facet quite absent in *hashaka*. This is not nit-picking, it rather goes to the core of the claimed QM refraction by *mikve*.

*Inter alia*, the very concept of simultaneous events conjures quite different referents for the physicist and the *posek*, and it is a category error to analyze the halakhically “instantaneous” purification of a *mikve* volume by borrowing the physicist’s concepts.

2. R. Goldberg’s description of the Gibbs Paradox attributes the lack of entropy increase when two identical gases mix to the physical irreversibility of the process. This is incorrect, as the counterexample of entropy production in the irreversible mixing of two gases of identical composition but different initial temperatures clearly demonstrates. (His description fails to highlight the real issue of the “paradox” very well, which is associated with a discontinuous change in entropy production in the limit as changes in initial gas states go continuously to zero.)

3. Also, while not a scientific error *per se*, it would also seem to me that R. Goldberg sails in uncharted halakhic waters with an unjustified extrapolation of the Gra’s concept of *hibbur* between *mikva’ot* to the level of molecular exchange. If anything, one might argue that more prevalent precedent would not ascribe significance to quantities undetectable to the ordinary human senses, thus microscopic bugs on lettuce have no halakhic resonance, let alone single molecules.

I should also like to publically register the anticipatory cringing that the specialist feels when confronted with section titles such as R. Goldberg’s “The Gra’s Theory of the Unified Field.” It is nothing of the kind, and one is uncomfortably reminded of the semantic trivialization of relativity theory in popular culture shortly after its introduction.

A minor historical point. As the late, great historian of science, Thomas Kuhn, conclusively demonstrated almost twenty years ago (“Blackbody Theory and the Quantum Discontinuity, 1894-1912,” Oxford U. Press, 1978), it was, separately, Einstein and Ehrenfest in 1906 who provided the first remarkable quantum interpretation of the blackbody spectrum. Planck, despite his discovery of the correct formula in 1900, and contrary to Rabbi Goldberg’s (and most textbooks’) assertion, had not the slightest suspicion at the time that the real spectrum was anything but continuous.

Above and beyond any specific objections to this or that formulation, I should like to register my uneasiness with all efforts of this genre, no matter the level of scientific competence of the practitioner. (I'm thinking of such recent popular efforts by G. Schroeder and N. Aviezer). Science, by its very nature, is falsifiable and mutable, open to change based on the accrual of additional data or new insight. Religion, eternal and absolute, is none of these. To closely align religious truths with scientific mechanisms of the day, no matter how solidly entrenched in the present era, is to introduce an unproductive, even dangerous coupling. We know that QM as understood today is incomplete. It does not encompass gravity, nor is there any consensus on the nature or consequence of the most basic of quantum operations, the measurement. Nor does any current physical theory encompass any understanding of the physical nature of consciousness. Indeed, though rather unpopular, at least one alternative physical theory (due to Bohm) with the same predictive power as standard QM already exists today. Is the truth of *mikve* as incomplete and mutable as QM must be? The religious dangers of such a course would seem self-evident. While there is some momentary gratification, pride even, that the best of modern science would already seem reflected in the ancient, holy wisdom, this is an inherently ephemeral exercise, capable of engulfing in the backflow eternal Torah truths when the current skein of physical theories is ultimately swept away in favor of the new. For such, sooner or later, is the inevitable course of the scientific enterprise.

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## RAV KOOK

TO THE EDITOR:

In his incisive and challenging article ("Rav Kook's Contested Legacy," *Tradition* 30:3, Spring 1996), David Singer contends that both Modern Orthodox academics and messianic Zionists simplify or shade the teachings of Rav Kook, each group essentially painting Rav Kook in its image, stressing or even exaggerating what it finds congenial in his thought and personality and downplaying or even ignoring what it finds problematic. He also suggests that, while both groups are struggling over Rav Kook's legacy (the Orthodox liberals stressing his openness to secular culture and the messianic Zionists stressing his messianism), both aspects of that legacy have, ironically, become ever increasingly problematic.

I would like to respond both to Singer's critique of the interpretation of Rav Kook on the part of modern Orthodox academics and to

his critique of Rav Kook's warm embrace of secular culture stressed and lauded by that interpretation. The arguments employed by Singer in advancing both aspects of that critique considerably oversimplify a much more complex and interesting reality.

Singer claims that Modern Orthodoxy portrays Rav Kook "as a paradigmatic modern Orthodox Jew—open, tolerant, and deeply engaged with currents of secular thought." He further claims that for this interpretation "Rav Kook's messianism is completely secondary." Both claims, while containing some truth, are greatly exaggerated.

An important review essay by Yehuda Gellman (*Jewish Action*, Summer 1991) of Benjamin Ish-Shalom's book, *Rav Kook: Between Rationalism and Mysticism*, anticipates many of the interpretive issues raised by Singer. Gellman addresses himself to the critique of Ish-Shalom's view regarding the influence of secular culture on Rav Kook's thought, put forward by Rabbi Yaakov Filber, a leading messianic Zionist figure, a critique referred to by Singer as well. Contrary to Singer's claim that "no process of accommodation [between the two camps] is possible," Gellman admits that Ish-Shalom's portrait of Rav Kook's thought is indeed one-sided, though he proceeds to argue that Filber's own portrait of Rav Kook's thought, as formed in isolation from secular culture, is similarly one-sided.

Gellman's own view is that "Rav Kook . . . was able to perceive and then successfully elaborate a broad parallel between an optimistic theology based upon Rabbinic, Kabbalistic, and Hassidic sources, on the one hand, and a current mood in nineteenth century philosophy, influenced especially by Hegel and Darwin, on the other." In my own article on Rav Kook in *Rabbi Abraham Isaac Kook and Jewish Spirituality*, I accept this view but add "that it was Rav Kook's exposure to nineteenth-century philosophy . . . that, at least in part, contributed to his working out that optimistic theology drawn from [Jewish] sources and thereby helped him successfully elaborate the broad parallel to which Gellman refers." In sum, there is a fairly wide range of views among modern Orthodox academics regarding the influence of secular culture on Rav Kook's thought, and Singer's picture of a unitary modern Orthodox interpretation that "holds up Rav Kook as a paradigmatic modern Orthodox Jew" flattens and distorts a nuanced and three-dimensional reality.

Even more off the mark is Singer's claim that for the modern Orthodox interpreters of Rav Kook, his "messianism is completely secondary." At best, it may, once again, hold true for Ish-Shalom, though in this instance I do not believe that even he, despite his expressed dis-

dain for those who associate Rav Kook with “fanatical adherence to a single idea,” would view his messianism as being “completely secondary.” Moreover, in the course of advancing his claim, Singer oversimplifies the views of other scholars. It is true, for example, that Aviezer Ravitsky, whom Singer correctly identifies as “long the leading modern Orthodox critic of Gush Emunim,” offers an interpretation of Rav Kook’s messianism that serves to differentiate it from the messianism of his son and follower, Rav Zvi Yehuda Kook. But the question of how we are to understand Rav Kook’s messianism must be distinguished from the issue of the centrality of that messianism, however understood, in his thought.

Most strikingly, Singer fails to notice how the evidence he offers undermines his own thesis. Thus, to support his view that Rav Kook’s messianism, contra the modern Orthodox interpretation, “operated at full throttle,” Singer cites articles by Michael Nehorai and Ella Belfer. But these authors, like the authors of the other articles in *Rabbi Abraham Isaac Kook and Jewish Spirituality*, are themselves modern Orthodox academics. The very evidence invoked by Singer, then, serves to show that there is no unitary modern Orthodox view about the place of messianism in Rav Kook’s thought, but that, on the contrary, there is a lively debate regarding this issue among modern Orthodox academics.

Singer’s critique of Rav Kook’s “warm embrace of secular culture” claims that in light of the “strongly anti-humanistic” turn taken by “cultural expression in the secular sphere,” and in light of the fact that “much of what passes for high culture today is nothing more than a poisonous mix of relativism, subjectivism, and outright nihilism,” Rav Kook’s “assumption that an exposure to secular culture can contribute to religious growth appears highly dubious.” In reply, I wish to make three points.

First: Even if we were to accept Singer’s characterization of contemporary secular culture, this would rule out a dialogue only with that contemporary culture and not with secular culture of past generations. Certainly, to cite some of the modern thinkers to whom Rav Kook refers or alludes in the course of his writings, there is much still to be learned from studying and, even more important, struggling with the works of Spinoza, Kant, Hegel, Darwin, Nietzsche, and Bergson. And if we move further back in time, have such pagans as Homer, Sophocles, Plato, and Aristotle nothing left to teach us? I could easily treble or quadruple the list, but the point, I trust, is clear.

Second: Should we, in fact, accept Singer’s characterization of contemporary secular culture? Singer claims that “much of what passes

for high culture today is nothing more than a poisonous mix of relativism, subjectivism, and outright nihilism.” Indeed, much of it is, and much of it isn’t. Singer invokes Foucault, Derrida and Mapplethorpe as representatives of today’s high culture. But what of such noted secular (although not anti-religious) thinkers as Isaiah Berlin, John Searle, Mary Midgley, Amartya Sen, and the late A. R. Luria, all of whom are profoundly humanistic, and all deeply anti-relativist, anti-subjectivist, and anti-nihilist. True, they might not be quite as well known as Derrida or Foucault, but it is they, I would contend, who speak for contemporary culture at its best, and who, drawing on a wide variety of disciplines—psychology (Luria), intellectual history (Berlin), economics (Sen), biology (Midgley), and cognitive science (Searle)—show that the humanist tradition is alive and well, if at times overshadowed by the latest intellectual fashions emanating from Paris.

Moreover, there are a number of recent significant intellectual trends that I would deem to be highly positive from a general religious standpoint. For example, the devastating and thoroughgoing criticism to which Freudianism has been subjected in the past two decades has effectively freed us from thralldom to that seductively reductivist view of human nature. And the current revival of a neo-Aristotelian virtue ethics can serve to illuminate the manifold ways whereby the observance of halakha contributes to the achieving of human perfection.

All this is not to deny the very real and prevalent highly negative features of contemporary culture which Singer so forcefully and so eloquently condemns. And no doubt, any religious dialogue with contemporary secular culture needs to be conducted with great caution and vigilance. But has it not always been so?

Third (and most controversial), I would argue that Rav Kook might even derive some consolation and—yes—some confirmation of his basically optimistic outlook from the trajectory of the intellectual career of that dazzlingly irresponsible nihilist, Jacques Derrida. For, as several commentators have noted, Derrida, after a lifetime of deconstructing all values, reversing all distinctions, and subverting all meaning and truth, has, in a recent essay, “Force of Law: The ‘Mystical Foundation of Authority,’” acknowledged the need to begin with the infinite and irreducible and transcendent “idea of justice,” an idea that is *not* subject to deconstruction, in order to thereupon and thereby deconstruct positive law. Thus, for the Derrida of this article, we construct and deconstruct different versions of positive law in order to, in an almost neo-Kantian fashion, ever more effectively approximate and articulate the transcendent normative ideal of justice in this world. That

Derrida, the great denier, has finally been forced to affirm, and that he, moreover, did so in a paper which was delivered as the keynote address for a symposium on “Deconstruction and the Possibility of Justice” at the Cardozo School of Law of Yeshiva University, is precisely the type of intellectual turn that Rav Kook would have expected and appreciated. In sum, Singer’s contention that the modern Orthodox ideal of the positive religious value inherent in exposure to and critical dialogue with secular culture “appears highly dubious” is, if not itself dubious, certainly questionable.

It should finally be noted that not only are Singer’s two theses, if taken separately, questionable, but that taken together, they pull in different directions. Singer’s first thesis would appear to assume that it is impossible for people in their study of Rav Kook to escape from their ideological presuppositions and search for truth and understanding. But does not that assumption fall prey to the very relativism and subjectivism that Singer so rightfully condemns in his second thesis? Conversely, does not the rejection of relativism and subjectivism imply that we need not be hostages to our own ideologies, nor need we make Rav Kook their hostage?

Rather, as we seek to study Rav Kook’s writings with whatever measure of honesty and objectivity we can muster, as we struggle to attain that subtle and elusive blend of sympathy and detachment so necessary to arrive at a just and balanced appreciation and evaluation of his profound and rich and complex world view, HaRav Kook, far from being our captive, will be and will always remain our teacher.

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### ***TSELEM ELOKIM***

TO THE EDITOR:

No educator can take exception to Eugene Korn’s call (“*Tselem Elokim* and the Dialectic of Jewish Morality,” *Tradition* 31:2, Winter, 1997) for increased efforts to inculcate in our students an appreciation of the divine spark and *tselem Elokim* that is implanted in every human being. And I am sure he himself shares our communal revulsion at the canard heaped upon the Torah community at the time of Prime Minister Rabin’s assassination, charging Torah educators with blame for the despicable actions of a crazed student.

This having been said, though, I think it important to take note of and correct some errors in his essay. Dr. Korn suggests (n. 32) that

Hazon Ish—the citation should be 2:16 and not 13:16—rejected the contemporary application of the law to kill heretics (*moridin ve-lo ma'alim*) because its implementation would be “morally corrupt and an act of violence.” But Hazon Ish had said that such would be how *contemporary society* would view the event (*be-eineihem*), and hence doing so would hardly correct society. It is unfair to suggest that Hazon Ish was adopting as his own the view of “*dalat ha-am*” (Hazon Ish’s phrase), the masses who had lost important basics of faith.

Similarly, Korn suggests (p. 22) that Hazal viewed Pinhas’s *kana’ut* with alarm and offers the discussion at *Sanhedrin* 82a in support. It is true that the *Amora'im* there suggest that if Zimri had killed Pinhas in self defense, he would not have been punished for the killing, as Pinhas was a *rodef*. But that is hardly to suggest that they rejected the *halakha leMoshe miSinai* that *kana'im poge'im bo*. Pinhas is considered a *rodef* not because any opprobrium attaches to his action, but because *kana'im poge'im bo* does not impose a legal *hiyyuv mita* upon the *bo'el aramit*. Pinhas was praised by the Torah and gifted with *kehuna* because of *be-kan'o et kin'ati*. Neither the Torah nor Hazal were “alarmed” by his actions.

We must be on guard against retrojecting “contemporary sensitivities” into the words of our Sages, who stood firm in rejecting rather than accommodating values antithetical to our faith. Korn had done this in these and some other citations, and I feel that the discussion should have avoided such misinterpretations.

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EUGENE KORN REPLIES:

I am indebted to Rav Moshe Eisemann for pointing out the typographical error (13:16 should indeed be II:16). He is also correct that Hazon Ish attributed to others the evaluation of *moridin ve-lo ma'alim* as morally corrupt and violent. These technical points, however, have no relevance to the main thesis for which I cited Hazon Ish: that *posekim* at times claimed that “a halakha is normative, but perhaps does not apply under present circumstances” (p. 16). It is an indisputable matter of record that Hazon Ish took this position on *moridin ve-lo ma'alim*. In his own words, “*Ein ha-din noheg be-sha'a. . .*”

R. Eisemann has difficulty with the claim that rabbinic judgment viewed Pinhas’s zealotry with alarm. Yet it is not “my suggestion” at all, but the position of our traditional sources. It is the Jerusalem Talmud (*Sanhedrin* 9:7) which teaches that “Pinhas acted against the wishes of

the sages” and that “R. Yehuda Bar Pazi maintained that the sages of Pinhas’s time sought to ostracize him from the community of Israel” for his rash behavior. Only the miraculous intervention of a *bat kol* saved Pinhas from this harsh punishment. I leave it to the reader to decide whether proposed *herem* constitutes opprobrium or praise.

Lastly, R. Eisemann makes the claim that I “retroject contemporary sensitivities into the words of our sages,” implying that these are “antithetical to our faith.” One wonders why anyone feels compelled to maintain that the reluctance to execute the majority of *Am Yisrael* and the insistence on due legal process before punishment are values that are contrary to Judaism.

As indicated, Hazon Ish shared our judgment regarding the incorrectness of a contemporary implementation of killing heretics, and our talmudic sages also rejected *le-ha-tehila* the model of a person violently taking the law into his own hands. (See also *Rambam, Hilkhhot Issurei Bia* 12:5 and *Rama, Hoshen Mishpat* 425:4.)

The halakhic sources indicate that these “sensitivities” are neither exclusively contemporary nor antithetical to our faith. On the contrary, they were expressions of both Hazon Ish’s and Hazal’s faith in the moral purity of halakha.

## HALAKHIC MIND

TO THE EDITOR:

William Kolbrener (“Towards a Genuine Jewish Philosophy,” *Tradition*, 30:3, Spring 1996) gave a basically accurate picture of what *The Halakhic Mind* says about quantum physics and its implications. But I believe he erred in taking Rabbi Joseph B. Soloveitchik’s portrayal of quantum mechanics at face value.

*Halakhic Mind* concludes with five pages demonstrating how the subjective approach towards understanding the reasons for the commandments as presented in *Mishne Torah* is more fruitful than the more purely analytic approach of *Guide of the Perplexed*. This is preceded by a lengthy description of the epistemological crisis that came about in the early part of the 20th century as a result of the discoveries of relativity and quantum mechanics, how several philosophers dealt with them and how they liberated the religious personality from being tied to the objective order. I am not qualified to say whether Rabbi Soloveitchik’s interpretation of Bergson’s and Natorp’s philosophy is correct, but as a practicing physicist I can say that his description of quantum mechanics is seriously flawed.

Quantum mechanics differs from classical physics in that it explicitly includes the process of measurement (or, as others would say, the participation of an observer) in its description of physical interactions. It also postulates that the results of certain kinds measurements cannot be predicted absolutely, but rather can be estimated only with the result expressed as a range of possible values, each of which is assigned a specific probability of occurrence. The central problem with *The Halakhhic Mind* is that it concludes from these albeit revolutionary ideas that the concept of objective reality is no longer tenable. Maybe that's how post-modern philosophers describe the situation, but nearly all scientists are realists. Contemporary research on the foundations of quantum mechanics includes mind-boggling questions concerning and fierce debates over the nature of reality and on how well we can know reality, but I've never read a paper or had a discussion with a scientist who denied the existence of an objective reality.

One can only guess what led Rabbi Soloveitchik to his conclusions. The intellectual crisis at the beginning of the century was intense. Planck, Einstein, and Bohr had to invent concepts that went against common sense and their physical intuition in order to describe nature. This was a severe challenge to their metaphysics and epistemology. When Rabbi Soloveitchik was a student in Berlin, Planck and Einstein were the grand old men of physics in that city and were wrestling with these problems. It is easy to imagine that this struggle had its echoes among the philosophical circles. Several scientists of that generation, like Whitehead and Eddington, turned to philosophical and mystical interpretations of the new concepts. These last two authors, though having made no significant contributions to quantum mechanics, are cited extensively by Rabbi Soloveitchik.

Meanwhile, elsewhere in Europe, partly under the tutelage of Bohr, younger scientists were getting used to the new physical concepts and were making great strides in explaining the sub-atomic world. To a generation raised on relativity and quantum mechanics, there was nothing implausible about them. The epistemological conflict more or less melted away. Science sailed on, retaining the concept of reality, and many who were originally astounded by the audacity of the new concepts, including Rabbi Soloveitchik, stopped following the ensuing scientific developments.

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WILLIAM KOLBRENER RESPONDS:

Avram Montag's response to my *Tradition* article and to the arguments of *Halakhic Mind* provide a hopeful beginning for a dialogue among philosophers and scientists about a series of extremely complex epistemological issues. I am grateful for his response.

Notwithstanding Montag's arguments to the contrary, I would suggest that most contemporary physicists are not so much realists as they are instrumentalists who have simply put aside the philosophical and epistemological problems left in the wake of quantum theory. I would speculate that one reason that, as Montag puts it, "science" has "sailed on," is that the current generation of physicists—immersed in the practical and predictable reality allegedly governed by quantum mechanics—has simply ceased to be bothered by the enormous problems of making sense of the claims of quantum theory. Such latter-day attempts to account for the problem of measurement (*i.e.*, the so-called collapse of the wave-function) as the many-world or many-mind interpretations of quantum mechanics are enough to convince any person—physicist included—of both the enormity of the problems and the all too little progress made towards solving them. Indeed, though quantum theory *works*, there remain, nonetheless, enormous divergences (an understatement) between the micro-reality depicted by quantum mechanics and our macro-reality. But one doesn't have to explain these divergences to build a bigger bomb or a better laser.

Despite Montag's implicit argument that for the physicist, there has been a return to business as usual, historians of science and philosophers (like the Rav) cannot be faulted for sharing the sense of Louis de Broglie, the 1929 Nobelist in physics, that "in the history of the intellectual world . . . there have been few upheavals comparable" to the quantum revolution, and that even today, "quantum physics should interest not only specialists," but should rather merit "the attention of all cultivated men." Of course, one may dismiss de Broglie (with the Rav) as one who failed to follow "the ensuing scientific developments." Roger Penrose, however, the current Rouse Ball Professor of Mathematics at Oxford (certainly up on the "ensuing developments"), elaborates upon (though in a tone admittedly more circumspect than de Broglie's) the philosophical ramifications of what he calls the "quantum mystery." On the question of "objective reality," for example, on which Montag's critique of the Rav seems to depend, Penrose writes, "Many physicists, taking their lead from the central figure of Neils Bohr, would

say that there is *no* objective picture at all. Nothing is actually ‘out there,’ at the quantum level. Somehow, reality emerges only in relation to the results of ‘measurements.’ Quantum theory, according this view, provides merely a calculational procedure, and does not attempt to describe the world as it actually ‘is.’” Though Penrose ultimately demurs from this view, it is one that he attributes not to “post-modern philosophers,” but to contemporary physicists themselves, and notably Bohr, who in Montag’s account seems to have gotten things right.

In any event, *Halakhic Mind* does not actually deny, as Montag asserts, “the existence of an objective reality.” In my reading, the Rav no doubt believed in “objective reality,” though he would have insisted, as did Bohr, that this reality is always mediated through concepts which (however serviceable and practically true) are contingent, historical, and partial (de Broglie calls them “pictures” or “idealizations”). Speaking more philosophically, I think the Rav would not have denied the existence of an ontological reality, though he would have insisted on showing the way in which our access to that reality is limited by the epistemic apparatus we choose to employ. Since, as the philosopher John Searle argues, “there is an indefinitely large number of different points of view, different aspects, and different conceptual systems under which anything can be represented,” every representation “represents its target under certain aspects and not others.” This is neither to argue for the rejection of “objective reality” nor to open the door for a post-modern relativism, but rather to assert that subjective constructs are the only means by which we have access to objective reality. For, as Searle, a staunch defender of “realism,” writes, “ontologically objective reality does not have a point of view.” Not even that of the physicist.

To move from the scientific and philosophical to grounds more familiar to the readers of *Tradition*: just as we speak of an “objective reality,” we may also speak of an objective Torah, though in both cases, there may be conflicting conceptions—in the latter case at least *seventy*—of what that objective reality entails. (Bohr’s description of the “complementarity” of different scientific descriptions reads amazingly like a *perush* of *elu ve-elu divrei Elokim hayyim*.) It is precisely the abandonment of such conceptual apparatus—or the claim to transcend it—which the Rav condemns in both *Halakhic Mind* and *Halakhic Man*. Though in *Halakhic Man*, it is *homo religiosus* who claims a mystical and direct—what the Rav calls a “super-noetic”—approach to reality, the physicist described by Montag may have more in common with this figure than it first appears. For in implicitly claiming for the physicist an unmediated

access to objective truth, Montag countenances a form of scientific “super-noesis” in which the scientist delivers a clear and objective—an unmediated vision—of the truth.

Notwithstanding the Rav’s emphasis on “subjectivity” (which had, for him, very specific philosophical resonances), his thought—it must be emphasized—cannot be usefully categorized with the subjectivist extremism of some post-modern philosophers. In quantum physics, the Rav saw (in both 1944 and in 1983, when he consented to *Halakhic Mind’s* publication) a way of liberating philosophy from its acquiescence to a certain conception of Newtonian science and its claims to objectivity. If Newtonians had rendered philosophy a poor handmaid to Science, then the quantum revolution, for the Rav, and later philosophers of science (whom the Rav anticipated by a generation), allowed for the reinvigoration of philosophy in which subjectivity could once again play a role. For many contemporary philosophers, the qualification of the Newtonian ideal of objectivity led to a re-emphasis on the role of paradigms, and on the nature of language and discourse. For the Rav, it led to the correction of the false detour that Jewish philosophy had taken in the Middle Ages and the Enlightenment, and to the regrounding of Jewish philosophy in its source and origins—that is, the halakha.