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Science, Theology, and the Purpose of Creation

"The Religious Implications of Extraterrestrial Life" & "Man's Purpose in the Universe"

In 1968, the celebrated Hollywood figure Stanley Kubrick produced, co-wrote, and directed a science fiction film (inspired by a story by his co-author, Sir Arthur C. Clarke) that bore the then futuristic title *2001: A Space Odyssey*. Lauded over the years with such accolades as "iconic" and "groundbreaking," the film was selected for the National Film Registry. To ensure, however, that the work would be regarded as serious and important—rather than dismissed, like earlier sci-fi films, as sheer entertainment, "the perfect accompaniment to popcorn"[1]—Kubrick created a "foreword" (i.e., prologue) in which twenty eminent scientists (most working in the physical sciences) were interviewed about the movie's themes. Among the participants were Isaac Asimov, Freeman Dyson, Gerald Feinberg, Margaret Mead, Marvin Minsky, Harlow Shapley, B. F. Skinner, and Fred Whipple.

A theologian was interviewed too, however: Rabbi Norman Lamm, then serving as Associate Rabbi of The Jewish Center in New York City. The rabbi gave a wide-ranging interview that included remarks about Heaven, the theological implications of computers (HAL was the star computer in the film), creating life in a laboratory, genetic engineering, and—Kubrick's main interest—extraterrestrial life, particularly sentient and intelligent life.

Alas, the entire prologue was dropped for the final movie version—for one thing, Kubrick felt it would make an already long movie too long—and the recordings of the interviews were lost. Yet the transcripts survived, and, once discovered nearly 40 years later, they were published in a book aptly titled *Are We Alone?*[2] Better yet, in 1965 R. Lamm had published an article in *Tradition* titled "The Religious Implications of

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Extraterrestrial Life."[3] It ran over 50 pages, and an updated version is the longest essay in Rabbi Lamm's collection *Faith and Doubt*. In the same year he published a related article in *Jewish Quarterly Review* on the subject of Sa'adia and Maimonides' views on the purpose of the universe.[4]

In "The Religious Implications of Extraterrestrial Life," R. Lamm presents a perspective on exobiology, the study of questions concerning extraterrestrial life. He calls his project "exotheology": "a religious conception of a universe in which man is not the only rational inhabitant and is perhaps inferior to many other races" (106).[5]

Why this *outré* topic of extraterrestrial life, especially since R. Lamm acknowledges reasons to doubt there is any intelligent life (and perhaps any life) on other planets (113–121)?[6] Two pieces of background probably bear the key.

First, the 1960s were the heady days of the space race between the United States and the Soviet Union. Who would be first to land on the moon? R. Joseph B. Soloveitchik, too, was clearly struck by space travel in his "The Lonely Man of Faith," which, like R. Lamm's articles, appeared in 1965. For the Rav, "Man reaching for the distant stars" fulfills a divine mandate.[7] Outer space and extraterrestrial life were part of a matrix of concepts that fascinated the public.[8]

A second likely reason for R. Lamm's focus—or at the very least a reason he felt equipped to tackle the subject of exotheology—was his own background in science. He graduated Yeshiva College in 1949 as valedictorian with a major in chemistry, and, besides studying for *semikha*, did graduate work at Brooklyn Polytechnic Institute. Later, after turning down a four-year scholarship to Hadassah Medical School—preferring research over medical practice—he was offered a doctoral fellowship in chemistry at the Hebrew University. Torn between that option and the rabbinate, R. Lamm sought the counsel of Rabbi Dr. Samuel Belkin, at the time president of Yeshiva University. Dr. Belkin made the decision for him: enter the rabbinate.[9]

This was a moment in R. Lamm's life at which "two roads diverged in a wood," and the fact he seriously considered the path leading to a career in science is significant in our context. His scientific interests may explain why he packs into the first third of "The Religious Implications of Extraterrestrial Life" a detailed account of issues in cosmology, astronomy, chemistry, and biology, a presentation that goes beyond what is needed to address the purely theological questions in the essay.[10]

Moreover, the topic of life on other planets was one in which R. Lamm could fuse his scientific intelligence with theology, and Jewish theology in particular, thereby modeling the "synthesis" advocated by Dr. Belkin as

the mission of Yeshiva University. ("Synthesis" was the predecessor term to "*Torah u-Madda*," the YU motto R. Lamm later made famous.) Already as a college junior he published an essay in the Yeshiva College yearbook urging that halakha must regard science not as an enemy but as "a friend with whom disagreements must be ironed out." [11]

Although R. Lamm was personally enthused about "doing" science, in his *derashot* he not infrequently made science and technology—as *social phenomena*—the target of sharp criticism. In a *Hag ha-Semikha* address he depicted the "*gibbor hayil metzora*," the mighty warrior Naaman, who was a leper (II Kings 5), as a paradoxical "symbol and picture of modern society: technologically powerful, but ethically leprous; scientifically progressive, but ethically regressive; materially mighty, but morally a midget...." While outwardly assertive and optimistic, this mighty warrior is on a closer look "a leper, corrupt, frightened, in despair and disrepair... rotting and withering away inside."[12] In one sermon he criticizes the United States' heavy investment in its space program, stating: "Man's salvation lies not in the exploration of distant planets but in alleviating pain and hunger and want on this planet.... We must not permit Moon to eclipse Man." And in another *derasha*: "With our increase in knowledge has come a shrinkage in wisdom... exploring outer space, we have ignored the thunderous silence of our inner space and inner void."[13] Science can feed secularization and a loss of spiritual and ethical aspiration. For R. Lamm, there was a difference between gaining knowledge of the world through science—an imperative in his ideal of synthesis—and letting science reign without restraint.[14]

Overall, however, R. Lamm's approach to the space program was highly nuanced. On the positive side, the desire to explore other planets may reflect a salutary drive to transcendence.[15] Furthermore, space exploration, the experience of seeing the earth from another planet, can inject a needed dose of humility, even a sense of insignificance. At the same time, the very drive to explore may derive from arrogance; and a feeling of insignificance may lead to a diminution of human worth and thus apathy toward others. Looking from still another angle, however, this sense of insignificance itself arises, paradoxically, from an enterprise secured by impressive human efforts.[16] Characteristically, then, R. Lamm saw all sides and appreciated the complexities of the religious psyche. To this extent, he seemed ambivalent about the very scientific achievements that fascinated him.

Note that R. Soloveitchik likewise had reservations. Even while not erecting barriers to scientific endeavors, he recognized vividly the dangers of Adam the first running untrammeled, unrestrained by Adam the second. Adam the first can turn "demonic."

With this background in place, I turn to the essay on extraterrestrial life, with some reference to "Man's Position in the Universe."

The Essay's Agenda

The article on extraterrestrial life is concerned with the theological impact of a potential "new cosmography." The work can best be discussed, I suggest, by separating out nine issues it examines. (This taxonomy is mine, not R. Lamm's.) Most are related directly to extraterrestrial life; others are ancillary. Note that there are several distinct phenomena, real or hypothetical, that give rise to these issues: the sheer vastness of the universe, the existence of other planets, the potential existence of *life* on other planets, of *sentient* life on other planets, of *intelligent* life on other planets, and of *intelligent moral and spiritual* life on other planets.

- *Scientific*: How many stars have planets? Is there life on those planets? Are there sources in Jewish tradition that recognize the possible existence of extraterrestrials?
- *Metaphysical*: Does philosophical reflection on the scientific evidence support or undermine the assertion that the cosmos was created by (divine) intelligence? Might it all have been an accident of nature?
- *Axiological (value-focused)*: Would the existence of intelligent life on other planets diminish the value of human beings?
- *Teleological*: Is the existence of humanity the purpose of creation?
- *Theological*: "If the universe is so much more vast and complex than we heretofore imagined, if man is much less singular, no longer unique, and perhaps surpassed in wisdom by other, nonterrestrial species; then perhaps God is so great, so remote, that He is unconcerned with us earth creatures strutting self-centeredly over an insignificant planet. The very majesty of His universe threatens such fundamentals as God's providence, His personality, His relatedness to His creatures" (142).
- *Psychological*: How can human beings experience God's immanence, as opposed to transcendence, in a world that is vast and in which there may exist other intelligent beings? (This is closely related to the theological question, but is not identical with it.)
- *Biblical*: Can Genesis 1 be reconciled with evolution?
- *Anthropological*: Are human beings composed of matter alone?
- *Halakhic:* Is it permissible for scientists to create life in a laboratory?

I'll deal mainly with the questions of axiology, teleology, theology, and psychology.

Obviously, given that R. Lamm believed that there *might* be sentient, intelligent life on other planets, he would not think, as a profoundly committed Orthodox Jew, that their existence would force Jews to abandon elements of their faith. How does he achieve "synthesis"?

First, he argues that some Jewish sources affirm the existence of a plurality of worlds (127). *Avoda Zara* 3b portrays God roaming across 18,000 worlds (albeit R. Lamm acknowledges the view that these worlds may be successive rather than simultaneous, as in *Bereishit Rabba* 3:9: "God creates worlds and destroys them").

Second, as regards the value that the human being would have when other, perhaps superior beings exist (the axiological question), many Jews believed in higher beings like angels, or, as in the case of philosophers like Rambam, disembodied intellects (129). Moreover, they apparently thought that, *even so*, human beings have significance and worth.[17] To be more precise, although Rambam believes that our being is "very, very contemptible" compared to the intellects and spheres, "man and nothing else is the most perfect and the most noble thing that has been generated from this [inferior] matter"[18] and possesses the *tzelem Elokim* of intellect.[19] R. Lamm calls attention to the *Neila* prayer and to Psalms 8:4–7, texts that affirm both our specialness and our insignificance (81, 126–127).

A third component of R. Lamm's analysis is his marshalling a broad array of authorities (among them both philosophers and Kabbalists) who believe that the human being is the purpose of creation. Early in his career, Maimonides affirmed that all sublunar entities exist only for the sake of humans, supplying food, transport, and other necessities.[20] But many years later, in *Guide of the Perplexed* (III:13), he resoundingly rejects anthropocentrism and denies that humans are the purpose of creation. As R. Lamm notes, however, even if humankind is not the purpose of creation—which is not the only view—it doesn't follow that human beings don't *have* a purpose, and that is what matters.[21]

Fourth, and finally, R. Lamm reacts to the theological question and the correlated psychological challenge. The problem, recall, is that if human beings are not unique and singular, perhaps God is not concerned with them—God would then be only transcendent, not, in addition, immanent. In the end, nonetheless, the existence of extraterrestrial life would not threaten the doctrines of providence and immanence, because "a God who can exercise providence over ten billion earthmen can do so for ten billion times that number throughout the universe" (149). This realization can bring people to experience God's immanence.[22]

The Essays in Our Time

Nearly six decades later, what is the legacy of these essays? Let's begin with the obvious point: "The Religious Implications of Extraterrestrial Life" is a paradigm of *Torah u-Madda*. It reflects on the still vexed issues of interpreting Genesis 1 in light of science; it assesses the religious value of technology and human innovations, particularly in the creation of life; and of course it identifies the place of the human being in the cosmos from both a philosophical and psychological perspective. These issues are no less meaningful and impactful than they were six decades ago.

But there are two additional aspects of cutting-edge philosophical thought to which we may relate the article. One pertains to method, the other to the substance of the question of whether humans are the purpose of the universe.

First, method. In a generally laudatory review of *Faith and Doubt* in *Tradition*, the late theologian Michael Wyschogrod criticized the choice of topic in the essay on extraterrestrial life.

> Though I am not a real science fiction addict I do appreciate good science fiction for what it is, great fun and often considerably more. But it is, after all, only fiction. To apply the whole machinery of Halakhah and Jewish philosophy to this possibility (or is fantasy a better word?) is not quite serious. It gives me the feeling that we are dealing with some sort of exercise rather than reality.

Wyschogrod continues: "The moon is just a total wasteland. And I rather suspect that the same scene will be unfolded on planet after planet."[23]

But suppose Wyschogrod is right about the scientific facts. Discussion of the topic can still be valuable—and not merely because there are many people who *do* believe in E.T.s, and who would welcome a religious perspective.

First of all, pondering hypothetical cases—including cases that are so fantastic that some expect they will never occur—is an excellent way of defining and testing the scope and limits of legal and philosophical principles. Important sources for contemporary Jewish medical ethics regarding issues like artificial insemination, surrogate motherhood, uterine transplants, and the status of those who survive after cardiac resuscitation, are fanciful and wild cases that were considered in the Talmud and Midrash. As for philosophy, a Google search for "science fiction and philosophy" brings up a large and serious academic literature. Pondering a thought experiment about two people undergoing a brain switch, or a brain undergoing fission, can help us clarify our intuitions about what constitutes a person's identity. Imagining alien beings who act and think as we do but

possess a different physiology has implications for how to understand ascriptions of mental states. Inquiring whether machines can make free choices or have emotions sheds light on mentalistic concepts. Stories of time travel clarify not only the nature of time but how far humans can exercise control over events. And some science fiction features ethical questions posed by mind control and powers of prognostication.

Unrealistic scenarios, then, can clarify philosophical questions; and they can do so while arousing emotions, enhancing their value as a medium.[24] So (and this sentence would have made Kubrick very happy!) imagining extraterrestrial life can supply significant philosophical/theological reflection *even* for those who, like Wyschogrod, firmly dismiss belief in extraterrestrials as mere fiction. Specifically, by understanding how our outlook would be affected if there *were* (hypothetically) intelligent extraterrestrial beings, how things "would look theologically,"[25] we can better appreciate the implications of God's wanting us to be the sole intelligent/moral/spiritual embodied beings, and can gain insight into His purposes.

Second, although R. Lamm himself sounds an extended cautionary note (113–121) urging us to "distinguish science from science fiction" (114), he also knows that what seems fantastic at one time may become familiar in another. One need only look at the dizzying array of scenarios generated in recent years by cloning and reproductive technologies. Experimentation and technology move at breakneck speed, and not for naught has Dr. Edward Reichman suggested establishing a *Journal for Anticipatory Medical Halakha*—a body of Jewish law designed for a future whose arrival was preposterous, the stuff of science fiction, just a short time ago. More germane to our topic, airplanes, spaceships, computers, robots, and endless other inventions not long ago struck many as doomed to be perpetually fictional. Now, the phenomena mentioned, unlike life on other planets, are humanly-produced. But in researching this article, I learned that there are today, as when R. Lamm wrote, respected scientists who give credence to belief in intelligent extraterrestrials.[26] I'm obviously not at all qualified to pass judgment on the disputes that arise over such claims. But if the existence of extraterrestrial beings is (still) the subject of scientific debate, it makes sense to be theologically attuned, at least to the extent of identifying which religious beliefs are and are not at stake—the very task R. Lamm undertook.

I turn now to a second issue relevant to a contemporary assessment of the articles. The topic of the purpose of the universe has been substantially augmented in recent decades by disputes over a scientifically-powered argument for God's existence, one known as "the fine-tuning argument" (henceforth FTA). FTA attempts to establish, based on scientific evidence,

the "Anthropic Principle": that the universe has been designed from the beginning by an intelligent being to bring about humans, this through the operation of natural laws in evolutionary cosmology and biology.

The basic idea behind FTA is that the tiniest changes in the laws of nature, or in the conditions present at the Big Bang or during the emergence of species, would have entailed that life, intelligence, and morality would not emerge. There are so many things that had a small likelihood of happening, and especially of happening jointly. So—this single example will give the flavor—if the force of either gravity or electromagnetism in a star had been different by one part in 10^{41} (ten followed by forty zeroes!), the universe could not have sustained any habitable planets—including our own. A great number of laws and conditions must be minutely tuned for any life to exist anywhere, to say nothing of sentient, intelligent, moral, and spiritual human beings. Yet, here we are![27]

FTA and other arguments for intelligent design have aroused a sometimes bitter and vociferous controversy, with proponents on occasion suffering severe professional consequences. Some atheists *accept* the thesis that the universe exhibits fine tuning in the sense theists describe; but either they simply shrug, "Big deal. Improbable things happen," or they maintain that there are multiple universes, each with different laws and initial conditions—so that the likelihood that at least *one* universe would be like ours is high enough to obviate appealing to intelligent design. (This is called the multiverse hypothesis. Shades of life on other planets!)[28]

Where do these recent shifts (the mobilizing of science fiction to explore philosophy, and the rise of fine-tuning arguments) leave us in assessing R. Lamm's article? As I've indicated already, the greatly expanded use of science fiction in philosophy lends gravitas to the purpose and method of the essay, even while the scientific theories in play are of course not works of science fiction. As for FTA, its impact is felt powerfully when contrasted with Rambam's opposition to anthropocentrism in *Guide of the Perplexed*. Rambam aside, even if there exist extraterrestrial beings more impressive than us, we may tweak FTA as follows: the designer's purpose wasn't producing humans in particular, but rather producing intelligent, morally and spiritually accomplished beings, whether human or non-human. In any event, talk of human beings as the purpose of creation is today rife in theological and even some scientific circles.

R. Lamm's essays of nearly 60 years ago deserve a long shelf life. Who knows, maybe one fine day we will discover that their audience has not been restricted to earthlings.

[1] The phrase (and my information about the film) is from editor Antony Frewin's introduction to *Are We Alone?: The Stanley Kubrick Extraterrestrial Intelligence Interviews* (Elliot and Thompson, 2005), 9–30. I thank Dr. Chaye Warburg and R. Sam Dratch for providing the Frewin materials.

[2] R. Lamm's interview, conducted by Roger Caras in May 1966, appears in Frewin, *Are We Alone?*, 131–139.

[3] *Tradition* 7:4–8:1 (1965), 5–56, reprinted in *Faith and Doubt* (3rd ed., Ktav, 2006), 105–158, from which page citations are taken.

[4] Norman Lamm, "Man's Purpose in the Universe," *Jewish Quarterly Review* 55:3 (1965), 208–234, reprinted in *Faith and Doubt*, 82–104. Page citations are from *Faith and Doubt*.

[5] The first footnote in the Wikipedia article on exotheology singles out R. Lamm's usage as "an early attestation."

[6] R. Lamm was fond of the quip, "Is there intelligent life on earth?"

[7] "The Lonely Man of Faith," *Tradition* 7:2 (1965), 16.

[8] As R. Lamm notes (111–112), however, there are historical precedents for speculation about extraterrestrial life, such as some ancient Greek philosophers, as well as Bruno, Galileo, Kepler, and Descartes.

[9] See the oral history project, "Norman Lamm—Full Interview" (Toldot Yisrael, September 22, 2008), available at https://youtu.be/N7GkNLZeXPU (at the 19 minute mark).

[10] It is somewhat puzzling, though, that in other articles and even his book *Torah Umadda,* R. Lamm does not relate much to specific scientific views. Presumably he had plenty of other issues on which to focus.

[11] Norman Lamm, "Criteria in the Resolution of the Conflict Between Science and Halacha," *Masmid* (1948), 59, available at https://archive.org/details/masmid1948/page/56.

[12] See "There Is a Prophet in Israel" (1985) in *The Spirit of the Rabbinate: A Collection of Chag HaSemikhah Addresses Delivered by Rabbi Norman Lamm* (Rabbi Isaac Elchanan Theological Seminary, 2010), 37–38.

[13] In the Kubrick interview, R. Lamm expressed great curiosity about extraterrestrial life and endorsed research into the subject, but only provided it would not be at the expense of addressing problems on earth. The two sermons I quoted are "The Greatest Trial" and "When We Try to Keep God in His Place," both available in Norman Lamm, *Festivals of Faith: Reflections on the Jewish Holidays*, ed. D. Shatz, associate editor S. Posner (OU Press and RIETS/Yeshiva University Press, 2011). Quoted passages from pp. 49 and 323, respectively.

[14] In this he is not unique among Orthodox theologians. Rabbi Dr. Eliezer Berkovits likewise saw science as a threat to the human spirit, in his case stressing the threat of depersonalization, yet he advocated for Jews studying science. See David Shatz, "Berkovits on the Priority of the Ethical," *Shofar* 31:4 (Summer 2013), 87–88.

[15] See the sermon "The Quest for the Supernatural" in *The Royal Reach* (Feldheim, 1970), 3–11, esp. 7–8.

[16] These considerations appear in the sermon "The Lunar Perspective," delivered after the moon landing, in *The Royal Reach*, 152–162.

[17] Cf. "Man's Position," 87–88.

[18] *Guide of the Perplexed* III:13; translation from the Pines edition, 443.

[19] Ibid., I:1.

[20] In his introduction to his commentary on the Mishna. See Lamm, "Man's Position," 91.

[21] I simplify Rambam here. For one thing, Rambam says we should not seek the purpose of the universe at all, a view attacked by many. Moreover, Warren Zev Harvey has aptly described *Guide* III:13 as a "dizzying, conflicted, and audacious discussion." See Harvey, "Maimonides' Critique of Anthropocentrism, and Teleology" in *Maimonides' Guide of the Perplexed: A Critical Guide,* ed. D. Frank and A. Segal (Cambridge University Press, 2021), 209–222 (the quotation is at 221).

[22] One interesting contention that R. Lamm takes up (raised in a critique by R. Louis Jacobs) is that it would be disturbing if God would not have given the Torah to inhabitants of other planets. He notes in his response, *inter alia*, that Kabbalists speak of different *Torot* for the different "worlds" in their mystical hierarchy (152–154).

[23] Michael Wyschogrod, review of Norman Lamm, *Faith and Doubt*, *Tradition* 13:1 (1972), 164.

[24] This last point was made to me by philosopher Aaron Segal—who, illustrating my general point, has taught university courses on science fiction and philosophy.

[25] In Aaron Segal's phrase.

[26] In fact, fortuitously (or eerily), in the very week I was finishing this essay, a book was released, authored by a prominent Harvard University astronomy professor, that is garnering much attention in the media. He claims, not without critics, to have identified a piece of alien technology. See Avi Loeb, *Extraterrestrial: The First Sign of Intelligent Life Beyond Earth* (Houghton-Mifflin, 2021). See also Elizabeth Kolbert's enjoyable account of Loeb's and others' views: "Swinging on a Star," *The New Yorker* (January 25, 2021).

[27] For a particularly clear overview of the evidence for FTA and responses by its critics, see Stephen T. Davis, *God, Reason, and Theistic Proofs* (Eerdmans, 1997), 107–115. FTA has been discussed by Orthodox writers with a focus on issues about probability. See George N. Schlesinger, "The Anthropic Principle," *Tradition* 23:3 (1989), 1–8 (which cites the example I mention from the writings of Paul Davies), and Nathan Aviezer, "The Anthropic Principle," *Jewish Action* (Spring 1999), 9–15.

[28] On Hasdai Crescas' similar but not identical view, briefly mentioned by R. Lamm in "Religious Implications" (129), see Warren Zev Harvey, *Physics and Metaphysics in Hasdai Crescas* (J.C. Gieben, 1998), chap. 1. I thank Prof. Harvey for correspondence concerning Crescas' theory.

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