Religion and Environment

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The Case of Judaism

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Religion and Science
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Editor's Preface

In each annual Goshen Conference on Religion and Science a single speaker, who has proven to be an important voice in the dialogue between religion and science, is invited to present a topic of her or his choice in a series of three lectures. Most of the conference is then devoted to monitored discussions in which the participants explore the topic with the speaker. Including the open microphone session, after first lecture on Friday evening, there were four discussion sessions. These discussions form the major part of the conference.

There is also a discussion session with the speaker for students only. Students consider this a high point of the conference. In order to offer a maximum freedom to students, this session is not recorded.

The three lectures and an edited version of the discussions are presented here. In editing the discussions I have left the speaker's words untouched, while the questions have occasionally been rewritten for the sake of clarity.The reader may find that many of the more interesting issues are considered in these discussions.

The speaker for the 2016 Goshen Conference was Hava Tirosh-Samuelson, Regents Professor of History, Irving and Miriam Lowe Professor of Modern Judaism, and Director of Jewish Studies at Arizona State University. For her topic Hava chose to present a detailed study of Judaism including an overview of its history and the roots of Judaism's involvement in ecology. Presenting this to a predominantly Christian audience in the brief span of a weekend was no mean undertaking. As Hava and I began to bring this together it became clear to us that this volume must be expanded to fully embrace what she had intended for the Goshen Conference. The present volume is the result primarily of Hava's genius in developing the intricacies of the important aspects of the case of Judaism in relation to religion and the environment.

Hava identifies herself as a non-observant Jew. This allowed her to participate fully in this conference, which included the Sabbath. At the same time she acknowledges, in her introduction to the lectures, that this is problematic, since Judaism has shaped who she is intellectually, culturally, and spiritually. Even though she does not observe Jewish law, Jewish texts, ideas, motifs, and intellectual traditions frame her personal identity, cultural orientation, and ethical sensibility. She has approached the task of presenting the lectures for this conference as an historian with intellectual honesty and sensitivity, whether or not she accepts the issues discussed. This makes the present volume particularly valuable for the scholar or student of the Jewish ecological tradition.

The lecture section of these proceedings is then considerably longer and more complete than the lectures Hava originally presented at Goshen. In editing and indexing these lectures their unique value became increasingly evident to me. Any Christian scholar must become familiar with as much of Judaism as is feasible because Judaism is the first of the Abrahamic religions. Hava's lectures reveal the depth to which the text combined with Greek philosophy, and later the philosophy of Kant, affected Jewish thought and understanding of God. Christian concepts of God and science are impoverished by an ignorance of the depths of this theological encounter.

The traditional discussions of the Goshen Conference, as always, were recorded, transcribed, and edited as they originally occurred. On mutual agreement, these discussions are placed in chonological order following the enhanced version of the lectures. They have been labeled by topic, but they have not been alphabetized.

I wish to thank David Powell for transcribing the recordings of this conference.

Carl Helrich
Goshen College

Contents

Lectures

The speaker at the Goshen Conference on Religion and Science is asked to prepare three lectures to develop the topic she or he has chosen for the conference. These lectures are the standard 50 minutes in duration. Hava fulfilled this obligation masterfully. As explained in Editor's Preface, the published lectures appearing here are an expansion of the lectures presented at the conference.

Introduction: Framing the Conversation

We live in the midst of an ecological crisis due to massive environmental degradation, whose numerous manifestations are interconnected. Global warming is the first manifestation of the crisis.[1] Since 1860, the Earth has warmed by about 0.6 degrees Celsius, and the warming trend has continued uninterrupted, with 2016 as the hottest year on record. Indeed, August 2016 was recorded as the hottest month the world has seen in the last 136 years. Global warming has occurred because of greenhouse gases that remain trapped in the atmosphere, forming a layer around the Earth. These greenhouse gases include carbon dioxide, emitted mostly as a result of burning fossil fuels (e.g., oil, gas, and coal) and deforestation; methane gas, mostly from cattle and rice farming and from landfill waste; and nitrous oxide, along with some other gases, including some rare and particularly vicious ones like industrially produced SF5 CF3. Most scientists agree that human activity tied to industrialization is the direct cause of global warming.

Global warming has a profound, wide-ranging impact on the plant's environment, which is now undergoing climate change.[2]

1 See Robert Hanson, "Global Warming in a Nutshell," in his *The Thinking Person's Guide to Climate Change*, (Boston: American Meteorological Society, 2014), 3–56.

2 See Joseph Romm, *Climate Change: What Everyone Needs to Know* (Oxford: Oxford University Press, 2016). For comprehensive discussion of the social ramifications of climate change, consult John S. Dryzek, Richard B. Norgaard, and David Schlosberg, eds., *The Oxford Handbook of Climate Change and Society* (Oxford: Oxford University Press, 2011); Riley E. Dunlap and Robert J. Brulle, *Climate Change and Society: Sociological Perspectives, Report of the American Sociological Association's Task Force on Sociology and Climate Change* (Oxford: Oxford University Press 2015).

As a result of global warming, we now witness a change in rain precipitation patterns with an increase in heavy precipitation in quite a few regions of the globe, rising sea levels, retreating glaciers, Arctic ice shrinking and thickness, and changes in bird migration patterns and the length of growing seasons. The warming of land surface temperatures has brought about extreme weather events that include heat waves, heavy downpours, higher storm intensities, frequent floods, longer droughts, frequent and intense wildfires, soil moisture deficits, water-related pest outbreaks, and species extinction.

Although no one knows the total number of living species, which is estimated to anywhere between ten and fifteen million, it is clear that the rate of extinction has increased significantly.[3] Many species are dying off or facing extinction because of the loss of their habitats as the result of not only climate change but destructive human practices such as industrial agriculture, deforestation, fragmentation of natural habitats, large-scale hunting, overuse of resources (especially fisheries and forests), and pollution of air, water, and soil. Evidence of increasing species extinction is clear: some 60 percent of coral reefs are threatened, the world's tropical forest cover has been shrinking, some 75 percent of major marine fish species are either depleted or dwindling fast due to overfishing, some 50 percent of the world's coastal mangroves are gone, nearly one in five mammal species is threatened with extinction, one in eight bird species is at risk, 19 percent of the world's reptiles are estimated to be threatened with extinction, and fish catches are expected to decline dramatically in the world's tropical regions and commercial fish and seafood species may all crash by mid-century. At the current rate of loss, it is feared that the oceans may never recover.

Calculating the rate of biodiversity loss is not simple and is mired in debate among scientists, but estimates range between 100

3 See Charles Perrings, *Biodiversity Loss: Economic and Ecological Issues* (Cambridge: Cambridge University Press, 2008); Alexander Wood, *The Root Causes of Biodiversity Loss* (London and New York: Routledge, 2000).

to 1,000 times the normal extinction rates. Some believe that by the end of the twenty-first century, more than half of all species of mammals, birds, butterflies, and plants will have disappeared or will be well on their way toward extinction. The loss of biodiversity is significant, because biodiversity plays a big role in the very stability of the five major ecosystems on which life depends: agricultural, coastal, forest, freshwater, and grassland. Biodiversity increases an ecosystem's resilience, and having more species provides a greater cushion against environmental damage, such as global warming, droughts, and other stresses. The genetic diversity of plants, insects, animals, and microorganisms determines the long-term productivity of agricultural ecosystems, their ability to bounce back after shocks, and their capacity to ensure sufficient food for the future. Yet the trend has been to replace polycultures with monocultures and toward reliance on fewer varieties. The loss of biodiversity is extremely relevant to humans, since biodiversity is fundamental to human health: many drugs are derived from natural resources.

The decline of biodiversity is most evident in the problem of deforestation.[4] Forests contribute to freshwater quality by slowing erosion and filtering pollutants; forests regulating the timing and rate of water flow; forests are crucial in the fight against global warming because they sequester carbon. Today thirty to thirty-five million square kilometers of forests remain, constituting about 25 percent of the world's total land surface, which is down 20-25 percent from pre-agricultural times. In industrialized countries, forests actually increased slightly over the past decades, but their trees are getting younger, smaller, and less diverse. Deforestation and introduction of non-native species has led to about 12.5 percent of the world's plant species becoming critically rare. The world's forests have been exploited to the point of crisis: major changes in global forest management strategies are needed to avoid

4 See Xingly Giam, "Global Biodiversity Loss from Tropical Deforestation," *Proceedings of the National Academy of Sciences of the United States of America*, 114, no. 23 (2017): 5775–5777.

devastation. In developing countries, the problems are most severe: forests have been shrinking by more than 130,000 square kilometers a year. Some 20 percent of the tropical and subtropical forests have disappeared since 1960s. In Indonesia alone, deforestation has run at 17,000–20,000 square kilometers a year over the last decade, shrinking its forest cover more than 50 percent since 1985.

Many factors have contributed to global deforestation, among them human population growth, the expansion of subsistence agriculture and unsustainable fuel-wood collection, large-scale cattle ranching in Latin America, government-planned settlement schemes, illegal logging, forest fragmentation, and the increase in forest fires. Forest loss has eroded the capacity of the world's forests to retain and filter water and to regulate its flow, thus contributing to soil erosion. When forests disappear, so does biodiversity, and with devastating results. Clearing tropical forests and burning the debris has also exacerbated the problem of climate change, since it releases large amounts of carbon back into the atmosphere as carbon dioxide. In turn, large-scale forest clearing, logging, and clearing small areas of forest for agriculture have significantly reduced the forests' storage capabilities, thereby diminishing the positive role that forests play in the planetary ecosystem.

The destruction of natural forests parallels the depletion of fisheries worldwide. Total fish production was estimated at around twenty-five million tons per year in the late 1990s.[5] With the dramatic increase in human population and the rise of standards of living, demand for fish has increased substantially. Today the viability of many fisheries and the survival of many species are threatened by overcapacity of the world's fishing fleets and by bad management practices. Illegal fishing also accounts for about 30

5 On the devastating impact of climate change and pollution on the health of oceans, see "State of the World's Fisheries," available on www.Oceana.org; Neil Ramsden, "FAO: State of World Fisheries Declining," (July 10, 2018), *Undercurrent News: seafood news from beneath the surface*, available at: https://css.undercurrentnews.com/wp-content/uploads/2018/07/Capture.jpg. Last accessed on June 29, 2019.

percent of the total production of some fisheries. The result is that 50 percent of marine fisheries are fully exploited; 20 percent are over-exploited, and much of the rest are exploited in an unsustainable or self-destructive manner. Among the major marine fish stocks—cod and tuna—three out of four are being fished at or above their biological limit. New nets and technologies for locating schools of fish are making things worse. One solution to the problem was the development of aquaculture, or fish farming, but it brings its own problem: chemical pollution and biological risks when farmed fish escape and join wild communities.[6] The problem is further exacerbated because of experimentation with genetic modification programs.

The decline of fisheries and forests threatens the viability of human life on Earth, but no less threatening are the water deficits worldwide, where two to three billion people face acute water shortage by 2020; the most affected areas are Asia, Sub-Saharan Africa, and the Mediterranean. Water scarcity is caused by increased demand and pollution and is aggravated by global warming. Today, irrigation accounts for 70 percent of the world's demand for water, and it has to increase in order to meet the expansion of the food supply to feed population growth. There is also a lot of water waste (namely, water that does not reach the crops), due to leaks or wasteful practices. Excess irrigation damages lakes, rivers, and marshes, which provide food and timber for many communities. As a result, worldwide aquifers are being either badly overused or badly polluted by pesticides, nitrates, and other human-made products. Other causes of water pollution are serious oil spills, the release of ship waste into the seas, and booming sea tourism; the release of land waste and pollution generated by agriculture, industries, and municipalities; the shipping of hazardous waste (e.g., industrial, medical, military, old batteries, spent nuclear reactor fuel, etc.) around the world by sea, and much of it illegally; and legal and

6 See Robert R. Stickney, *Aquaculture: An Introductory Text* (Oxford: Oxford University Press, 2009).

illegal fishing practices that damage the integrity of sea ecosystems.

No less severe is the problem of air pollution that is caused by natural sources as well as human activity.[7] As for the former, dust from large areas of land with little or no vegetation; methane, emitted by the digestion of food by animals such as cattle; radon gas from radioactive decay within the Earth's crust; smoke and carbon monoxide from wildfires; and even vegetation emits environmentally significant amounts of volatile organic compounds on warmer days. But much more significant is air pollution caused by human activity: the burning of biomass; air pollution by motor vehicles, marine vessels, and aircraft; controlled burns of forests; fumes from paint, hair spray, varnish aerosol sprays, and other solvents; waste deposition in landfills, which generate methane; and pollution from military sources, such as nuclear weapons, toxic gases, and germ warfare. While humans are the main producers of air pollution, they are also the main sufferers from it, since it brings respiratory infections and difficulties, eye irritation, and increases in chronic illnesses, such as cardiovascular diseases, cancer, and negative effects on the central nervous system.

As our water and air become polluted, we also experience severe soil erosion, the third element necessary for viable life. Soil erosion is a naturally occurring process that affects all landforms. But in agriculture, soil erosion refers to the wearing away of a field's topsoil by the natural physical forces of water and wind and through farming practices.[8] Soil erosion occurs when topsoil, which is high in organic matter, fertility, and soil life, is relocated elsewhere "on-site," where it builds up over time, or is carried "off-site," where it fills in drainage channels. Soil erosion results in the

7 Information about air pollution is available on the World Health Organization website, www.who.int. According to the World Health Organization, 90 percent of the world's pollution breathe polluted air, and New Delhi is the world's most polluted big city.

8 Consult, "Literature Review on Soil Erosion," Essays UK (November 2018), retrieved from: https://www.ukessays.com/essays/environmental-sciences/literature-review-of-soil-erosion-environmental-sciences-essay.php?vref=1.

reduction of cropland productivity and the pollution of adjacent watercourses, wetlands, and lakes. The causes of soil erosion include the use of heavy farm equipment that compacts the soil, damages soil texture, and causes nutrients loss. The powdery dirt left behind is more susceptible to erosion by wind and water. The problem of soil erosion is closely related to chemical pollution: the heavy use of chemical fertilizers, designed to combat declining soil fertility, and pesticides have further polluted ground and surface water and have depleted topsoil. The problem is exacerbated by the fact that irrigation water has been pumped out of aquifers far faster than rain and run-off can recharge these underground lakes. And, as if this is not enough, manure from intensive "factory farms" is a major source of ground water pollution, in addition to being a major odor nuisance. In short, with soil erosion and water and air pollution, the ability of the natural world to sustain life on Earth is significantly reduced.

Underlying all of these stresses to air, water, and soil is human population growth, even though the predicted rate of growth is subject to debate.[9] Currently, the world population is growing at a rate of around 1.13 percent per year, and the average population change is estimated at around eighty million per year. Annual population growth reached its peak in the late 1960s, when it was at 2 percent or above, and there is little agreement about what mechanism is likely to cause the rate of growth to diminish, or about the population levels that may be achieved before we reach stability or decline in total population size. According to the UN's 2019 revised population projections, the world's population is expected to increase by 2 billion persons in the next 30 years, from 7.7 billion currently to 9.7 billion in 2050. The study concluded that the world's population could reach its peak around the end of the current century, at a level of 11.2 billion by 2100, but it will begin to decline thereafter. These figures have been disputed but

9 The world now approaches eight billion people. See "2013 World Population Factsheet," available at www.pbr.org; "United Nations—World Population Prospects (2017).

what is not disputed is that human population growth contributes to the proliferation of destitution and misery and increases poverty, that it brings about the exploitation of resources and destruction of Earth's ecosystems, and that it imposes inordinate personal costs and high risk of death on women in their reproductive years. Human population growth is a major cause of the environmental stresses and environmental degradation that constitute our current ecological crisis.

In short, human actions have brought about the large-scale environmental degradation that challenges the well-being of many ecosystems, threatening the future of life on Earth. The vast scope of human-induced environmental changes has led scientists to speak about the dawn of a new geological era—the Anthropocene—in which the human species impacts each and every ecosystem.[10] We do not know how this multifactorial, complex, and evolving process will shape the future of planet Earth, but it is clear that the various manifestations of the current environmental crisis are interconnected and that the future of the Earth hangs in the balance if global warming triggers irreversible, large-scale changes in the climate systems. The environmental crisis is global in scope, crossing political boundaries; it encompasses all aspects of human life—economic, political, social, legal, and cultural—and it requires many scientific disciplines to understand it and explain its scope. Indeed, scientists, beginning with Rachel Carson and Barry Commoner, alerted the world in the early 1960s about the negative environmental impact of human activities and the threat they pose to the future of life on Earth. In 1962, Rachel Carson

10 For basic overview of the literature on the Anthropocene, see Erle C. Ellis, *Anthropocene: A Very Short Introduction* (Oxford: Oxford University Press, 2018). On the connection between the Anthropocene and extraction industry, see Ian Angus, *Facing the Anthropocene: Fossil Capitalism and the Crisis of the Earth Systems* (New York: Monthly Review Books, 2016); for the philosophical ramifications of living in the Anthropocene, see Christophe Bonneuil and Jean-Baptiste Fressoz, *The Shock of the Anthropocene* (London, New York: Verso, 2013).

noted the impact of synthetic pesticides on the environment,[11] and in 1964, Barry Commoner warned that "the greatest single cause of environmental contamination of this planet is radioactivity from explosions of nuclear weapons in the atmosphere."[12] Carson's concern for the environment was deeply rooted in her religious beliefs,[13] and Commoner's anti-nuclear campaign expressed his unbounded commitment to justice as a secular Jew.[14] Science is always informed by the scientist's values, social location, and ideals.

Since the 1960s, scientists have provided the data to document massive environmental degradation and have been influential in shaping public policies of various governmental agencies. Science made it possible to describe environmental issues in factual terms that could be perceived as "value free" and provided numbers that enabled policy makers to calculate the economic costs and benefits needed for the language of governance. Becoming more complex and interdisciplinary, the environmental sciences incorporated the natural, physical, and social sciences as they developed methods to describe environmental components' condition, abundance, importance, and their vulnerability to pressures that could change the way they functioned.[15] These methods were applied to

11 Rachel Carson, *Silent Spring* (New York: Houghton Mifflin, 1962).

12 Barry Commoner, "Fallout and Water Pollution—Parallel Cases," *Scientist and Citizen,* 7, no. 2 (1964): 2.

13 For analysis of Carson's religious posture, see Lisa Sideris, "Facts and Fiction, Fear and Wonder: The Legacy of Rachel Carson," *Sounding: An Interdisciplinary Journal* 91, no. 3/4 (2008): 335–369.

14 Commoner, an Eco-Socialist, linked environmental issues to a broad vision of social and economic justice and noted the parallels among environmental, civil rights, labor, and peace movements. Commoner viewed the environmental crisis as a symptom of fundamentally flawed economic and social systems. See Michael Egan, *Barry Commoner and the Science of Survival: The Remaking of American Environmentalism* (Cambridge, MA and London, England: The MIT Press, 2007).

15 There are numerous textbooks on environmental science that summarize the state of the field. See William P. Cunningham and Mary Ann Cunningham, *Principles of Environmental Science*, 8th edition (New York: McGraw-Hill Education 2017 [2008]); G. Tyler Miller and Scott Spoolman, *Environmental Science*, 16th edition (Belmont, CA: Brooks/Cole Cengage Learning 2013

policies on air, water, soil, oceans, flora, and fauna, aided by new technologies that helped scientists to gather satellite data on water vapor, oceanic temperatures, and ozone levels in the atmosphere.

Although scientists have documented the massive environmental degradation and have influenced public policy on environmental issues, scientific information about the environmental crisis has been proven insufficient to mobilize people to act so as to respond or reverse environmental degradation. Precisely because modern science has created a rigid separation between "fact" and "values," science has weakened its ability to speak to pressing issues; science has lost its moral authority. Scientists concerned with environmental degradation recognized the shortcomings of science in January 1990 when thirty-four internationally renowned scientists issued an Open Letter to the Religious Community.[16] In response, "representatives of the religious community in the United States of America gathered to deliberate and plan action in response to the crisis of the Earth's Environment."[17] The Joint Appeal in Religion and Science: Statement by Religious Leaders at the Summit on Environment, issued on June 3, 1991, reflected the awareness that faith communities must collaborate with scientists to address the ecological crisis, which is "spiritual and moral, economic and cultural, institutional and personal." The statement called for national and international policy responses to take steps toward

> accelerated phase out of ozone depleting chemicals; much more efficient use of fossil fuels and the development of a non-fossil fuel economy; preservation of tropical forests and other measures to protect continued

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[2010]).

16 See "Preserving & Cherishing the Earth: An Appeal for Joint Commitment in Science and Religion," Global Forum, Moscow, National Religious Partnership for the Environment (January 1990). The document is available on the website of the Forum on Religion and Ecology at Yale (www.fore.yale.edu).

17 Global Forum, "Preserving & Cherishing."

> biological diversity; and concerted efforts to slow the dramatic and dangerous growth in world population through empowering both women and men, encouraging economic self-sufficiency, and making family planning services available to all who may consider them on a strictly voluntary basis.[18]

The joint statement acknowledged that the planetary environmental crisis could not be addressed without the concerted, collaborative efforts of world religions, since most of the world population define themselves religiously, interpret the world in religious categories, and organize their life through religious rituals and practices.[19] To address the environmental crisis, religion and science had to join forces: if science provides the data about environmental processes, religion provides the ultimate values that mobilize people to act so as to address the environmental crisis. As Holmes Rolston III succinctly put it, "science and religion are equally needed, and strained, to bring salvation (to use a religious term) to keep life on Earth sustainable (to use a more secular, scientific term)."[20] The three lectures included in this volume fully endorse Rolston's claim, but instead of talking about "religion" in general, the volume looks at one religious tradition—Judaism—as a case study to understand how world religions have responded to the environmental crisis.

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18 The "Joint Appeal in Religion and Science: Statement by Religious Leaders at the Summit on Environment" is available on the website of the Forum of Religion and Ecology at Yale (www.fore.yale.edu).

19 About 84 percent of the world population is religiously affiliated. See Pew Forum on Religion & Public Life, "The Global Religious Landscape," (2012) available at: http://pewforum.org/files/2014/global-religion-full.pdf.

20 See Holmes Rolston III, "Environmental Ethics and Religion/Science," in *The Oxford Handbook of Religion and Science*, ed. Philip Clayton and Zachary Simpson (Oxford, New York: Oxford University Press), 908- 928, quote on 908.

The Academic Discourse

The three Goshen Lectures featured in this volume present the Jewish voice within the academic discourse commonly referred to as "religion and ecology." This discourse is closely related to other academic disciplines, such as religious studies, religion and science, environmental philosophy and ethics, and environmental studies. A detailed history of the academic field of religion and ecology cannot be undertaken here,[21] but a few comments on the development of this discourse will be useful to see how the Jewish voice fits in it.

Thinking about nature has always been integral to Western religions, but reflecting on the causal connection between religion and environment is rather recent and inseparable from the awareness of our ecological crisis. The connection was spelled out most forcefully by Lynn White Jr. in his short, controversial, and highly influential essay, "The Historical Roots of Our Ecologic Crisis." [22] White, a lay Presbyterian and a medieval historian, argued that the Judeo-Christian tradition was the direct cause of the contemporary environmental crisis, because the Bible (Genesis 1:26–28) gave license to humanity to control the natural world solely for human use and enjoyment. [23] According to White, the Judeo-Christian tradition is responsible for the apparent indifference of Western civilization toward nature. White maintained that the transcendence of God in Western religion led to a devaluation,

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21 For detailed history of the discourse of religion and ecology, consult Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O'Brien, eds., *Grounding Religion: A Field Guide to the Study of Religion and Ecology* (London, New York: Routledge, 2010); Bauman et al., *Inherited Land: the Changing Grounds of Religion and Ecology* (Eugene: Pickwick, 2011); Evan Berry, "Religious Environmentalism and Environmental Religion in America," *Religion Compass* 7, no. 10 (2013); John Grim and Mary Evelyn Grim, *Ecology and Religion* (Washington, DC, Island Press, 2014).

22 Lynne White Jr., "The Historical Roots of Our Ecologic Crisis, *Science*, vol. 155, issue 3767 (1967): 1204–1207.

23 For an assessment of White's thesis in retrospect, see Willis Jenkins, "After Lynn White: Religious Ethics and Environmental Problems," *Journal of Religious Ethics* 37 (2) (2009): 283–299.

objectification and exploitation of nature, because "nature" was seen as something separate from "humanity." The Western attitude toward the natural world was summarized by White in one word—"dominion"—and that attitude has sanctioned human conduct for millennia, resulting in our current ecological crisis.

White's controversial charge has generated a passionate debate which gave rise to the academic field of religion and ecology. At first, many Christians and Jews rose to defend the Bible against White's charges, and in so doing they began to look at the resources of their own tradition for the development of some form of environmental ethics based on particular religious or philosophical positions. The debate first focused on the question of whether religion is either "good" or "bad" for the environment, but as Christian theologians began writing on the relationship of religion, ethics, and the environment, they gave rise to Christian eco-theology, ecological hermeneutics, and ecological ethics.[24] Jewish theologians who responded to White's accusations were more concerned about his narrow reading of the Bible, which has focused disproportionately on the first narrative of creation (Gen. 1:1–2:3), in which humanity is commanded "to have dominion" over creation, at the expense of the second narrative (Gen. 2:4–2:25), in which humanity is commanded to "till and protect" the created world represented in the Garden of Eden.[25] Jewish theologians have also rebuffed

24 A typical example of early Christian eco-theology was H. Paul Santmire, *Brother Earth: Nature, God and Ecology in Time of Crisis* (New York: Thomas Nelson, 1970); H. Paul Santmire, *The Travails of Nature: The Ambiguous Ecological Promise of Christian Theology* (Philadelphia: Fortress Press, 1985). John B. Cobb is another pioneering Christian eco-theologian whose work linked eco-theology not only to environmental ethics but also to Process Theology. See Herman E. Daly, John B. Cobb, and Clifford W. Cobb, *For the Common Good: Redirecting the Economy toward Community, the Environment and a Sustainable Future* (Boston: Beacon Press, 1989); John B. Cobb, *Sustainability: Economics, Ecology and Justice* (London: Wipf & Stock Publishers, 1992; 2007); John B. Cobb, *Valuing the Earth: Economics, Ecology, Ethics* (Cambridge: The MIT Press, 1993).

25 For the early Jewish responses to Lynn White Jr., see Eric G. Freudenstein, "Ecology and the Jewish Tradition," *Judaism* 19, no. 4 (Fall 1970): 406–414;

White's narrow identification of "Judaism" with the biblical Scripture, ignoring the post-biblical development of Judaism.[26] The Jewish response to White marks the beginning of the discussion of Judaism and the environment.

The first phase of the religion and ecology discourse in the 1970s and 1980s was decidedly theological and hermeneutical. Those who agreed with White adduced the evidence for showing how the Christian theology of dominion contributed to the ecological crisis, whereas his critics looked at the entire biblical tradition and identified within it critical voices that supported deep concern for the natural world. The most original ecologically minded reinterpretation of Christianity came from Christian feminists, whose ecofeminist theologies either highlighted the connection between the domination of nature and the domination of women in Western society and culture or offered egalitarian theological models grounded in a scientific, evolutionary understanding of the cosmos.[27]

Robert Gordis, "Judaism and the Spoliation of Nature," *Congress Biweekly* (April 2, 1971): 9–12; Norman Lamm, "Ecology in Jewish Law and Theology," in his *Faith and Doubt: Studies in Traditional Jewish Thought* (New York: Ktav, 1972); Jonathan Helfand, "Ecology and the Jewish Tradition," *Judaism: A Quarterly Journal* 20 (1971): 330–35; Jonathan Helfand, "The Earth is the Lord's: Judaism and Environmental Ethics, in *Religion and Environmental Ethics*, ed. Eugene C. Hargrove (Athens, London: University of Georgia Press, 1986), 38–52; Evert Gendler, "On the Judaism of Nature," in *The New Jews*, ed. James A. Sleeper and Alan L. Mintz (New York: Vintage Books, 1971), 233–243.

26 A good example of the Judaic critique is Jeremy Cohen, "*Be Fertile and Increase, Fill the Earth and Master It:" The Ancient and Medieval Career of a Biblical Text* (Ithaca, NY: Cornell University Press, 1989). The book demonstrates the development of Judaic interpretations of the Bible and the mistake of generalizing about "Judaism" by taking a biblical text out of the ongoing Jewish interpretative process.

27 The term 'ecofeminism' was coined in the early 1970s to denote the feminist critique of environmental ethics, which has failed to pay attention to gender. Christian ecofeminists such as Rosemary Reuther, Sallie McFague, and Catherine Keller focused their critique not on secular environmental ethics but on Christian theology and ethics in order to articulate an egalitarian

Christian ecofeminists illustrate how scholars of religion and ecology have engaged their own traditions by following three main patterns: retrieval, re-evaluation, and reconstruction. *Retrieval* means the investigation of literate, oral, and performative sources for evidence of traditional teachings regarding human-Earth relations. *Re-evaluation* means reexamining and assessing these traditional sources once they have been retrieved and developing more ecologically sensitive attitudes or forging sustainable practices; and *reconstruction* means offering new synthesis and adaptations of traditional ideas to address the ecological crisis in creative ways.[28] The massive ecological rethinking of religious traditions was not limited to Christianity and Judaism, but encompassed all world religions. In the late 1990s, Mary Evelyn Tucker and John Grim organized a series of conferences on "The Religions of the World and Ecology" at the Center for the Study of World Religions (CSWR) at Harvard Divinity School. The conferences resulted in the ten volumes published by Harvard University Press (1998–2004).[29] The conferences and the edited volumes based on them have changed the discourse of religion and ecology from eco-theology and eco-hermeneutics to comparative analysis of world religions and the environment as the discourse on religion and ecology was consolidated within the discipline of religious studies.

The academic discourse of religion and ecology has several

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interpretation of Christianity that will be attentive to environmentalism. See Sallie McFague, *Models of God: Theology for an Ecological, Nuclear Age* (Philadelphia: Fortress Press, 1987); Rosemary R. Reuther, *New Woman, New Earth: Sexist Ideologies and Human Liberation* (New York: Seabury Press, 1975); Rosemary R. Reuther, *Gaia and God: An Ecofeminist Theology of Earth Healing* (San Francisco: Harper San Francisco, 1994). I will return to eco-feminism in Lecture 1.

28 See Mary Evelyn Tucker and John Grim, "The Movement of Religion and Ecology: Emerging Field and Dynamic Force," in *Routledge Handbook of Religion and Ecology*, ed. Willis Jenkins, Mary Evelyn Tucker, and John Grim (London, New York: Routledge, 2017), 7–8.

29 A list of all ten volumes, their Table of Contents, and Introduction is available at The Forum on Religion and Ecology at Yale. Fore.yale.edu/files/FORE_brochure.pdf.

distinctive characteristics. First, the field retains the distinctiveness of religious traditions, including Christianity, Islam, Judaism, Hinduism, Buddhism, Daoism, Shintoism, and various indigenous traditions. Second, since religions are global phenomena, the field encompasses their global manifestations without losing sight of the local expression of religious activism. Third, while the field is most interested in the theoretical expression of the relationship between religion and nature, the field is very attentive to the religious practices. Finally, while the field explicates religious theories, it is committed to bridging the gulf between environmental theory and environmental practice, between the academy and the general public. As the field has matured and moved beyond a textual and hermeneutical focus, it has increasingly utilized the social sciences, examining the role of religion in the development of environmental attitudes and practices. The social scientific focus has shifted the analysis from examination of texts, ideas, and themes, to examination of social institutions, power dynamics, environmental policies, and the relationship between governmental and religious civic organizations. The shift intended to enrich the field by locating the environmental discourse in religious actors, civil organizations, and institutions, be they local, national, or global. Under the impact of the social sciences, scholars have preferred to refer to the field not as "religion and ecology" but as either "religion, nature, and culture"[30] or as "religion and environment."[31] As scholars studied

30 The framing of "religion, nature and culture" was promoted by Bron R. Taylor, the editor of the *Journal for the Study of Religion, Nature and Culture,* which is the official journal of the International Society for the Study of Religion, Nature and Culture. Launched in 2007, the journal "explores through the social and natural sciences the complex relationships among human beings, their diverse 'religions' (broadly and diversely defined) and the earth's living systems, while providing a venue for analysis and debate over what constitutes an ethically appropriate relationship between our own species and the environment we inhabit." In this reframing of the field, the focus has been not only on the use of the social sciences but also on the integration of the humanities, the social sciences, and the earth sciences.

31 The phrases "religion and environment" or "religious environmentalism" have been promoted by Evan Berry, who has emphasized the political

religiously infused environmental activism, they spoke about "religious environmentalism" or even "environmental spirituality" as a distinct feature in contemporary culture.[32] Although each of these designations has a slightly different emphasis, they all contribute to the same academic discourse.

Today this academic discourse boasts numerous monographs, edited volumes, journal articles, encyclopedias, references books, newsletters, websites, and political initiatives.[33] Two recent reference books—*The Wiley-Blackwell Companion of Religion and Ecology* and the *Routledge Handbook of Religion and Ecology*—feature the main themes, texts, contributors, concerns, and debates of this academic discourse.[34] This "emerging field and dynamic force," as Mary Evelyn Tucker and John Grim characterize it, religion and ecology integrates religious interpretations and scientific analyses, Western and Eastern traditions, and governmental and civic organizations, all of which are deeply concerned about our ecological crisis.

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dimensions of religious environmental activism. See Evan Berry, "Social Science Perspectives on Religion and Climate Change," *Religious Studies Review* 42, no. 2 (2016): 77–85.

32 See Roger S. Gottlieb, *A Greener Faith*: *Religious Environmentalism and Our Planet's Future* (Oxford, New York: Oxford University Press, 2006); Roger S. Gottlieb, *Spirituality: What It Is and Why It Matters* (Oxford, New York: Oxford University Press, 2012). On how environmental spirituality fits in the contemporary global search for spiritual quest, see Gordon Lynch, *The New Spirituality: An Introduction to Progressive Belief in the Twenty-First Century* (London and New York: I.B. Tauris, 2007).

33 The Yale Forum of Religion and Ecology tracks publications, public lectures, curricula, and political activism in the US and worldwide, serving as the most useful resources for the field.

34 See John Hart, ed., *The Wiley-Blackwell Companion of Religion and Ecology* (Oxford: Wiley-Blackwell, 2017); Willis Jenkins, Mary Evelyn Tucker, and John Grim, eds., *The Routledge Handbook of Religion and Ecology* (Milton Park, New York: Routledge, 2017). The fact that these reference books still retain the phrase "religion and ecology" indicates that at least within the academy, the phrase "religion and ecology" is more commonly used.

Judaism: A Case Study

Judaism has a peculiar place in the discourse of religion and ecology.[35] Judaism is one of the smallest of the world religions, about sixteen million people worldwide. Nonetheless, it is appropriate and instructive to use Judaism as a case study for the discourse on religion and environment. First, Judaism is the oldest of the Abrahamic traditions and the foundation of the two other Western monotheistic traditions, Christianity and Islam. Any attempt to generalize about the environmental crisis and Western religions must begin with Judaism, since it has framed the Western understanding of the relationship among God, humanity, and nature. The key concepts of the Western approach to nature (e.g., creation, revelation, redemption, covenant, sin, guilt, responsibility, stewardship, sacrifice, and others) all originated in Judaism. These concepts play a key role in Western monotheism, which consists of the beliefs in the transcendence of God, divinely revealed Scriptures, covenantal theology, ethics of responsibility and social justice, God's revelation in history, and eschatological hope. It is simply impossible to talk about Western religions and the environment without understanding and referring to Judaism.

Second, as much as Judaism is the cornerstone of the Western religious outlook, in regard to the environment, Judaism could be seen as the most problematic. After all, if Lynn White is right and the Bible is the cause of our environmental crisis, then Judaism has much to answer for. Above, we noted that Judaic scholars, theologians, rabbis, and educators have responded to White's accusations by saying that his reading of the Bible was selective, incomplete, and misleading. Contrary to White, they sought to show that when the Bible is read in its entirety and in light of the entire rabbinic tradition, the ecological wisdom of the Bible is made

35 For overviews, see Hava Tirosh-Samuelson, "Judaism," *The Encyclopedia of Religion and Nature*, ed. Bron R. Taylor (London: Continuum, 2005), vol. 1, 525–537; Hava Tirosh-Samuelson, "Judaism," *The Oxford Handbook of Religion and Ecology*, ed. Roger S. Gottlieb (Oxford: Oxford University Press, 2006), 25–64.

apparent. For environmentally concerned Jews, the Bible should not be seen as the cause of the environmental crisis but rather as divine instruction for the correct relationship between humanity and nature, a guidance that was lost in Christianity. "Judaism" is not to be reduced to its canonic text, the Bible, since the Judaic tradition has continued to evolve over time through the ongoing interpretation of the Bible (in Hebrew, *Midrash*). Understanding Judaic attitudes toward the environment, therefore, must go beyond the Bible, must encompass the entire tradition as it evolved from antiquity, through the Middle Ages, to the modern period, and must take into consideration the changing historical circumstances of the Jews.

The Judaic tradition, as will become clear in the three lectures of this volume, has had much to say about the natural world, which is believed to be created by God. Yet, the physical world became a theological problem that requires systematic exposition only since the rise of the discourse on religion and ecology and the emergence of religious environmentalism since the 1970s. In the third lecture, I will discuss the Jewish environmental movement, explaining how it illustrates the fusion of religious faith, academic scholarship, advocacy, and political activism.[36] But the Jewish environmental movement exists because of the emergence of the academic field of religion and ecology, since one could not talk about the "Judeo-Christian tradition" without including Jews and without considering Jewish texts.[37] Judaism does not only illustrate the general trends of the field; it also offers a critical perspective on the field, which constitutes a third reason why we should look at Judaism as a case study for our consideration of religion and environment.

Judaism is not simply a "religion," if by that term we mean

36 Hava Tirosh-Samuelson, "Jewish Environmentalism: Bridging Scholarship, Faith, and Activism," in *Jewish Thought and Jewish Belief*, ed. Daniel Lasker (Beer Sheba: Ben Gurion University of the Negev Press, 2012), 65–117.

37 K. Healan Gaston, *Imagining Judeo-Christian America: Religion, Secularism and the Redefinition of Democracy* (Chicago: University of Chicago Press, 2019).

a set of doctrines and beliefs to which one assents through faith. Judaism is not merely an affirmation of certain beliefs, but a way of life that one group of people—the Jews—has lived for centuries. Judaic beliefs, rituals, norms, and practices cohere into a way of life that has given this group of people, the Jewish People, a collective cultural identity. Since belonging to the group is a matter of birth, the Jewish collectivity has an ethnic or national identity as much as it has a religious identity. Instead of talking about Judaism as a "religion," it is more accurate to treat it as a "civilization," in which religion is but one, albeit central, dimension.[38] As a civilization, Judaism has developed over time in response to changing historical circumstances and through interaction with surrounding civilizations, especially Islam and Christianity. The Jewish civilization encompasses all aspects of life, including time, space, human relations, social institutions, law, politics, education, art, philosophy, mysticism, literature, and more. While the Jewish civilization developed internally on its own accord, it has always interacted with surrounding civilizations, especially the Greco-Roman civilization, Christianity, and Islam.

Within the history of the Jewish civilization, there was a clear difference between the premodern and modern periods. In the premodern period (roughly until the French Revolution), rabbinic Judaism determined the religious norms of Judaism, but it too was marked by diversity, be it the subcultures of the Ashkenazic and Sephardic Jewries, or the diverse modes of Jewish self-expressions, including jurisprudence, Midrash, theology, rationalist philosophy, science, mysticism, poetry, and prose. Although premodern Judaism was not monochromatic or univocal, modernity and its concomitant process of secularization has further accentuated the

38 The civilizational approach to Judaism is indebted to Mordecai Kaplan, *Judaism as a Civilization: Toward a Reconstruction of American Jewish Life* (Philadelphia: The Macmillan Company, 1934, reprinted Schocken Books, 1967). For Kaplan and many others who followed him, Judaism is the sum of the Jewish religion, culture, language, literature, and social organization. Kaplan's religious naturalism reflects his Zionist commitment.

diversity of Judaism. The modern period for Jews began when they were emancipated and given civil rights as citizens in their country of residence. Modernity signaled a major break with the Jewish religious past, since Jews by birth could now choose for themselves whether or not they wished to live by the norms of the Jewish religious tradition. The modern period thus witnessed the secularization of Jewish life, which was unthinkable in the premodern period. The result was that modern Judaism is marked by profound diversity and debate about the meaning of being Jewish and the ways that Jews can and should express their Jewishness. Since being Jewish is largely a matter of choice, Judaism today is inherently pluralistic as Jews express themselves in religious, secularized, or secularist ways, which makes generalizing about contemporary Judaism very difficult.[39]

By framing Judaism historically, I make clear that history is the methodology that informs my approach to the field of religion and ecology and more broadly to the field of religion and science. As an intellectual historian, I avoid the temptation to talk about science and religion as if they are reified entities that require us to ponder whether they are "enemies," "strangers," or "partners." Rather, I regard science and religion as cultural constructs that reflect specific historical conditions as they have evolved over time. As expressions of culture, at least in the Western world, science and religion have always been in conversation with each other, a conversation that expresses the confluence of social, political, and intellectual factors. This means that if we wish to study the interplay of religion and science in Western culture, we must trace this relationship from antiquity, through the Middle Ages and the modern period, and finally to the contemporary moment. From this perspective, the intersection of science and religion has been a constant feature of Western culture, and it behooves us to make certain that the dialogue between science and religion persists

39 Reuben Kimmelman, "Judaism and Pluralism," *Modern Judaism* 7, no. 2 (1987): 131–150.

in the future, albeit in new forms that we do not yet envision. To give up on the possibility of dialogue between religion and science will have deleterious effects both for those who see the world in religious terms and for those who are committed to science as the primary framing.

As an historian, I look at Judaism as a civilization that has developed over time and that can be analyzed with the distinctive tools of historical inquiry. Because Judaism is an historical phenomenon, it has always been subject to change, even though Jewish texts claim for themselves the status of divine revelation, which presumably transcends historicity. Furthermore, since I examine the Jewish tradition as an intellectual historian, what I present to you may or may not express my own personal beliefs. My goal is to present what the Jewish tradition has said about environmental matters, so as to understand how Judaic ideas can address the current ecological crisis, rather than propose my own environmental constructive theology. The lectures in this volume explore many theological concepts within Judaism, whether I agree with them or not.

Judaism has always changed over time and continues to do so today. In the twentieth century, Judaism was most profoundly transformed by two historical events: World War II with the Nazi attempt to annihilate the Jewish People in the Holocaust (1933–1945), and the establishment of the State of Israel (1948). These developments were rooted in earlier processes that took place in the nineteenth century: the emancipation of the Jews, and the rejection of this very process in the rise of modern, racial anti-Semitism. Modern Zionism, the movement that called on Jews to return to their ancestral homeland, the Land of Israel, was the most radical Jewish response to modern anti-Semitism. The anti-Semites denied that Jews could be equal members of European society and culture on account of their race. The Zionists agreed that the emancipation of the Jews had failed because of continued hatred of Jews and Judaism in Europe, but they saw Europe's rejection of the Jews as the impetus for the revival of Jewish life in the Land of Israel.

Zionism signifies not only the modern resettlement of the land by diaspora Jews and eventually the establishment of the Jewish State, Israel, but also a reinterpretation of Jewish attitudes toward space, place, and the natural world. Contrary to Judaic diasporic culture, which had centered on commerce, trade, and bookish learning, Zionism called Jews to "return to nature" and make land cultivation the focal point of their national identity. For many Zionist ideologues, especially those associated with Labor or Socialist Zionism, the return to the Land of Israel was not merely a political act; it was also a deliberate attempt to create a new kind of Jew, a person who will be rooted in the soil rather than in the study of sacred texts and the performance of religious rituals. The return of the Jews to nature was supposed to liberate the Jews from the negative character traits they had presumably acquired during their long exilic life and to lead to personal redemption not in the afterlife but in this world, and not through observance of divine commands but through manual labor. The so-called "religion of labor" through land cultivation was the most profound transformation of traditional Jewish values within the framework of Zionism. Along with the return to nature, the Zionists created a new, Hebraic culture that highlighted the agricultural basis of many Jewish festivals and designed new rituals that celebrated the abundance of the land without referring to God or to the sacred sources of Judaism.[40] Zionism was thus rooted in a paradox, because it was both a rebellion against the religious past as well as the continuation of that very past, albeit through comprehensive reinterpretation.

In Israel today, seven decades after the founding of the State, Israeli Jews express themselves in a variety of ways, ranging from the most "secular" to the most "religious" and numerous "spiritual" variants in between. In terms of environmentalism, Israel boasts

40 See Eric Zakim, *To Build and Be Built: Landscape, Literature, and the Construction of Zionist Identity* (Philadelphia: University of Pennsylvania Press, 2006); Boaz Neumann, *Land and Desire in Early Zionism* (Boston: Brandeis University Press, 2011).

several environmental parties, numerous environmental NGOs, extensive environmental legislation, and vast environmental educational programs, but most of them are not anchored in Jewish religious sources, nor do they appeal to the norms of Jewish law. Rather, they reflect how Israelis today wrestle with environmental problems, be they air and water pollution, soil corrosion, global warming and persistent droughts, loss of open spaces, or loss of biodiversity.[41] There are indeed several religious organizations in Israel whose environmental activism is rooted in religious values and norms and justified by appeal to religious texts, and there are also members of religious parties in the Israeli parliament, the Knesset, who endorse secular environmental legislation because of their religious convictions. By and large, it is accurate to say that environmentalism in Israel is secular in its orientation.

The story of Zionism and its complex attitude toward the Land of Israel is relevant to these lectures, since I was born and raised in Israel.[42] I was born in kibbutz Afikim, and I grew up as a secular Israeli. However, my kibbutz culture was not as secularist as one could expect. It is more accurate to say that kibbutz culture reflected the secularization and modernization of traditional Judaism, and that the Hebraic, modernist culture of my kibbutz reframed and reinterpreted traditional tropes, rituals, and rhythms of life, such as the celebration of Sabbath and holidays. Through the secularization of traditional Judaism, we grew up with links to the remote Jewish past, which was given a unique reinterpretation, a blending of humanism, Socialism, Romanticism, and Zionism. Since the Jewish past was part of my upbringing, it was no surprise that as a student

41 For a detailed discussion of environmentalism in Israel, consult Daniel Orenstein, Alon Tal, and Char Miller, eds., *Between Ruin and Restoration: An Environmental History of Israel* (Pittsburgh: University of Pittsburgh Press, 2013).

42 For a detailed description of my intellectual and spiritual path, see Hava Tirosh-Samuelson, "The Preciousness of Being Human: Jewish Philosophy and the Challenges of Technology," in *Jewish Philosophy in the Twenty-First Century: Personal Reflections*, ed. Hava Tirosh-Samuelson and Aaron W. Hughes (Leiden, Boston: Brill, 2014), 428–57.

at the Hebrew University in the 1970s, I embarked on the study of Jewish religious texts (especially philosophical and mystical texts), even though I lived as a secular Jew. When later life brought me to the US, my Jewishness had to be expressed in more religious terms, because in the US, Judaism is a religio-ethnic minority. If one is to remain Jewish, one must express oneself through religious modalities. In the United States, I became familiar with traditional Jewish rituals, immersed myself in the rhythm of Jewish life, and became attuned to the denominational differences that characterize American Jewry.

Because I am a non-observant Jew, I can deliver these lectures on the Sabbath. Indeed, one of the problems of involving Jews in the dialogue of religion and science or in the field of religion and ecology pertains to the fact that conferences and academic gatherings are usually held on the Sabbath. As a Jewish academic who is not an observant Jew, I am able to take part in these gatherings while being sensitive to the problematic aspect of my participation. However, I recognize that the rich literary legacy of Judaism has shaped who I am intellectually, culturally, and spiritually, even though I do not observe Jewish law. Jewish texts, ideas, motifs, and intellectual traditions frame my personal identity, cultural orientation, and ethical sensibility. Since I am non-observant, I am able to approach these rich texts analytically and critically, rather than as sources of authoritative truths. I do not try to prove that Jewish texts are true, or that the Jewish way of looking at the world is the best. Rather, because this literary tradition shapes my cultural identity, I try to understand its content by situating the tradition in its proper cultural context, teasing out the meaning of certain ideas, and reflecting on the cultural function of the texts in Jewish history. However, since I am an intellectual historian rather than a constructive theologian, I do not engage in the creative work of hermeneutical theology, nor do I try to fathom the presumed divine intention in these texts that claim to be divinely revealed.

My goal is to present what the Jewish tradition says about the environment, how the Jewish religious tradition anchors

contemporary environmental activism, and how contemporary Jewish thinkers have reinterpreted Judaism in order to address the contemporary ecological crisis. In the following three lectures, I argue that Judaism offers one instructive response to the environmental crisis, a response grounded in covenantal theology and its complementary ethics of responsibility. The Judaic paradigm can be meaningful to non-Jews as well, especially to members of the Abrahamic traditions, Christians and Muslims. The Judaic paradigm can also be meaningful to secularists, especially secular Jews, who do not think about the world in covenantal terms.

I present the case of Judaism by looking at three distinct but interrelated aspects. The first lecture focuses on Jewish environmental ethics, because I consider the ethics of responsibility to be the distinctive Jewish contribution to the discourse on religion and ecology. This lecture spells out the general principles of Jewish environmental ethics, key ethical values, and main philosophical reflections on the principle of responsibility. Since traditionally Jewish ethics was grounded in covenantal theology, the second lecture explores how the key beliefs of Judaism—creation, revelation, and redemption—frame Jewish eco-theology. The third lecture explains how these foundational beliefs were differently understood by diverse Jewish schools of thought in premodern times, especially rationalist philosophy and Kabbalah, and how these ideas have inspired contemporary Jewish eco-theology. Although theology is a crucial feature of Judaism, Jewish responses to the environmental crisis are not simply a matter of religious faith but rather a matter of concrete action in the world. The third and last lecture discusses Jewish environmental activism and explores its relationship to the science of ecology. It argues that while Jewish environmentalism is aware of the science of ecology, it does not derive its justification from science. Rather, Jewish environmentalism is motivated by ethical convictions, that is, the ethics of responsibility, and that conviction can be given religious as well as secular interpretations. Today, Jewish environmentalism offers a way of being Jewish in the world that takes into consideration the entire gamut of the

Jewish tradition interpreted through the prism of contemporary environmental sensibility.

The structure of the three lectures manifests the message I wish to convey. I start with environmental ethics, because ethics requires an account of what actions we ought or ought not to perform, and I end the lecture series by talking about what Jews who are environmentally concerned in fact do, namely, contemporary Jewish environmental activism. My focus on ethics and activism is no coincidence; it is meant to present Judaism as a way of life, a praxis that concerns itself with particular situations, actions, and obligations in the world we experience through our bodies, rather than a set of beliefs or dogmas that we affirm in the head or the heart. Furthermore, my emphasis on the ethical seeks to highlight the urgency of our situation. While it is true that theology always grounds ethics, to address the ecological crisis today is no longer a matter of articulating theology that takes nature into consideration or that sees the human as an integral part of nature. What we need today is not more hermeneutical creativity or theological sophistication, but a commitment to a way of life that will save the natural environment from further destruction. The primacy of the ethical is thus dictated by the urgency and severity of the environmental crisis itself.

Lecture 1: Jewish Environmental Ethics

Environmental Ethics, Religion, and Spirituality

The central question of ethics is "How Should I Live?" This requires an account of what actions we ought or ought not to perform, as well as an explanation of how to derive the account of right actions, whether by a rule, or a set of rules, a general principle, or a decision-making procedure. The exhortations to right action constitute normative ethics, which offers a framework for justifying and articulating these claims; the reasoning about the status and nature of ethical claims constitutes meta-ethics. The academic discourse of environmental ethics consists of *normative ethics* and *meta-ethics* about the environment as a distinctive branch of applied philosophy, alongside bioethics or business.[43] However, the precise meaning and scope of "environment" have been subject to intense debates. For some, "environment" denotes non-human nature within the context of ecological systems as studied by the science of ecology; for others, "environment" includes not only the relations of humans with biota and the non-biotic environment, but also the human-built environment. In general, the philosophical discourse of environmental ethics has extended the bounds of moral considerability beyond humans to encompass other entities, such as animals, plants, rivers, soils, mountains, and ecosystems, briefly referred to as "non-human nature," or as some environmentalists

43 How the distinction between normative ethics and meta-ethics applies in environmental ethics is succinctly explained in Dale Jamieson, *Ethics and the Environment: An Introduction* (Cambridge: Cambridge University Press, 2008).

prefer, the "more-than-human nature."

Environmental ethics emerged as a distinctive branch of philosophy,[44] or more precisely, a particular concentration within applied philosophy, in the 1970s.[45] At the same time that theologians responded to the charges of Lynn White that the Judeo-Christian tradition is responsible for exploitative attitudes toward nature, philosophers and ethicists began to address the implications of environmental degradation. Those who argued for the ethical significance of the environment had first to explain why non-human nature is worthy of moral consideration, contrary to the view that had dominated Western philosophy until then, that nature has mere instrumental value as an economic resource that benefits humans. In the 1970s, two questions dominated the discourse of environmental ethics: a) "Can standard moral philosophy ground environmental ethics that accords intrinsic worth to non-human nature?" and b) "Which entities deserve moral consideration, and why?" Environmental philosophers such as Tom Regan and Peter Singer considered standard moral philosophy and its individualistic ontology (i.e., Deontology or Utilitarianism) sufficient to ground environmental ethics, extending intrinsic value to individuals. For Regan, intrinsic worth inheres in non-human individuals, for example, primates that possess self-awareness as "subjects-of-a-life." He thus argued that these beings should be respected by moral agents who have duties toward them. This was the justification for animal rights.[46] Alternatively, Peter Singer's criterion for intrinsic

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44 For an excellent overview of the entire discourse of environmental ethics, its key questions, key concepts, and major contributors, see David R. Keller, "Introduction: What is Environmental Ethics?" in *Environmental Ethics: The Big Questions* (Malden, Oxford: Wiley Blackwell, 2010), 1–23.

45 On environmental ethics as part of applied ethics, see Andrew Light, "Environmental Ethics," in *A Companion to Applied Ethics*, ed. R.G. Frey and Christopher Heath Wellman (Malden, Oxford: Blackwell Publishing, 2003), 633–647.

46 Tom Regan, "The Case of Animal Rights," in Tom Regan and Peter Singer, eds., *Animal Rights and Human Obligations* (New York: Prentice Hall, 1976); Tom Regan, *The Case for Animal Rights* (Berkeley, Los Angeles, University of

worth was the capacity to suffer: since animals can suffer, their pain must be avoided. According to Singer, there is an obligation to serve the interests or at least to protect the lives of all animals who suffer or are killed, whether on the farm or in the wild. Singer thus justified and gave rise to the discourse on animal liberation, and his position was quite popular among environmental activists, while encountering criticism from environmental ethicists.[47]

In contrast to "extensionism" (i.e., extending moral consideration to non-humans by using existing ethical frameworks), most environmental ethicists held that the moral categories of Western ethics cannot ground environmental ethics; a new paradigm rooted in non-individualistic ontology is needed. Roughly speaking, the debate between these approaches overlapped the distinction between "anthropocentrism" and "non-anthropocentrism" (also referred to as "biocentrism" or "eco-centrism"). According to anthropocentrism, only human beings are valuable in and of themselves (i.e., natural entities possess intrinsic value) and non-human entities are valuable only insofar as they serve human purposes (i.e., natural entities possess instrumental value). In this debate, nature was viewed as mere matter, fundamentally different from human beings, who in addition to a material body have the capacity to transcend matter by means of either reason or free will. Some early environmental theories were unabashedly anthropocentric. For example, John Passmore denied the moral primacy of humans but claimed that humans have a moral duty to respect and protect nature.[48] A more biocentric but still hierarchical

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California Press, 1983; updated version with a new preface, 2004).

47 See Peter Singer, *Animal Liberation: A New Ethics for Our Treatment of Animals* (San Francisco: HarperCollins, 1975; 40th anniversary edition, 2015). Singer conceded that there are "important differences between humans and other animals, and that these differences must give rise to some differences in the rights that each have" (*Animal Liberation*, 2), but he argued that all beings capable of suffering are worthy of equal moral consideration, so that giving less consideration on the basis of belonging to a species is similar to discrimination on the basis of skin color.

48 John Arthur Passmore, *Man's Responsibility for Nature: Ecological Problems*

ethics was articulated by Holmes Rolston III, who argued that all living things possess intrinsic worth and that non-human biota are worthy of direct moral consideration, but humans hold a special moral place in the hierarchy of beings. Because of the ontological difference between humans and non-humans, social ethics is exclusively for human beings, whereas ecological systems require environmental ethics, but the two are fundamentally distinct.[49] Similarly, Paul Taylor argued for hierarchical biocentrism which recognizes individual plants and animals as "teleological centers of life."[50] The attitude of respect for nature is thus rooted in judgments about what promotes or protects beings' own good rather than what benefits moral agents themselves. Although these thinkers deeply influenced the discourse on environmental ethics, most environmental ethicists adopted egalitarian biocentrism: all organisms are equal in terms of moral considerability, and therefore value hierarchies should be rejected.

As the meta-ethical debates about intrinsic or inherent worth of non-human nature intensified, generating the vast literature of environmental ethics,[51] several ethicists attempted to bridge the conceptual gap. J. Baird Callicott argued for a holistic approach to the question of inherent worth: the proper objects of moral considerability are ecological wholes that include both human and non-human biota as well as the abiotic environment, and human moral agents have obligations to biotic and abiotic members of ecological communities, even though those others are not

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and Western Traditions (London: Duckworth, 1974).

49 Holmes Rolston III, "Is There an Ecological Ethics," *Ethics* 85 (1975): 93–109; Holmes Rolston III, *Environmental Ethics: Duties to and Values in the Natural World* (Philadelphia: Temple University Press, 1988). The strand of environmental ethics known as Social Ethics is attributed mainly to Murray Bookchin, a secular Jew, who will be discussed below.

50 See Paul W. Taylor, *Respect for Nature: A Theory of Environmental Ethics* (Princeton: Princeton University Press, 1986).

51 For seminal essays in the field of environmental ethics, consult Andrew Light and Homes Rolston III, eds., *Environmental Ethics: An Anthology* (Malden, Oxford: Blackwell Publishing, 2012).

saddled with reciprocal moral obligations.[52] For Callicott, the rigid distinction between anthropocentrism and non-anthropocentrism was therefore invalid. Although biotic communities are the source of value, values become actual only if and when humans deem them to be so. Expanding Aldo Leopold's Land Ethics,[53] Callicott's view was labeled "weak anthropocentrism," even though he argued for biocentrism.[54] Similarly, Bryan Norton argued that the presumed difference between anthropocentrism and non-anthropocentrism matters little, because in terms of public policy the two perspectives converge.[55] Norton's so-called Convergence Hypothesis gave rise to Environmental Pragmatism, which criticized the tendency of environmental ethicists to focus on meta-ethical questions that have no bearing on practical environmental issues. In the 1990s, Environmental Pragmatism became a distinct strand within environmental ethics, with a focus on the practical effect of philosophical arguments.[56] To begin, Environmental Pragmatists "have consistently endorsed anthropocentrism as the value system for discussing environmental issues, in order to achieve efficacious results," but more recently, Pragmatists have argued that "true environmental pragmatists ought to supplement anthropocentric

52 See J. Baird Callicott, "The Conceptual Foundation of the Land Ethics, in his *In Defense of the Land Ethic: Essays in Environmental Philosophy* (Albany: SUNY Press, 1989), 75–91.

53 See Aldo Leopold, *A Sand Country Almanac* (Oxford: Oxford University Press, 1949). Leopold's Land Ethics was a call for moral responsibility to the natural world, and its core idea was caring about people, about land, and about strengthening the relationships between them.

54 See Bryan G. Norton, "Environmental Ethics and Weak Anthropocentrism," *Environmental Ethics* 6, no. 2 (1984): 131–148.

55 See Bryan G. Norton, *Toward Unity among Environmentalists* (Oxford: Oxford University Press, 1991); Bryan G. Norton, "Convergence and Divergence: The Convergence Hypothesis Twenty Years Later (2009), in Ben A. Minteer, ed., *Nature in Common? Environmental Ethics and the Contested Foundations of Environmental Policy* (Philadelphia: Temple University Press, 2009).

56 See Eric Katz and Andrew Light, eds., *Environmental Pragmatism* (New York, London: Routledge, 1996).

values with non-anthropocentric values of the non-human world."[57]

The theoretical discourse of environmental ethics has been distinctly secular as it seeks to identify objective and universal ground, or grounds, for environmental values. This axiological discussion resulted in distinct strands of environmental ethics, each with its own analysis of the causes for the ecological crisis, its salient ethical aspects, and the solutions to the crisis.[58] Thus Deep Ecology insisted on egalitarian biocentrism and metaphysical holism.[59] Dismissing resource management as "shallow ecology," Deep Ecology advocated rethinking the place of humanity in the ecological whole. The platform of Deep Ecology grounded protection of nature not in the illusive "intrinsic worth," but in the felt sense of relatedness to the rest of nature or a love of existence.[60] Humans can so feel only if they become aware that the Self is transpersonal and that things in the world are conceived as processes. Although Deep Ecology uses a psychological category, it is not anthropocentric, because Deep Ecology is concerned about the flourishing of non-human life, values the diversity of life, and recognizes the need to sustain the very conditions for the diversity of myriad forms of life, including the decrease of human population.

57 L. Philippa Callanan, "Intrinsic Value for the Environmental Pragmatist," *Res Cogitans* 1 (2010): 132–142, citation on 132.

58 A very good overview of the various strands is offered in Peter Hay, *Main Currents in Western Environmental Thought* (Bloomington, Indianapolis: Indiana University Press, 2002).

59 The term 'Deep Ecology' was coined by the Norwegian philosopher Arne Naess in 1972 as he distinguished between "long-range deep ecology movement" and the "shallow ecology movement." The latter engages in technological fixes based on consumption-oriented values and methods of the industrial economy, whereas the former refers to the level of questioning of human purposes and values when arguing in environmental conflicts and involves deep questioning, right down to fundamental root causes. Deep Ecology involves redesigning whole systems based on values and methods that preserve the ecological and cultural diversity of natural systems.

60 See David R. Keller, "Deep Ecology," in *Encyclopedia of Environmental Ethics and Philosophy*, ed. J. Baird Callicott and Robert Frodeman (Detroit, New York, San Francisco, New Haven, Waterville, Maine, London: Gale Cengage Learning, 2009), 207–211.

Deep Ecology did not have systematic ethics, but many forms of radical environmental activism took their inspiration from Deep Ecology. Most importantly, Deep Ecology shares many concerns, assumptions, and tasks with world religions, so that it is possible to talk about "spiritual Deep Ecology" as a fusion of the religious and the secular.[61]

In contrast to Deep Ecology, the Social Ecology of Murray Bookchin argued that the source of the ecological crisis is the very human tendency for domination.[62] Murray Bookchin, the "father" of Social Ecology, was a secular Jew steeped in Marxism and anarchism.[63] He recognized the degree to which humans are part of nature but insisted that humans are also more than just "nature." As a Marxist critic of Darwinism, Bookchin has argued that nature develops not through competition but through cooperation and mutualism to ever greater possibilities for diversity, freedom, and subjectivity. Humans are indeed part of nature, but they are also a "quantum leap" within the natural process: only humans actualize the "potentiality for nature to become self-conscious and free," and therefore only humans have responsibility to nature, contrary to the instrumentalism of modern industrial capitalism,

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61 See David Landis Barnhill and Roger S. Gottlieb, "Introduction" in *Deep Ecology and World Religions: New Essays and Sacred Ground*, ed. David Landis Barnhill and Roger S. Gottlieb, (Albany: SUNY Press, 2001), 17–33. Gottlieb in particular has shown how "spiritual Deep Ecology" can be promoted by the secular Left and how spirituality includes but is not limited to environmentalism. See Roger S. Gottlieb, *Spirituality: What It Is and Why It Matters* (Oxford: Oxford University Press, 2013).

62 Murray Bookchin, "What Is Social Ecology?" in *Environmental Philosophy: From Animal Rights to Radical Ecology*, ed. Michael E. Zimmerman, J. Baird Callicott, Karen J. Warren, Irene Klaver and John Clark (Upper Saddle River: Pearson Education, Inc., 1993), 462–78; Murray Bookchin, *Toward an Ecological Society* (New York, Montreal, London: Black Rose Books, 1976; 1980).

63 For overview of Murray Bookchin's life and thought, consult Janet Biehl, ed., *The Murray Bookchin Reader* (New York, Montreal, London: Black Rose, 1997; 1999). For a succinct analysis of his Social Ecology see Hay, *Main Currents in Western Environmental Thought*, 288-301.

and in contrast to the biocentric egalitarianism of Deep Ecology. Human responsibility to nature could be properly carried out only if humans first eliminate practices of exploitation, domination, and hierarchy.

Dismantling the logic of domination was the core of ecofeminism, yet another distinctive strand of environmental ethics.[64] However, for ecofeminists the paradigm of domination was not the control of one class of people over another, but the control of men over women, namely, patriarchy or androcentrism.[65] Ecofeminists have attempted to make feminism environmental, and conversely, to reconceive environmental ethics in a feminist, egalitarian manner. Although all ecofeminists decry male domination that supports the oppressive framework of patriarchy, ecofeminists were deeply divided about how to accomplish the egalitarian goal or how to justify it philosophically. Some ecofeminists (e.g., Arielle Salleh) aligned themselves with Social Ecology, while others (e.g., Charlene Spretnak) who promoted Earth-based Spirituality were more attuned to Deep Ecology, and still others (e.g., Chris J. Cuomo) have promoted ecofeminism as ethics of care, urging the development of a particular character that could *care for* the environment.[66] Although ecofeminists debated the precise

64 The term 'ecofeminism' was coined in 1974 by the French feminist environmentalist Francoise d'Eaubonne; ecofeminism emerged into a distinct feminist voice within environmental philosophy and ethics during the 1980s and 1990s. See Karen J. Warren, *Women, Culture and Nature* (Bloomington: Indiana University Press, 1997); Karen J. Warren, ed., *Ecofeminist Philosophy: Western Perspective on What It Is and Why It Matters* (Lanham: Rowman and Littlefield, 2000).

65 Ecofeminism is not limited to philosophy but intersects with various disciplines and discourses in the social sciences and the humanities. See Carol J. Adams and Lori Gruen, eds., *Ecofeminism: Feminist Intersections with Other Animals & the Earth* (London: Bloomsbury Academics, 2014). The first chapter (7–57) offers a useful overview of ecofeminism as a social and political movement.

66 See Arielle Salleh, *Ecofeminism as Politics: Nature, Marx and the Postmodern* (New York: Zed Books, 1997); Charlene Spretnak, *The Politics of Women's Spirituality: Essays on the Rise of Spiritual Power within the*

significance of gender to environmental theory, a common theme in ecological feminist scholarship is the desire to combine ecofeminist theory with strong ecofeminist activism. Unlike male-dominated academic environmental ethics, which was characteristically secular, ecofeminism was open to and deeply influenced by religion. The intersection of these discourses was advanced by Christian ecofeminists such as Rosemary R. Ruether, Sallie McFague, and Carol P. Christ, and the Jewish theologian Judith Plaskow.[67]

Philosophically speaking, the feminist insistence on ethics of care and its focus on character cultivation were inspired by yet another strand within environmental ethics, namely, environmental virtue ethics.[68] Virtue ethics developed in the second half of the twentieth century out of the critique of reigning theories in moral philosophy: Deontology, Consequentialism, and Utilitarianism. In virtue ethics, the question "How ought I to live my life?" could not be separated from the question "What kind of person ought I to be?" Environmental virtues ethics holds that standard interpersonal virtues (e.g., honesty, temperance, and compassion) should be

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Feminist Movement (New York: Anchor Books, 1981); Charlene Spretnak, *The Resurgence of the Real: Body, Nature and Place in a Hypermodern World* (New York: Routledge, 1999); Chris J. Cuomo, *Feminism and Ecological Communities: An Ethics of Flourishing* (London: Routledge, 1998).

67 Rosemary R. Reuther, *Gaia and God: An Ecofeminist Theology of Earth Healing* (San Francisco: HarperSanFrancisco, 1994); Rosemary R. Reuther, *Integrating Ecofeminism, Globalization and World Religions* (Lanham: Rowman and Littlefield, 2004); Sallie McFague, *The Body of God: An Ecological Theology* (Minneapolis: Fortress Press, 1993); Sallie McFague, *Life Abundant: Rethinking Theology and Economy for a Planet in Peril* (Minneapolis: Augsburg Press 2000); Carol P. Christ, *Rebirth of the Goddess* (London: Continuum, 1995); Carol P. Christ and Judith Plaskow, eds., *Womenspirit Rising: A Feminist Reader in Religion* (San Francisco: HarperOne, 1979; 1992); Carol P. Christ and Judith Plaskow, *Weaving the Visions: New Patterns in Feminist Spirituality* (San Francisco: HarperOne, 1989).

68 See Ronald Sandler and Philip Cafaro, eds., *Environmental Virtue Ethics* (Lanham: Rowman and Littlefield, 2005); Ronald Sandler, *Character and Environment: A Virtue-Oriented Approach to Environmental Ethics* (New York: Columbia University Press, 2007).

considered normative in the environmental context. The cultivation of right virtues promotes proper action. The environmentally virtuous person will be disposed to recognize the right thing and to do it for the right reasons. Environmental virtue shifted the focus from meta-ethical issues about moral considerability to pragmatic concerns about how to act in the environmentally correct matter. The shift was championed as well by Environmental Pragmatists, who have encouraged fellow ethicists to relinquish theoretical debates because they are unproductive and instead become involved in environmentalism in a way that could affect the public sphere, especially public policy. Environmental Pragmatism called for civic engagement with practical issues, preferred a problem-oriented approach to environmental issues, looked for theories that were closely related to social experience, and endorsed environmental activism that yielded factual results. Pragmatism offered strategies of practical rationality to organize environmental issues within moral experience.

Environmental Pragmatism of the late 1980s and 1990s entailed a critique of academic environmental ethics for being socially ineffective. Another aspect of that critique reflected the heyday of postmodernism. Like the pragmatists, postmodernist ethicists called for reconceptualization of environmental ethics, but their pragmatism was less political, more communitarian, and primarily attentive to language.[69] The primary claim of postmodernist ethics was that human beings are linguistic creatures: they perceive the world and make sense of it through the mediation of language. Language constitutes the meaningful world that humans inhabit; language does not mirror reality. Thus concepts such as "nature" or "wilderness" are no more than linguistic constructs; they do not represent independent reality but human narratives

69 See Jim Cheney, "Postmodern Environmental Ethics: Ethics of Bioregional Narrative," *Environmental Ethics* 11, no. 2, (1989): 117–134; Max Oelschlaeger, ed., *Postmodern Environmental Ethics* (Albany: SUNY Press, 1995); Arran Gare, *Postmodernism and the Environmental Crisis* (New York, London: Routledge, 1995).

about it. With attention to the linguistic context of human life, postmodernist environmental ethics denied any privileged position outside language from which to build apodictic truth and instead emphasized the performative aspects of language and its ability to transform human social experience. Effective discourse means a discourse that moves people to action, which means acting sustainably. Postmodernist ethics thus focused on how humans have constructed their locales through shared stories. The emphasis on "storied living" meant paying attention to communities and their collaborative discussion. Humans judge what is good and bad within specific, local, discursive communities and in the context of certain narrative traditions that make judgment possible. By analyzing these stories, postmodern environmental ethicists tended to move society in the direction of sustainability.

Postmodern environmental ethicists acknowledged that for millennia, humans have framed the meaning of nature in terms of religious narratives. These sacred myths have given meaning to human life and defined the moral status of nature and human obligations toward nature. It was no coincidence that the ethicists who first paid attention to the plight of nature and called humans to change their actions (e.g., Rachel Carson, Lynn White, Holmes Rolston, John Passmore, Paul W. Taylor, and John B. Cobb) were all members of religious communities with strong concerns for the preservation of the world, believed to be created by God. The impetus for recognizing the environmental crisis came from religious sensibility that identified the harmfulness of human practice to the integrity of creation.[70] Even Lynn White, who accused the Judeo-Christian tradition of giving rise to exploitative attitudes toward nature, did so as a Presbyterian lay person who spoke within the tradition of prophetic self-criticism.[71] In a later essay, which

70 An argument for the integration of religion and the science of ecology is well stated by Max Oelschlaeger, *Caring for Creation: An Ecumenical Approach to the Environmental Crisis* (New Haven: Yale University Press, 1994), especially 19–51.

71 The point is made by H. Paul Santmire, "The Liberation of Nature: Lynn

received a lot less attention, White discussed the degree to which Judeo-Christianity has the potential to change. This is precisely what happened when religious practitioners and environmentalists began to converge in the late 1980s and early 1990s within the discourse of religion and ecology. Unlike environmental ethics, which was taken to be a branch of secular, applied philosophy, the field of religion and ecology developed within the academic discipline of religious studies and in relation to the emergence of yet another academic discourse, science and religion, the intellectual context of the Goshen Conferences. As we shall discuss in the third lecture, the dialogue of science and religion is not strictly secular, because it is generated by people who are religious practitioners and who speak out of prior commitments to religious narratives, values, and norms.

Academic environmental ethics remained a secular discourse, but the recognition of the sacred narratives as motivation for environmental activism has offered important links between environmental ethics and the field of religion and ecology. Practitioners of both fields agree that the environmental crisis has an ethical dimension because it is humanly induced; humans have a moral obligation to address environmental degradation which they have brought about by overuse of natural resources, greed, and shortsightedness. Religion (however defined) frames the moral situation and offers environmental social action. The field of religion and ecology has generated a large body of literature that intersects with environmental ethics but is also independent of it. Several strategies have dominated the discourse of religion and ecology: the recovery of environmental wisdom from sacred texts believed to be divinely revealed or inspired, which instructs humans how to treat non-human creatures; a critique of religious traditions for generating harmful attitudes toward the natural world and a complementary reinterpretation of the tradition in light of the new environmental sensibility; a call for the replacement of traditional

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White's Challenge Anew," *The Christian Century* 102, no. 18, (1984): 530–33.

religious with another spiritual orientation (e.g., what Bron Taylor has called "dark green religion") that could better address the current ecological crisis.[72] In all of these strategies, the question "What ought I to do?" stands at the center of ethical reflections on environmental matters.

With a better understanding of the connection between environmental ethics and religion, we can now turn to examine Jewish environmental ethics. I begin my three lectures with a discussion of Jewish environmental ethics for three reasons. First, Judaism is a way of life, a praxis that concerns itself with particular situations, actions, and obligations in the world we experience through our bodies, rather than a set of beliefs or dogmas that we affirm in the head or the heart. Furthermore, by focusing on ethics, I want to signal the urgency of our situation. Although theology grounds Jewish ethics, to address the ecological crisis today is no longer a matter of articulating theology that takes nature into consideration or that sees the human as an integral part of nature. What we need today is not more hermeneutical creativity or theological sophistication, but a commitment to an environmentally sensible way of life that will save the natural environment from further destruction. The primacy of the ethical is thus dictated by the urgency and severity of the environmental crisis itself. Finally, the primacy of the ethical is the core insight of modern Jewish philosophy, exhibiting most clearly in the ideas of Hermann Cohen (d. 1918), Franz Rosenzweig (d. 1929), Martin Buber (d. 1965), and Emmanuel Levinas (d. 1992), who criticized the Western philosophical tradition for its obsession with universal, totalizing abstractions that ignore otherness and difference.

The Literary Sources of Jewish Environmental Ethics

The Jewish tradition answers the ethical question "How Should

72 Bron R. Taylor, *Dark Green Religion: Nature Spirituality and the Planetary Future* (Berkeley, Los Angeles: University of California Press, 2009).

I Live?" in great detail, but the answer is neither monolithic nor straightforward. It is, rather, multi-vocal, multivalent, and quite ambiguous, because Judaism has evolved over time and in response to changing historical conditions and continues to do so today. The tradition has generated numerous literary texts that reflect on and respond to practically every aspect of life, including the relationship of human beings to the natural world. These texts reflect the cultural situation of those who composed, edited, translated, or interpreted them as much as they reflect continuity of certain ideas, motifs, tropes, metaphors, and symbols. The literary sources of Judaism thus provide the resources for Jewish environmental ethics, but it is the interpreter who decides which sources to highlight and how to interpret them. To be a Jew, then, is first and foremost to stand within a textual tradition and engage it through the act of interpretation, which never yields a single authoritative reading. Even though there is no consensus on the meaning of the received texts, the modes of interpretation, or the end result of the interpretative process, it is the shared body of texts to which Jews refer that gives coherence and continuity to the tradition. No matter how a Jew defines himself or herself, the definition is framed by and must relate to these literary layers that constitute the content of Jewish culture.

What are the sources of Jewish environmental ethics? Needless to say, we must begin with the Bible, the foundational text of Judaism, although Judaism is much more than the Bible. Yet, the Bible is a very problematic text and a major source of ambiguity. As we noted in the Introduction, the Bible (and the Judeo-Christian tradition based on it) was accused as the very cause of the ecological crisis, because it commanded humanity to rule the Earth and have dominion over its inhabitants (Ge. 1:28). Lynn White Jr, the medieval historian who made the charge, intended it as a form of prophetic self-criticism that will generate self-examination. In that regard he was most successful, since the accusation that the Bible is the source of the human exploitation of nature has prompted Jews and Christians to examine the Bible anew in light of the ecological

crisis. Emerging as a response to White's accusation, Jewish environmentalism began as an apologetic defense of Judaism. I will have more to say about Jewish environmentalism in my third lecture, but for now let us recognize that the Bible serves as a major source of inspiration for contemporary Jews, whether they are religious or secular, whether they are Zionists who live in the Land of Israel or diaspora Jews whose Jewishness is not land-centered.

Making sense of the Bible, however, is by no means straightforward or simple. Is the Bible an "inconvenient text," as Norman Habel, who heads the Earth Bible Project called it,[73] or is the Bible a text that harbors deep ecological wisdom that has been either ignored or misinterpreted? The Bible is accused of creating the negative attitudes that brought about the environmental crisis, but is also seen as the source of the right values and proper action that could help address the environmental crisis.

As a Jewish intellectual historian, I have no trouble admitting that the Bible can be read in numerous and conflicting ways: the Bible is both an inconvenient text as well as an ecologically wise text; the Bible recognizes that the natural world does not belong to humans but to God, the Creator of the world, and the Bible is also the text that asserts human primacy over other creatures; the Bible is the text that commands humans to protect and conserve the world that belongs to God, but also the text that creates the major ethical conundrum, the gap between "is" and "ought." The Bible condemns the worship of nature and denies that nature is holy, but the Bible is also a text that "develops a pervasive theology of nature: it sanctifies certain aspects of the environmental and its

73 See Norman C. Habel, *An Inconvenient Text: Is a Green Reading of the Bible Possible*? (Adelaide: ATF Press, 2009). The Earth Bible series was launched in 2000, representing scholarship from Australia, South Africa, New Zealand, England, and America. The Earth Bible Project is currently associated with the Adelaide College of Divinity and Flinders University of South Australia and has generated several volumes published by Sheffield Academic Press. These texts have not made significant impact on Jewish environmental discourse.

characters are very concerned about environmental well-being";[74] the Bible is a text that reflects the specific physical conditions of the Land of Israel (its geography, topography, climate, flora, and fauna) as well as agricultural practices of ancient Israel, as much as it reflects the human desire to transcend nature so as to overcome the natural limits of birth and death.

In short, the Bible is an enigmatic, opaque, demanding text that can be read and has been read in numerous, diametrically opposed ways. In principle, all readings of the Bible are partial, incomplete, and inherently limited because they present only one possible, yet finite reading of an infinite text whose depth can never be fathomed or exhausted. Any given reading of the Bible, including the one I propose, is like a Rorschach test: it tells me more about the reader-interpreter than about the objective meaning or reality of the Bible.

If one is environmentally inclined, one can find numerous sources in the Bible to frame and justify an environmental sensibility and an environmental ethics; but that environmental sensibility cannot gloss over other texts in the Bible which stand in conflict with it. The biblical text, then, is a fertile soil that can support the growth of diverse vegetation, rather than one crop, but which crop one decides to cultivate depends on the grower. As an Israeli-born Jew, for me the Bible is exceedingly useful as a source of Jewish environmental ethics, because it is so attentive to the delicate conditions of the Land of Israel, whose geographical location makes it more vulnerable to desertification, the very conditions that we find ourselves in today.[75] When I spell out the environmental principles of the Bible, it will become clear why I believe that the biblical text can respond to contemporary

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74 Jeanne Kay, "Concepts of Nature in the Bible," *Environmental Ethics* 10, no. 4, (1988): 309–327, reprinted in *Judaism and Environmental Ethics: A Reader*, ed. Martin D. Yaffe (Lanham: Lexington University Press, 2001), 86–104.

75 My approach is indebted to Daniel Hillel, *The Natural History of the Bible: An Environmental Elaboration of the Hebrew Scriptures* (New York: Columbia University Press, 2005).

challenges, but an environmentally sensitive reading of the Bible cannot gloss over some environmentally problematic practices such as animal slaughter for the Temple sacrificial cult.

The admission that the Bible is inherently open to multiple readings entails that a strict literalist reading of the Bible is inherently antithetical to its rich complexity. I approach the Bible as an invitation for reading, an invitation to open the door of the interpretative process, but I maintain that it does not present us with one correct reading. This non-literalist approach to the biblical text was articulated already in antiquity by the rabbis who offered spiritual leadership to Jews after the destruction of the Second Temple and the end of Jewish political sovereignty in the Land of Israel in the year 70 CE.

The post-70 rabbinic movement created normative Judaism on the basis of its reading of the Bible, but the rabbinic approach to the natural world became inherently ambivalent. On the one hand, the rabbis elaborated biblical environmental legislation that protected the Earth and its inhabitants, but on the other hand, the rabbis created a scholastic culture that placed Torah study at the center of Jewish life and Jewish education. As teachers of Torah with circles of disciples, the rabbis launched an educational revolution in the ancient world by insisting that all (male) Jews receive formal education. The centrality of sacred text (the Written Torah) and of the process of interpretation (Oral Torah) created a textuality that ultimately distanced rabbinic Jews from interest in the natural world. Rabbinic texts—the Mishnah, Talmud, and Midrashim—are filled with information about farming and agriculture in the Land of Israel during the rabbinic period, but they also indicate the gradual decline of agriculture among Jews and the growing process of urbanization.

Like the Bible, rabbinic Judaism too is multi-vocal, and its attitude toward the natural world cannot be reduced to either the sociocultural context of the rabbinic movement or to one correct reading. In general, it is safe to say that rabbinic Judaism created a holistic way of life that is rooted in a paradox: nature is inherently

good, albeit neither perfect nor holy. It is only human intentional action in accordance with divine command that sanctifies the world, that is, makes the world holy. The sanctification of nature is paradoxical because it is human involvement through prayer, blessing, or other rituals that elevates the world "above" mere physical existence, or "nature." Thus on the one hand, to be an ideal rabbinic Jew one is called to transcend nature by virtue of observing divine commands. But on the other hand, the overwhelming focus on the act of studying sacred texts and the preoccupation with textuality brought about a certain distancing of Jews from the natural world. Precisely because the rabbis put in place a comprehensive religious way of life that governs all aspects of being Jewish, rabbinic culture itself removed rabbinic Jews from concern for and involvement in the natural world.

This paradoxical situation is most evident in the logic of blessing. Many natural activities (e.g., eating), natural objects (e.g., fruits and vegetables) and natural events (e.g., a rainbow or a rainstorm) are occasions for uttering a blessing. Uttering a blessing over a mere natural activity, object, or event transforms it into a holy phenomenon that transcends the natural realm. But by doing so, the rabbinic system of prescribed acts ultimately gives rise to "unnatural Jews," as Steven Schwarzschild has aptly put it.[76] In rabbinic Judaism, nature is sanctified by transforming what is to what should be. By means of symbolic rituals, rabbinic Judaism wishes to transport observant Jews beyond the natural, investing their lives with transcendent meaning.

Rabbinic Judaism was consolidated in the fourth and fifth centuries with the redaction of the Palestinian and Babylonian Talmuds, respectively. In the two centuries after the Muslim conquest of the Middle East in the seventh century, Jewish life was further transformed as Jews finally forsook agriculture and moved to commerce, trade, and finance. These sociocultural changes

76 Steven S. Schwarzschild, "The Unnatural Jew," *Environmental Ethics* 6 (1984): 347–62; reprinted in *Judaism and Environmental Ethics: A Reader*, 272–82.

exacerbated the removal of Jews from interest in the natural world. In the Middle Ages, Jews lived throughout the Islamic world as well as in Christian Europe, governing themselves by Jewish law, which was considered to be divinely revealed by both Islam and Christianity. With different theological justifications, Islam and Christianity gave Jews legal and religious autonomy, while at the same time insisting on the inferiority of Jews and of Judaism. During the Middle Ages, Judaism continued to develop in distinctive forms in the lands of Islam and in Christendom, giving rise to diverse Jewish subcultures.

In the lands of Islam, rabbinic Jews developed philosophy and its related sciences as the prism through which to read and interpret the biblical text. Medieval Jewish philosophers, chief among them Moses Maimonides (d. 1204), became fully conversant with Aristotle's philosophy of nature and held that Torah corresponds to nature. I will explicate the meaning of this claim in the second lecture, but here let me note that Jewish philosophers who studied the natural world were not interested in the observation or experience of physical nature, but in the understanding of laws of nature which are accessible to human reason. If Jewish Aristotelian philosophy developed and thrived in the lands of Islam, in Christian Europe we will find that Jewish mysticism, known as Kabbalah, flourished side by side with Aristotelian philosophy, and in the sixteenth century, Kabbalah would replace Jewish Aristotelianism. In the mystical tradition, the created world was understood to be a linguistic construct whose elemental units are the letters of the Hebrew alphabet. The one who knows the "grammar" of nature can control, manipulate, and even change the physical world.

The Bible, rabbinic texts, medieval philosophy, and Kabbalah are the primary sources of Jewish environmental ethics. All Jewish environmental activists *retrieve* these sources, *reinterpret* them, and *reconstruct* their meaning for the purpose of living by their wisdom. But this is not to say that Jewish environmental ethics can only be carried out in religious categories. In the modern period, when Jews became citizens in their country of residence, Judaism

was deeply challenged by the onslaught of modernity. If Jews are to be equal citizens, can they continue to abide by Jewish religious texts exclusively? Jews have given a variety of responses to this question, resulting in fragmentation and diversity of the modern Jewish experience. Those who sought integration, assimilation, and acculturation accepted non-Jewish sources (especially philosophy and science) as sources of ethical inspiration, and were ready to reinterpret the Jewish tradition and bring about many changes in Jewish ritual life. Integration into European culture required the modernization of Judaism, and the means for it was the very interpretative process of the Jewish tradition. The modern variants of Judaism—Reform, Conservative, Reconstructionist, and even Neo-Orthodox—reflect different interpretations of the tradition, and diverse willingness to admit that Judaism is part of a historical process. But there were also Jews who rejected integration and acculturation and resisted the process of modernization by insisting that Judaism should neither be changed nor conform to external cultural standards. Ironically, that response, which constructed the idea of unchanging tradition, a position we call Ultra-Orthodox, was itself a response to specific historical circumstances. Whether Judaism should change and how much to change have been hotly debated for the past 250 years, with no consensus in sight. Modern Judaism is a house divided.

The internal debate that marks modern Jewish existence became especially acute with the rise of Zionism, the Jewish national movement that called for the return of the Jews to the ancestral home after two millennia of exile. The Land of Israel was not just an ideal Promised Land about which the Jews dreamed and to which the Jews yearned to return but rather an actual geographical territory that Jews must settle, not only in order to escape centuries of persecution, but also in order to rebuild the physical condition of Jewish existence, individually and collectively. In the Land of Israel, the modern Jew will be able to develop a new, healthy life, rooted in the physicality of nature, a life free from fear, hatred, and persecution. The Zionist movement gave rise to the State of

Israel, where Jews are the majority of the population, but political sovereignty did not solve the dilemmas of Jewish existence. The debates about the meaning of Jewish life in the Jewish State are as passionate as ever, illustrating the inherent paradox of the Zionist project: Should the State of Israel be secular or religious? Should the laws of the state be grounded in Jewish religious law—Halakhah—or should they be strictly secular? How should the religious sources of Judaism function in the national culture of modern Israel? There is no consensus on these questions, but I suggest that when it comes to environmental matters, there is an interesting convergence between the religious and the secular.

The State of Israel has to respond to serious environmental challenges, and the legislation that is enacted is often inspired by Jewish religious law, even though the legislative process itself is inherently secular, governed by the rules and regulations of a modern democracy. Jewish environmentalism in Israel is a unique hybrid of secular and religious postures, a hybridity that characterizes what I will call the post-secular age. I will explore this point more fully in the third lecture. For now, let me note that Jewish environmentalism thrives both in Israel, where Jews have legislative power, and in the Diaspora, where Jews are a religious minority that can only advocate for certain environmental legislation. Jewish environmentalism today offers Jews of various levels of religious commitment and observance a way to be Jewish that relates to the environmental crisis by placing the ethics of responsibility at the center of one's worldview.

Jewish Normative Environmental Ethics

With a better understanding of the historical layering of Judaism and its evolving nature, we can now turn to discuss the main principles of Jewish environmental ethics. Our point of departure, as I have indicated, is the Bible, which frames Jewish environmental ethics in covenantal terms. That is to say: God has entered into an eternal Covenant with His Chosen People, the People of Israel. The

Covenant expresses the unbounded love of God to Israel, but this love comes with a set of commands to the People of Israel to behave in a specific manner toward the Land of Israel, the collateral of the Covenant. As normative ethics, Jewish environmental ethics is rooted in the biblical commands and exhibits a distinct fusion of law and theology. Put differently, in Jewish normative ethics, the right thing to do is couched as divine command that has the power of law.

The Land of Israel: The Conditionality of the Covenant

The Bible contains extensive legislation about the Land of Israel, the Land which God promised the People of Israel. The various land-based commandments in the Bible express the belief that "God is the rightful Owner of the Land of Israel and the source of its fertility; the Israelites working the land are but God's tenant-farmers who are obligated to return the first portion of the land's yield to its rightful owner in order to insure the land's continuing fertility and the farmer's sustenance and prosperity."[77] Accordingly, the first sheaf of the barley harvest, the first fruit of produce, and two loaves of bread made from the new grain are to be consecrated to God. The various agricultural laws of the Bible make clear that the land has to be cultivated in a particular way legislated by God and that the ultimate proprietor of the Land is God.

The notion that the Land is the Lord's raises a vexing question: Does the Bible teach that the Land of Israel is intrinsically holy, or does the Land become holy as a result of Israel's acts of sanctification? What is the relationship between the intrinsic quality of the land and human deeds? Some Jewish environmentalists have highlighted the intrinsic sanctity of the Land of Israel in an attempt

77 Richard Sarason, "The Significance of the Land of Israel in the Mishnah," in *The Land of Israel: Jewish Perspectives*, ed. Lawrence A. Hoffman (Notre Dame: University of Notre Dame Press), 144. For a modern reworking of this biblical view, see Samuel Belkin, "Man as Temporary Tenant," in *Judaism and Human Rights*, ed. Milton R. Konvitz (New York: Norton, 1972), 251–258.

to anchor Jewish environmentalism in the Bible.[78] However, biblical scholarship casts doubt on this notion. Moshe Weinfeld notes that while the Land of Israel was undoubtedly described as a good land, the notion that it is a Holy Land appeared only in the Second Temple period, first in the writings of Hellenistic Jewish authors such as Philo, *II Maccabees*, *Wisdom of Solomon*, the *Testament of Job*, *II Baruch*, and the *Sibylline Oracles*.[79] These Judeo-Hellenistic authors also transformed the notion of Promised Land either by extending it to the entire world, as does Josephus, or by spiritualizing it entirely, as does Philo, when he equates "land" with "wisdom." The rabbis would continue in this vein by associating the inheritance of the land with an eschatological future, linking having a portion of the land with having a portion in the world-to-come.

The centrality of the Land of Israel in biblical self-understanding is well-attested. In fact, no other nation in antiquity or perhaps in human history was so preoccupied with the significance of the land. The Patriarchal narratives in Genesis all revolve around the promise of the land; the narrative of Exodus and the wilderness years are a preparation to enter the Promised Land; the conquest is depicted in the Book of Joshua as a struggle with the Canaanites, the inhabitants of the land, who did not deserve it, and the settlement of Israel, to whom God gave the Land as a gift in their stead; and the period of the Judges and the monarchy are depicted as a diminution of the boundaries of the Promised Land due to Israel's sinful conduct; gradually, the land was taken away from Israel because they did not merit it. Exile was the appropriate punishment for Israel's sins.

In the Bible, the Land of Israel was promised first to Abraham and later to David as part of the Covenant with God. Weinfeld explains that in the Bible, the word "Covenant" (*berit*) actually

78 For example, Bradley Shavit Artson, "Our Covenant with Stones: A Jewish Ecology of Earth," in *Judaism and Environmental Ethics*, ed. Yaffe, 161–171, esp. 168.

79 See Moshe Weinfeld "Inheritance of the Land—Privilege Versus Obligation: The Concept of 'The Promise of the Land' in the Sources of the First and Second Temple Periods" (in Hebrew) *Zion* 49 (1984): 127, note 51.

applies to two kinds of arrangements: one is a political treaty and the other is a grant. The Sinaitic Covenant belongs to the first type, whereas the Covenants with Abraham and with David illustrate the second type. "The structure of the covenantal arrangements is the same: a historical introduction, border delineations, stipulations, witnesses, blessings, and curses."[80] The biblical language echoes Near Eastern royal grants in which the suzerain, in this case, God, gives a vassal, in this case, Israel, a royal grant. Whereas in the "grant" the curse is directed toward anyone who violates the rights of the king's vassal, in the treaty the curse is directed toward the vassal who violates the rights of his king. In other words, the "grant" serves mainly to protect the rights of the servant, while the treaty protects the rights of the master. In addition, while the grant is a reward for loyalty and good deeds already performed, the treaty is an inducement to future loyalty.

The Land of Israel was promised to Abraham and to David as a gift bestowed upon an individual who excelled in loyally serving the masters. Abraham was promised the land because he obeyed God and followed his mandate (Gen. 26:5; Cf. 22: 16 and18), and David was given the grace of dynasty because he served God with truth, righteousness, and loyalty (I Kings 3:6; cf. 9:4; 11:4, 6; 14:8; 15:3). The gift came as a reward for their goodness and kindness and is promised to their descendants (Deut: 7:9): "Know, therefore, that . . . your God . . . keeps his gracious covenant to the thousandth generation of those who love him and keep his commandments." God's promises to Abraham and David and their descendants were motivated by loyal service and parallel the royal covenantal grants of the Hittites and Assyrians.

The promise of the land to Abraham is preceded by the promise of progeny (Gen 15: 4–5), and the kindness of God to David is likewise extended to the future generations (II Sam. 7:15; 22:51; I Kings 3:6 and 8:23). However, after the Fall of the northern

80 Moshe Weinfeld, "The Covenantal Aspect of the Promise of the Land to Israel," in his *Normative and Sectarian Judaism in the Second Temple Period* (London, New York: T&T Clark International, 2005), 201.

Kingdom of Israel in 722 BCE, it was necessary to reinterpret the belief that God's grant was eternal. As a result of the political failure, the belief in the Promised Land was reinterpreted to mean that the gift was conditional upon the observance of the Sinaitic Covenant. The Covenant is eternal *only if* Israel keeps its loyalty to the Sinaitic law. The non-observance of the Covenant will certainly bring punishment (Exodus 33:33; 34:12), but no annihilation. The Priestly stratum of the Bible and the Book of Deuteronomy highlight the conditional aspect of the Covenantal relation, but all biblical layers share the belief that Israel would lose the land if it undermines its moral-religious uniqueness, namely if it undermines the Covenant. Israel's sinful conduct would bring about the desolation of the land and ultimately the exile of the people from the land.

Put differently, contrary to the claims of some Jewish environmentalists, the Bible does not posit the intrinsic holiness or sanctity of the Land of Israel. Given as a grant to Israel by God, the Bible insists on the causal relationship between the performance of the commandments and the fertility of the land. Rabbinic literature, as we shall see below, would further limit the notion of the land's holiness, viewing the land as a means to an end and not the end, while extending the list of sins on account of which Jerusalem was destroyed. To reside in the Land of Israel, the People of Israel had to be morally and religiously worthy, or else the land would be taken away from them. We can now turn to specific biblical laws that illustrate the causal connection between the conduct of the People of Israel and the physical well-being of the Land of Israel. Although it is very doubtful that the original intent of the law was ecological, the laws respond to the specific environment of the Land of Israel and manifest deep ecological wisdom. We will consider biblical legislation about animals, vegetation, and the soil.

Animals: Clean and Unclean

The Bible allows for killing of animals only for human consumption and severely limits its scope. First, there are relatively few animals

fit for human consumption. Second, of those permitted to be eaten, not just anyone can kill, but only those who qualify by their skill and piety. Third, the animals that are ritually slaughtered are only fit for consumption after their blood is drained (Lev. 17: 14b); humans have a right to nourishment but not to life, and blood is the symbol of life. What is the purpose of such restrictions? Jacob Milgrom offers a cogent explanation when he claims that the intention of biblical dietary law is to "make yourselves holy . . . that you be holy . . . for I am holy" (Lev. 11:44). What does holiness mean? Like Weinfeld, Milgrom specifies that "holiness is not innate. The source of holiness is assigned to God alone. Holiness is the extension of his nature; it is the agency of his will."[81] For Israel, the holy is the extension of God's Will, and the commandment "to be holy as I, your God, am holy" sets up an ideal worthy of emulation. The Bible is aware that the ideal can never be fully actualized, but it is the life in pursuit of the ideal of holiness that sets Israel apart from its idolatrous neighbors. To aspire to be holy entails a life in pursuit of godliness.

God demands of Israel to become a holy people, and the demand for holiness frames the ritual commandments of Leviticus 19. This demand occurs with greater frequency and emphasis in the food prohibitions than in any other commandment. By virtue of these prescriptions, Israel is separated from its idolatrous neighbors. Many of the specific details of the dietary system can be explained against the background of prevailing practices in Canaan. The prohibition on "seething a kid in its mother's milk" (Ex. 23:19; 34:26; Deut. 14: 21), which is the basis for an elaborate system of ritual separation of milk and meat products in rabbinic Judaism, was most likely meant to separate Israel from their Canaanite neighbors, whose ritual involved precisely such practice. The rabbis, as we shall see later, explained it as an attempt to prevent cruelty in humans (Deuteronomy Rabbah 6:1). While Scripture

81 Jacob Milgrom, "The Biblical Diet Laws as an Ethical System," in his *Studies in Cultic Theology and Terminology* (Leiden: E.J. Brill, 1983), 109.

does not forbid slaughtering animals for consumption or sacrifice or using eggs for human need, it curtails excess cruelty. Kindness to animals is a virtue of the righteous man associated with the promise of heavenly rewards (Pr. 12:10).

Placing limits on human consumption of animals and regulating all food sources is a major concern of the Bible and its holiness code. The laws of Lev. 11; Deut. 14:1–20 are part of an "elaborate system of purity and impurity affecting the sanctuary and the priesthood as well as the lives of individual Israelites."[82] In general, the Torah prohibits eating the meat of certain living creatures that are classified as impure or unclean, ingesting the blood of any animals, consuming animal fat (*helev*), and eating the carcass (*nevelah*) of dead animals and fowls. More particularly, the Bible spells out which animals are permitted and which are forbidden for human consumption. The differentiation between "clean" and "unclean" animals, which is the core of the Jewish dietary laws (*kashrut)*, has generated a lot of discussion about their internal logic.[83] Some scholars explained that the unclean animals were viewed as a threat to life, whereas others suggested that forbidden animals were those regarded as deities in neighboring cultures.[84] Still others considered the means of locomotion as the crucial classification principle.[85] But

82 Baruch A. Levine, *The JPS Torah Commentary: Leviticus* (Philadelphia: The Jewish Publication Society, 1989), 243.

83 For a detailed discussion of the distinction between the lists in Leviticus and in Deuteronomy and consideration of the cultic, hygienic, ethical, and anthropological explanations of these distinctions, consult David Bryan, *Cosmos, Chaos and the Kosher Mentality*, Journal for the Study of the Pseudepigrapha Supplement Series 12 (Sheffield: Sheffield Academic Press, 1995), 130–35.

84 See Aloys Hüttermann, *The Ecological Message of the Torah: Knowledge, Concepts, and Laws Which Made Survival in a Land of "Milk and Honey" Possible* (Atlanta: Scholars Press, 1999), 82.

85 Mary Douglas, *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (London: Routledge & Kegan Paul, 1966) offered an anthropological, Structuralist analysis of the dietary laws that has been accepted by many other scholars of Judaism. For example consult Leon Kass, "Sanctified Eating," in *Judaism and Environmental Ethics*, 384–409.

it is also possible to explain the prohibition on consuming certain animals as ecologically motivated.[86]

The Bible permits the husbandry and consumption of ruminants, namely, animals which were able to make the most efficient use of vegetation. Other animals (the horse, mule, and camel), which were domesticated, could be kept by farmers for transportation and work on the field, but not for consumption. The cow was used for work, milk, and meat, and the sheep and goat for milk and meat only. Water-dwelling animals that could be eaten must have fins and scales (i.e., fish); frogs, toads, and newts were not to be eaten, perhaps because the authors of the Bible were aware that they are beneficial to ecosystems and cut down on the mosquito population. Lobsters, oysters, and mussels are also forbidden, most likely because the coast of Palestine is not suited for them. All birds of prey, including owls, were forbidden for human consumption, as well as all storks, ibises, and herons, and species of bats. Once we realize that many of the forbidden species were actually common in the Land of Israel, it is possible to look at these prohibitions as extended protection of birds that are important to "maintaining the ecological equilibrium and serve as the most efficient biocontrol agents of species."[87]

Deut. 22:6–7 attests to concern for the perpetuation of non-human animal life. Upon finding a nest on the ground or in a tree with young ones or eggs in it and "the mother sitting upon the young or upon the eggs, you shall not take the mother with the young; you shall let the mother go, but the young you may take to yourself, that it may go well with you and that you may live long." By saving the mother, the law enables the species to continue to reproduce itself and avoid potential extinction. The rabbis further elaborated this law, specifying that the person who finds the nest is only allowed to take the nestlings if they are not fledged.[88]

86 This is the gist of Aloys Hüttermann, *Ecological Message,* 71 ff.

87 Hüttermann, *Ecological Message,* 76.

88 The relevant rabbinic sources are *Deuteronomy Rabba* (VI, 5) and in the Babylonian Talmud (Hulin 138b-142a) and in *Sifre Deuteronomy* (# 227).

Although the Bible and the rabbinic tradition place the responsibility for management of God's creation in human hands, the tradition also recognizes the well-being of non-human species: humans should take care of other species and be sensitive to the needs of animals.[89] Cruelty toward animals is prohibited, because it leads to other forms of cruelty.[90] The ideal is to create a sensibility of love and kindness toward animals in order to emulate God's attribute of Mercy and fulfill the commandment "to be Holy as I the Lord am Holy" (Lev. 19:2). Thus Deut. 22:6 forbids the killing of a bird with her young, because it is exceptionally cruel and because it can affect the perpetuation of the species. This commandment is one of seven commandments given to the Sons of Noah and is therefore binding on all human beings, not just upon Jews. In Deut. 22:10, Scripture prohibits yoking an ass and an ox together, because their uneven size could cause unnecessary suffering.

Merciful treatment of animals is but one way through which Israel is separated from the surrounding pagan culture and becomes a holy nation. Most tellingly, Scripture forbids cutting off a limb from a living creature (*ever min ha-hai*), even to feed it to the dogs and even in the case of animals that are not to be eaten at all, because they are unclean. The tradition prescribes particular modes of slaughter that are swift, because they are performed with a sharp, clean blade. In Hasidism, this principle was combined with the belief in the transmigration of souls into non-human bodies and the development of very elaborate slaughtering practices designed to protect the human soul that may have transmigrated into the body of the animal about to be slaughtered.[91] The concern

89 For a comprehensive analysis, consult Noah J. Cohen, *Tza'ar Ba'ale Hayim: The Prevention of Cruelty to Animals, Its Bases, Development and Legislation in Hebrew Literature*, 2nd ed. (New York: Feldheim Publishers, 1976).

90 For further discussion for this principle, see Lenn Evan Goodman, "Respect for Nature in the Jewish Tradition," in Tirosh-Samuelson, ed., *Judaism and Ecology*, 227–260. The paragraph is based on his discussion in 245–252.

91 Hasidic slaughtering was a major contributing factor to the split between Hasidism and their opponents (Mitnagedim). For general overviews, see Samuel Dresner, "Hasidism and Its Opponents," in *Great Schisms in Jewish*

for unnecessary suffering of animals is applied today to the farming of animals for human consumption and to the use of animals in scientific experimentation.[92]

Vegetation: Protection, Separation, and the Production of Holy Food

The linkage between holiness and separation applies to biblical laws concerning vegetation. The Bible recognizes the diversity of species (literally, "kinds") in the natural world (Gen. 1:31), even though it lacks the philosophical analysis of the concept of species that one finds in Greek philosophy of nature, especially in Aristotle and his school. The concern for protection of diversification is expressed in biblical legislation such as Lev. 19:19: "You shall not let your cattle breed with a different kind; you shall not sow your field with two kinds of seeds (repeated also in Deut. 22: 9–11). The Bible prohibits mixing of different species of plants, fruit trees, fish, birds, and land animals, and the prohibition is clarified and further elaborated in Mishnah, Tractate Kil'ayyim, and in the Palestinian Talmud on that tractate.[93] While rabbinic rulings about the main grains of the Land of Israel—wheat, rye grass, barley, oats, and spelt—and about other species of vegetation does not indicate that the rabbis understood the principles of genetic engineering, it does suggest that they were keen observers of the natural world and that they had respect for diversification in nature.

Of the various flora of the Land of Israel, the Bible pays special attention to trees.[94] Leviticus 19:23 commands that during the first

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History, ed. Raphael Jospe and Stanley Wagner (New York; Ktav, 1981), 118–76.

92 See J. David Bleich, "Judaism and Animal Experimentation," in *Judaism and Environmental Ethics*, ed. Yaffe, 333–370.

93 See Hüttermann, *Ecological Message*, 55–68.

94 See Yosef Orr and Yossi Spanier, "Traditional Jewish Attitudes towards Plant and Animal Conservation," in *Judaism and Ecology,* Aubrey Rose, ed., (London: Cassell Publishing, 1992), 54–60. The major protection of trees, especially fruit bearing trees, is discussed under the principle of "do not destroy" (*bal tashchit*) below.

three years of growth, the fruits of newly planted trees or vineyards are not to be eaten (*orlah*), because they are considered to be God's property. When Israel conducts itself according to the laws of the Torah, the land is abundant and fertile, benefiting its inhabitants with the basic necessities of human life—grain, oil, and wine, but when Israel sins, the blessedness of the land declines and it becomes desolate and inhospitable (Deut. 11: 6–11).[95] When the alienation from God becomes egregious and injustice overtakes God's People, God removes them from the Holy Land. Thus the well-being of God's land and the moral quality of the people who live on the land are causally linked, and both depend on obeying God's Will.

Protection of fruit-bearing trees in wartime is another important biblical legislation of nature. In war, fruit-bearing trees must not be chopped down while a city is under siege (Deut. 20:19). This commandment is undoubtedly anthropocentric, but it indicates that the Torah recognizes the interdependence between humans and trees, on the one hand, and the capacity of humans to destroy natural things, on the other hand. To ensure the continued fertility of the land, scriptural law curbs human destructive tendencies. In the Talmud and later rabbinic sources, the biblical injunction of "Do Not Destroy" was extended to cover all destruction, complete or incomplete, direct or indirect, of all objects of potential benefit to humans. A sweeping series of environmental regulations is legitimized by appealing to the principle of "Do Not Destroy": the prohibition on cutting off water supplies to trees, overgrazing the countryside, unjustified killing of animals or feeding them harmful foods, hunting animals for sport, species extinction and the destruction of cultivated plant varieties, polluting air

95 This biblical text is part of the *Shema*, the affirmation of the Jewish faith in every public prayer service. However, Jewish Reform rabbis and theologians found this passage most problematic because it does not conform with modern science and took it out of the liturgy. There is now a realization among some Reform rabbis that perhaps this was a mistake and that the deep insight of the biblical text should be retained. Tanhum Yore, *Waste Not!: A Jewish Environmental Ethics* (Albany NY: SUNY Press, 2019).

and water, over-consuming anything, and wasting mineral and other resources.[96] These environmental regulations indicate that the Jewish legal tradition requires that one carefully weigh the ramifications of all actions and behavior for every interaction with the natural world; it also sets priorities and weighs conflicting interests and permanent modification of the environment.

This concern intimates a notion of sustained use of resources and could provide Jewish support for the concept of sustainability. This led the rabbis to prohibit raising sheep and goats that graze, even though the rabbis were aware that these animals generated a very profitable business in the Roman Empire (BT Hulin 58b). The ban was imposed after the devastation of the Judea in the Bar Kokhba revolt (132–135 CE) in order to enable the land to heal from the devastation of the war; thus short-term hardship was traded for long-term gains. This kind of environmental legislation was legitimated by appeal to the holiness of the Land, but it also indicates attention to the particular physical conditions.[97]

Soil: Social Justice and Ecological Well-Being

The most distinctive feature of biblical environmental legislation is the causal connection between the moral quality of human life and the vitality of God's creation. The corruption of society is closely linked to the corruption of nature. In both cases, the injustice arises from human greed and the failure of human beings to protect the original order of creation. From the Jewish perspective, the just allocation of nature's resources is indeed a religious issue of the

96 For explication of this ruling in its development in Judaism, consult Eilon Schwartz, "Bal Tashchit: A Jewish Environmental Precept," in *Judaism and Environmental Ethics*, ed. Yaffe, 230–249.

97 As noted above, the intrinsic holiness of the Land of Israel was highlighted by the rabbis precisely because of the political defeat of Judea by Rome. Contrary to those who highlight the intrinsic holiness of the land (and by extension of "nature"), I suggest that it is only human deeds that sanctify nature. This view is in accord with the position of Michael Wyschogrod, "Judaism and the Sanctification of Nature," in *Judaism and Environmental Ethics*, ed. Yaffe, 289–296, esp. 294.

highest order. The treatment of the marginal in society—the poor, the hungry, the widow, the orphan—must follow the principles of scriptural legislation. Thus, parts of the land's produce—the corner of the field (*peah*), the gleanings of stalks (*leqet*), the forgotten sheaf (*shikhekhah*), the separated fruits (*peret*), and the defective clusters (*olelot*)—are to be given to those who do not own land. By observing the particular commandments, the soil itself becomes holy, and the person who obeys these commandments ensures the religio-moral purity necessary for residence in God's land. A failure to treat other members of society justly, so as to protest the sanctity of their lives, is integrally tied to acts extended toward the land. This aspect of Jewish ecological ethics, which is characteristic of Deuteronomic legislation, is the foundation of the concept "Eco-Kosher" that was coined by Zalman Schachter-Shalomi and popularized by Arthur Waskow.[98] I will explore this notion more fully in the third lecture.

The connection between land management, ritual, and social justice is most evident in the laws regulating the Sabbatical Year (*shemittah*). The Sabbatical Year is an extension of the laws of the Sabbath to the Earth.[99] On the Sabbath, humans create nothing, destroy nothing, and enjoy the Earth's bounty. Since God rested on the seventh day, the Sabbath is viewed as the completion of the

98 See Arthur Wascow, "What is Eco-Kosher," in *This Sacred Earth: Religion, Nature and Environment,* ed. Roger S. Gottlieb (New York and London: Routledge, 1996), 297–302.

99 On the Sabbatical Year, see Gerald Blidstein, "Man and Nature in the Sabbatical Year," *Judaism and Environmental Ethics*, 136–142; Shlomo Riskin, "Shemitta: A Sabbatical for the Land: 'The Land Shall Rest and the People Shall Grow,'" in *Judaism and Ecology*, ed. Aubrey Rose (London: Cassell, 1992), 70–73. The Sabbatical Year could not be observed while the Jews were in exile, since it is a land-based commandment, but its observance was renewed in the modern State of Israel. See Benjamin Bak, "The Sabbatical Year in Modern Israel," *Tradition* 1, no. 2 (1959):193–199. For contemporary reflections on the relevance of this biblical legislation, see Arthur Waskow, "From Compassion to Jubilee," *Tikkun* 5, no. 2 (1990): 78–81; Eric Rosenblum, "Is Gaia Jewish? Finding a Framework for Radical Ecology in Traditional Judaism," in *Judaism and Environmental Ethics*, ed., Yaffe, 183–205.

act of creation, a celebration of human tenancy and stewardship. Sabbath teaches that humans stand not only in relation to nature but in relation to the Creator of nature. Most instructively, domestic animals are included in the Sabbath rest (Deut. 5:13–14). There are specific cases in which it is permissible to violate the laws of the Sabbath in order to help animals in distress. Thus one must alleviate the suffering of an animal that has fallen into a cistern or ditch on the Sabbath, bring food, or provide pillows and blankets to help it climb free. The normal restrictions against such labors on the Sabbath are waived. Cattle must be milked and geese fed, lest the buildup of milk in the one case or hunger in the other cause suffering to a living being (Maimonides, *Code* 87:9). The observance of the Sabbath is a constant reminder of the deepest ethical and religious values that enable Jews to stand in a proper relationship with God.

During the Sabbatical Year, it is forbidden to plant, cultivate, or harvest grain, fruit, or vegetables, or even to plant in the sixth year in order to harvest during the seventh year. Crops that grow untended are not to be harvested by the landlord but are to be left ownerless (*hefqer*) for all to share, including poor people and animals. The rest imposed during the Sabbatical Year facilitates the restoration of nutrients and the improvement of the soil, promotes diversity in plant life, and helps to maintain vigorous cultivars. In the seventh year, debts contracted by fellow countrymen are to be remitted (Lev. 25–23; Deut. 15:3), providing temporary relief from these obligations. In the Jubilee year, all Hebrew slaves, regardless of when they were acquired, are to be freed (Lev. 25:39–41), in order to teach that slavery is not a natural state. Baruch Levine explains that "the practice of allowing arable land to lie fallow periodically was a necessary aspect of ancient agriculture, especially where extensive irrigation was utilized. It served to reduce the quantity of alkalines, sodium, and calcium, deposited in the soil by irrigation waters."[100] The laws of the Sabbatical Year were practically reversed

100 Baruch Levine, *The JPS Torah Commentary: Leviticus* (Philadelphia: Jewish

in the rabbinic period, when a written document (*prozbul*) assigned the debt to the court prior to the Sabbatical Year with the intention of collecting the debt at a later time, but the biblical laws of the Sabbatical Year continue to inform Judaic consciousness. Today Jewish environmentalists, especially in Israel, are reviving the Sabbatical Year as a model for their activities.[101]

The Sabbath, the Sabbatical Year, and the Jubilee were not the only moments when the sanctification of time and the sanctification of space coalesced. Ancient Israel was an agrarian society that lived in accord with the cycle of seasons and celebrated the completion of each harvest cycle by dedicating the Earth's produce to God. There were three annual pilgrimage festivals (*hag*) in the earliest laws of the Torah, preserved in Exodus 23:15. According to the early law, God may be worshipped at any properly constructed altar at which the worship is conducted in the correct manner, and such cultic-centered altars proliferated throughout the Land of Israel. The Deuteronomic reforms instituted by King Josiah in the early seventh century changed the way Israelites celebrated the festivals as well as their ascribed meaning.[102] The details of the changes need not concern us now; we should only note that the annual pilgrimages were linked to the seasonal cycle and a particular agricultural activity.

The festival of "unleavened bread" (*matzot*) began on the New Moon of the month just preceding the hardening of the barley (Nisan-April). It lasted seven days, and on the seventh day the

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Publication Society, 1989), 272.

101 On the centrality of the *Shemittah* in the contemporary Jewish environmental movement, see David Krantz, "Shmita Revolution: The Reclamation and Reinvention of the Sabbatical Year," *Religions* 7, no. 8 (2016): 1–31.

102 The Deuteronomic centralization of the cult in the Jerusalem Temple made it difficult for farmers to leave the fields for a pilgrimage to Jerusalem. There might be some connection between this fact and the Deuteronomic emphasis on moral integrity of the Israelites and the fecundity of the land. For detailed discussion of the Deuteronomic reform concerning the celebration of the festivals, see Bernard Levinson, *Deuteronomy and the Hermeneutics of Legal Innovation* (Oxford: Oxford University Press, 1997).

pilgrimage took place. A sacrifice was to be offered outside one's home on the eve of the first day of the festival. *Matzot* were to be eaten and leaven avoided for all seven days. The barley harvest festival (*katzir*) occurred when reaping started, at the beginning of the month of reaping, (about Iyyar-May) and the pilgrimage lasted one day. The festival of ingathering (*asif*) occurred on the full moon of the former two-month season of the month of ingathering (Tishrei-September). The pilgrimage lasted one day. However, after the centralization of the cult in the Jerusalem Temple, leaving the fields became virtually impossible; the spring harvest festival was necessarily postponed by counting seven weeks from "when the sickle is first put to the standing grain" (Deut. 16:9) and then the pilgrimage festival was celebrated—at a time when absence from the field was possible. The Festival of Weeks (Shavuot) was celebrated when loaves of leavened bread, made of semolina wheat flour (*solet*), were delivered to the sanctuary and there offered to God along with the first harvest (*bikkurim*). The rabbis would historicize the festival by associating it with the giving of the Torah at Sinai.

Similarly, the Deuteronomic reforms changed the Festival of Ingathering to the Festival of Booths (*hag ha-sukkot*). No longer celebrated when produce was first brought in from the field, it was delayed until after the produce had been processed on the threshing floor and the vat. Once the spring harvest festival had been postponed for practical reasons, it became necessary to postpone the autumn pilgrimage as well. The festival was extended to seven days to be celebrated in the religious capital, and it became necessary to provide temporary housing for pilgrims in and around the city. Huts (booths) were erected for this purpose. This festival too was historicized by being associated with the redemption of Israel from Egypt. In Leviticus 23:42, Israel was commanded to dwell in booths for seven days so "that your generations may know that I made the people of Israel dwell in booths when I brought them out of the land of Egypt." Removed from the protection of their regular dwelling, the temporary booth compelled the

Israelites to experience the power of God in nature more directly and become even more grateful to God's power of Deliverance. In addition to dwelling in a *sukkah*, the Israelites were commanded "to take the fruit of the goodly tree, palm branches, foliage of leafy trees, and willows of the brook and you shall rejoice before your God for seven days" (Lev. 23:40). In this manner, nature became a means for Israel's fulfillment of the commandments to rejoice before God. This festival would undergo extensive reinterpretation in the rabbinic period, after the destruction of the Second Temple, when the ritual of this pilgrimage festival could no longer be carried out in the Temple.

In short, elaborate biblical legislation regulated how Israel is to treat the natural world. When Israel conducts itself according to the laws of the Torah, the land is abundant and fertile, benefiting its inhabitants with the basic necessities of human life—grain, oil, and wine, but when Israel sins, the blessedness of the land declines, and it becomes desolate and inhospitable (Lev. 26:32; Deut. 11:13–21). When the alienation from God becomes egregious and injustice overtakes God's People, God removes them from the Land of Israel. The flourishing of the Land and the quality of the People's life, then, are causally linked, and both depend on obeying God's Will. To live on God's land requires the residents to be holy by observing ritual and moral prescriptions. Only those who live by God's Will can properly enjoy the bounty and beauty of God's Earth.

To sum up this section, I can say that all of these principles feature prominently in contemporary Jewish environmental discourse, generating the reinterpretation of biblical texts so as to show that the Bible and the rabbinic tradition based on it can respond intelligently to the ecological crisis. In fact, a few Jewish environmentalists have argued that concern for the environment is inherent in Judaism, or that environmentalism is inherently Jewish. That simplistic claim glosses over some internal tensions that will become clearer in my second lecture, but I am ready to say that Jewish normative ethics can generate secular environmental legislation to protect land, vegetation, and animals. For example,

the Jewish value of preventing animal suffering (*Tza'ar Ba'aley Hayyim*) inspired the legislation on Protection of Animals (1994), and the laws of Shemittah are observed today by many religious kibbutzim. This extensive legislation illustrates the claim that in Judaism, there is no gap between law and ethics and between theory and praxis.

Jewish Meta-Ethics: Theorizing the Ethics of Responsibility

Jewish normative ethics clearly shows profound concern for the well-being of the created world, and its ethics of responsibility supports conservation and preservation policies. But can the Jewish ethics of responsibility be relevant to non-observant or secular Jews? Can the Jewish religious ethics of responsibility be relevant to non-Jews who do not frame their worldview in the context of the Jewish religious narrative? Did Jews theorize responsibility without justifying it by appeal to divinely revealed Scriptures? These questions can be answered positively by looking at the work of three influential Jewish philosophers: Martin Buber (d. 1965), Hans Jonas (d. 1993), and Emmanuel Levinas (d. 1995), who argued for the ethics of responsibility without appealing to the normative power of divine revelation. They did so as both committed Jews and as well-trained philosophers, although two of them—Jonas and Levinas—did not want to be known as "Jewish philosophers." These philosophers illustrate the complexity of modern Jewish existence.

I want to introduce you to these Jewish thinkers who reflected deeply about human responsibility toward nature. I want us to think about these three thinkers together because they have a lot in common: all three were trained in German universities, and their ethical theories developed through response to Western philosophy, especially Kantian philosophy.[103] In a nutshell: Buber recognized

103 The overwhelming impact of Kant on modern Jewish philosophy is explained by the fact that first, Kant's philosophy dominated German universities precisely at the time that Jews started to enter universities after centuries of exclusion and second, Kant's Deontology was in full accord with the

natural entities as persons with whom one has a dialogical encounter, Jonas articulated the ontological basis of the imperative of responsibility, and Levinas extended to nature the status of the Absolute Other to which we are always already responsible. All three philosophers developed their ideas in conversation with Kantian ethics, especially the so-called "Formula of Humanity" of Kant's Categorical Imperative, but their relational or dialogical philosophy was also a critique of Kantian ethics.

Let me say a few words about Kant's relevance to environmental thought.[104] Kant's Categorical Imperative states that we should treat every human being as "an end in itself" and never as a means to another person's ends. Kant drew a sharp distinction between the moral status of human beings and all other non-humans: only human beings are "persons," whereas all others are mere "things," because human beings are the only animals that are rational, autonomous (i.e., self-legislating), and free. For Kant, although animals are endowed with sensation and choice, they are "non-rational," that is to say, animals are incapable of rational cognition and they lack a free moral will. By virtue of their distinctive rationality, only human beings act in accordance with the universal moral law and only humans should be treated as ends-in-themselves rather than as means to an end. Therefore, human beings possess dignity that is absent in other animals or non-sentient beings. In Kant's ethics, there is a deep connection between dignity and moral obligation:

Jewish legal tradition's focus on duties. Jews who sought integration into European society and culture could render their religious belief into Kantian philosophical language. See Paul W. Frank, "Jewish Philosophy after Kant: The Legacy of Salomon Maimon," in *The Cambridge Companion to Modern Jewish Philosophy*, ed. Michael L. Morgan and Peter Eli Gordon (Cambridge: Cambridge University Press, 2012), 53–79.

104 Marc Lucht, "Does Kant Have Anything to Teach Us about Environmental Ethics?," *The American Journal of Economics and Sociology* 66, no. 1 (2007): 127–150; Matthew C. Altmann, "Kant's Strategic Importance for Environmental Ethics, in his *Kant and Applied Ethics: The Uses and Limits of Kant's Practical Philosophy* (Malden, Oxford: Wiley-Blackwell, 2011), chapter 2.

only beings with dignity can be obligated or obligate others, and only beings that fall under the rational universal moral law can be considered as persons. Given this fundamental disparity between human and non-human animals, humans do *not* have *direct* moral duties toward animals and cannot treat animals as persons. Humans have a moral right to use animals (and nature more generally) for their own benefit, but humans have an *indirect* moral duty to prevent "violent and cruel treatment of animals." Kant allows for the killing of animals, although he concedes that it should be quick and without pain, and he agreed that animals ought not to be harmed without reason (not unlike the Jewish position). But even the indirect duties to animals are ultimately human-centered, since they flow from "the human being's duty to himself as an animal being" (Metaphysics of Morals 6:421). Animals, in short, are mere "means to an end. The end is man." Whether Kantian philosophy can sustain environmental ethics or whether Kant was deeply mistaken in his views of animals has been long debated,[105] but there is no doubt that Kant's Categorical Imperative influenced many environmental ethicists who argued for respect for nature.[106]

Martin Buber: Nature as a Moral Subject

How did Jewish philosophers in the twentieth century relate to Kantian philosophy? Let's start with Buber. Kantian philosophy reverberates in Buber's philosophy, although he moved beyond Kant to accord moral status to nature. Buber was deeply rooted in the Jewish textual tradition, but he was not an observant Jew. While using God-language, Buber chose not to live an Orthodox

105 Allen Wood, "Kant on Duties Regarding Nonrational Nature," Aristotelian Society Supplementary Volume 72 (1998): 189–210; J. Skidmore, "Duties to Animals: The Failure of Kant's Moral Theory," *The Journal of Moral Inquiry* 35, no. 4 (2001): 541–559; Christine M. Krosgaard, "Interfacing with Animals: A Kantian Account," *The Oxford Handbook of Animal Ethics*, ed. Tom L Beauchamp and Raymond G. Frey (New York: Oxford University Press, 2011), 91–118.

106 A good example is Paul W. Taylor, *Respect for Nature* (Princeton: Princeton University Press, 1986).

life because he "could not accept the traditional and heteronomic belief in divine revelation of the Law."[107] Whether characterized as "religious secularism," as Donald Moore suggested,[108] or "secular religiosity" as Ron Margolin preferred, Buber's philosophy could appeal to secular, non-observant, or progressive Jews and to non-Jews. If the rabbinic tradition understood the Covenant to be law-centered, Buber insisted that the covenantal relationship culminating in revelation means a direct, non-propositional encounter with the divine Presence. According to his famous formulation (1923), humans relate to the world either directly and unconditionally ("I-Thou") or indirectly, conditionally, and functionally ("I-It"). The "I-Thou" modality means a direct encounter that encompasses all of one's personality and treats the other as an end rather than as a means. The "I-It" relationship has a purpose outside the encounter itself, and involves only a fragment of the other, not the entire person. Between the I-It and I-Thou realms there is no sharp dualism but rather a constant interplay as humans oscillate between the two postures, or attitudes. Similar to Heidegger's notion of "standing reserve," the I-It relation is a lower mode of relating to others because we perceive the other merely as an object value derived by their instrumental use to us. I-It relations are, therefore, potentially exploitative and destructive. By contrast, I-Thou relations (which echo the Kantian notion of treating humans as ends rather than means) enable us to see the other as a moral subject with intrinsic worth that cannot be exhausted by the Self. In I-Thou relations, we see the other as irreducible and inherently valuable, but also as utterly vulnerable.

Buber's ideas became very influential in environmental ethics because he extended the "I-Thou" relationship to an encounter with nature. He was highly critical of the naturalism characteristic

107 Ron Margolin, "Hans Jonas and Secular Religiosity," in *The Legacy of Hans Jonas: Judaism and the Phenomenon of Life*, ed. Hava Tirosh-Samuelson and Christian Wiese (Leiden: Brill, 2008), 235.

108 Donald Moore S.J., *Martin Buber: Prophet of Religious Secularism* (New York: Fordham University Press, 1996).

of modern philosophy and science, precisely because it illustrates I-It relations. Instead, he regarded plants and animals as subjects with which we have personal ethical relations. Buber described his encounter with a horse when he was a boy and extended the possibility of having such a relation with a tree.[109] In treating nature as a "Thou" rather than an "It," Buber personified natural phenomena and recognized not only the need of humans to communicate with natural objects, but also the inherent rights of nature. Nature is a waiting Thou, waiting to be addressed by the wholeness of our own being. I-Thou relations with animals are possible because animals can respond to us in mutual, reciprocal relations. Relations with non-sentient natural entities such as trees or rocks is more difficult to characterize as reciprocal, but even these entities can still reveal to us their Thou-ness, enabling us to understand them entirely as they are. What makes possible I-Thou relations with non-conscious nature is God, the Eternal Thou, who is present everywhere and in everything. This panentheistic idea reflects Buber's indebtedness to Hasidism, whose cosmology and ontology were framed by Kabbalah.[110] I will have more to say about it in the second lecture in this volume.

What does responsibility mean for Buber? Buber does not tell us what we must do in our relationships, and his focus on direct encounter stands in contrast to rule-governed ethics. For Buber, an I-Thou relationship lacks prescriptive, normative content, precisely because it is an authentic, non-objectifying encounter. With no reference to Jewish law, how do we know what we ought to do? The answer lies in the dynamics of the relationship between the two moral subjects, in the interpersonal dialogue *between* the

109 Martin Buber, *I and Thou*, trans. Ronald Gregor Smith (New York: Collier Books, 1970), 8; 75, 8.

110 Both Kabbalah and Hasidism viewed the physical world as a mirror of God, but neither strand was interested in the well-being of the natural world for its own sake. See Hava Tirosh-Samuelson, "The Textualization of Nature in Jewish Mysticism," in *Judaism and Ecology: Created World and Revealed Word*, ed. Hava Tirosh-Samuelson (Cambridge: Harvard University Press, 2002), 389–404.

moral persons. The relationship itself tells us what constitutes a mistreatment and when we go wrong. Because we have the capacity to be in I-Thou relations, we are thus responsible for the quality of the dialogical relationship, of the encounter itself. As Maurice Friedman put it: "In Buber 'is' and 'ought' join."[111] The "ought" is not an abstract rule imposed on us from the outside, but a response to needs of the other experienced in the actual "lived life" and in the context of the relationship itself. We are responsible by responding to the needs and wants of the Other with whom we are in relation. Buber's dialogical philosophy, which sees nature as a moral subject, deeply influenced Christian eco-theologians such as Sallie McFague and Paul Santmire. For McFague, Buber's subject-subject relations offers "a model that shows that, as incarnation insists, God is found in the depth and detail of life and the earth, not apart from it or in spite of it."[112] For Santmire, Buber's relational philosophy makes it possible to speak about "a third type of relation, a construct that will make available a truly ecological and cosmic conceptuality, one that accounts for rich relationship between persons and nature that are not I-It relations."[113] Although Buber was not an environmental thinker, his dialogical philosophy exerted significant influence on Christian environmental ethics.

Hans Jonas: Ontological Ground of the Ethics of Responsibility

Let me turn now to another important theorist of human responsibility toward nature: Hans Jonas, the most distinctly Jewish environmental thinker in the twentieth century. Like Buber, Jonas was not an observant Jew and did not appeal to revelation, even though Jewish religious sources, especially the Bible and the

111 Maurice S. Freedman, *Martin Buber: The Life of Dialogue* (New York, London: Routledge, 2002), 236.

112 Sallie McFague, *Super, Natural Christians: How We Should Love Nature* (Minneapolis: Fortress Press, 1997), 102.

113 H. Paul Santmire, *Nature Reborn: The Ecological and Cosmic Promise of Christian Theology* (Minneapolis: Fortress Press, 2000), 68.

Jewish mystical tradition, informed his thinking. If Buber made nature into a moral subject with whom humans can have a personal relationship, Jonas endowed life itself with intrinsic moral value as he attempted to ground ethics of responsibility in ontology. And if for Buber, following Hasidism, the presence of the Eternal Thou in all things was the ground of I-Thou relations with nature, for Jonas, God exists as Creator, but God is not omnipresent in the world and is not omnipotent. Jonas uses the kabbalistic doctrine of God's self-limitation (*tzimtzum*) to reinterpret the biblical narrative of creation: after creation, God left the world to itself, but with it God also left His own Being to creation as a "trace" (in Lurianic myth, this was called *reshimu*). Through the long process of the formation of consciousness in life and later self-consciousness in humanity, the divine comes into self-expression. This means that in reality it is the creatures, rather than God, who decide what the "image of God" could mean. The "image" is not a representation "of" God but the ideal human conduct "for" the sake of God. The "image," or what Jonas called the "Idea of Man," is the ideal that spells how humanity *ought* to conduct itself, treating all of nature and not just humans as end-in-itself rather than as means.

Jonas is rightly considered the father of Germany's Green Party, which was established in 1980, a year after his book *Das Prinzip Veranwortung: Versuch einer Ethics fűr die Technologische Zivilization* (1979) became a best-seller in Europe; it appeared in English under the title *The Imperative of Responsibility: In Search of Ethics for the Technological Age* (1984). Jonas's book articulated a powerful and original response to the horrors of WWII, symbolized by Auschwitz and Hiroshima. These catastrophic events necessitated a new philosophy of nature and a philosophical justification of the ethics of responsibility. Jonas challenged the conventions of philosophical ethics which separated "facts" and "value," "is" from "ought," and "nature" from "ethics." Instead, he exposed the ontological basis of the ethics of responsibility and,

conversely, made ontology informed by ethics.[114] In this regard Jonas, like Buber, went beyond Kant, because he denied the Kantian assumption that only humans can have moral relations, and he rejected the anthropocentrism of traditional ethics. For Jonas, value is not a construct that we impute to things; rather, things possess inherent moral value, or as Jonas called it, "the objective 'ought-to-be.'"[115] Nature itself, Jonas avers, possesses purposiveness that bridges "the alleged chasm between the 'is' and the 'ought.'"[116]

In Jonas's philosophy of nature, organic life is itself a radical change in matter's mode of being, and life is the overall unfolding of a primitive momentum of freedom: all living things approve their own being in contrast to non-being, and therefore living things are the concrete intensification of nature's primordial purposiveness, the means employed to realize the overall general aim of nature. Given the purposiveness of all life and the material world necessary for its being, nature commands ultimate respect, allegiance, and final moral commitment. In Jonas's philosophy of nature, intrinsic value, goodness, and ends-in-themselves are not inherently tied to human subjectivity or consciousness, as they were for Kant; rather they are spread throughout nature, especially in the organic realm of life. Therefore, nature can be viewed as fraternal rather than as mere stuff amenable to technological manipulation. The objective goodness of things determines not only what "ought to be" but also what humans ought to feel, think, and do, since humans are an integral part of organic life. In Jonas's philosophy, ethics transcends the human realm and encompasses Being as such.

Jonas's theory of nature articulated a new ontological justification for the ethics of responsibility. Nature is not mere

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114 Hans Jonas, "The Concept of Responsibility: An Inquiry into the Foundations of an Ethics for Our Age," in *Knowledge, Value and Belief*, ed. H. Tristram Engelhardt and Daniel Callahan (Hastings-on-Hudson: Hastings Center, 1977), 1–5.

115 Hans Jonas, *The Imperative of Responsibility: In Search of Ethics for the Technological Age* (Chicago: University of Chicago Press, 1984), 50.

116 Jonas, *Imperative of Responsibility*, 81.

inert stuff but rather purposive or goal-bearing existence, and human beings are nature's most significant actors. In humans, "nature becomes cultural, political, scientific, technological, artistic, religious, philosophical, and moral," and the natural facts about the human determine both the capacity and the imperative of ethical responsibility.[117] What does responsibility mean? Jonas distinguished between *formal responsibility* and *substantive responsibility*.[118] Formal responsibility means "being accountable 'for' one's deeds, whatever they are." This responsibility simply asserts that the "moral agent can be subject of praise or blame," but does not assign blame or praise to the agent.[119] Formal responsibility concerns actions of the past, in which caused damage must be compensated for, even if the consequences of the actions were not intended or foreseeable. Formal responsibility has a contractual character between equal partners and is "conditional *a-posteriori* upon the fact and terms of the relationship actually entered into."[120] By contrast, substantive responsibility means responsibility for particular objects that commits an agent to particular deeds concerning them. This type of responsibility concerns the future, toward the things to be done, and directly tends toward the object of responsibility. Such responsibility is *a-priori* and flows from the "immanent 'ought-to-be' of the object." To speak of substantive responsibility means that we are responsible for the caring or preservation of some object. Substantive responsibility is inherently non-reciprocal and non-contractual, and its paradigm is the responsibility of parents for their children.

Parental care is future-oriented, and so is human responsibility for the continued existence of life on a planet where life is seriously endangered by modern technology. One of the early thinkers to

117 Strachan Donnelley, "Hans Jonas: The Philosophy of Nature and the Ethics of Responsibility," *Social Research* 56, no. 3 (1989): 635–657; citation on 648.

118 Jonas, *The Imperative of Responsibility*, 90.

119 Richard J. Bernstein, "Rethinking Responsibility," *Social Research* 61, no. 4: 833–852, citation on 840.

120 Jonas, *The Imperative of Responsibility*, 95.

understand the novelty of modern technology, Jonas warned about its "power of destruction" and its ability to transform not only nature but also the human being itself.[121] The "power and peril" of technology "reveals a duty, through the commanding solidarity with the rest, extends from our being to that of the whole, regardless of our consent." The concern for the future of the human species is inseparable from the concern for the future of life. Jonas powerfully states: "Care for the future of mankind is the overruling duty of collective human action in the age of a technical civilization that has become 'almighty,' if not in its productive then at least in its destructive potential."[122] It is precisely the awareness of the danger of a looming disaster due to technology that generates the "heuristics of fear" that guides us to act so as to protect nature from the possibility of destruction. The fear of non-being or death guides the ethical subject to respond to the vulnerability of nature and take steps in obedience to the categorical imperative of respect for the life of the other.

Is Jonas's principle of responsibility biocentric or anthropocentric? Does he care more about the future of organic life or about the future of human life? Since for Jonas substantive responsibility is *not reciprocal*, the bearer of responsibility—the human species—has existential priority. As Jonas put it, somewhat awkwardly, "the possibility of there being responsibility in the world, which is bound to the existence of men, is of all objects of responsibility the first"; because human beings are the moral agent capable of responsibility, "the existence of mankind comes first," but "to preserve this possibility is a cosmic responsibility."[123] Humanity is responsible for its own future and must act with concern toward future generations, ensuring that they will have the conditions for life. Such an ethics develops a conception of humanity not as it is, but as it is *yet to be realized*. For Jonas, the very existence of humanity

121 Jonas, "Responsibility Today: The Ethics of Endangered Future," *Social Research* 43 (1976): 77–97.

122 Jonas, "Responsibility Today," 77.

123 Jonas, *The Imperative of Responsibility*, 98.

is an objective good that imposes an obligation on the human will, which through technology has power over this objective good. In light of the technological ability to decimate humanity, Jonas firmly insists that "there is an unconditional duty for mankind to exist." [124]

Jonas formulates the responsibility for the future of humanity as follows: "No condition of future descendants of humankind should be permitted to arise which contradicts the reason why the existence of mankind is mandatory at all."[125] He goes on to explain: "With this imperative, we are, strictly speaking, not responsible to the future human individuals but to the idea of Man. . . . It is this ontological imperative, emanating from the idea of Man, which stands behind the prohibition of a gamble with mankind. Only the *idea of Man*, by telling us *why* there should be men, tells us also *how* they should be" (emphasis in the original).[126] After the devastation of Auschwitz and Hiroshima, *humanity ought to be*, but to ensure this, humans must protect vulnerable nature from their own destructive powers. Jonas's passionate advocacy of nature and his critique of modern technology generated a lot of debate, as well as recent defense and admiration as a few have engaged in comparisons of Jonas's understanding of responsibility with that of Buber and Levinas.[127]

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124 Jonas, *Imperative of Responsibility*, 37.

125 Jonas, *Imperative of Responsibility*, 43.

126 Jonas, *Imperative of Responsibility, 43*.

127 See Peter Wolsing, "Responsibility to Nature? Hans Jonas and Environmental Ethics," *Nordicum-Mediterraneum*: *Icelandic E-Journal of Nordic and Mediterranean Studies* (2013); Ernst Wolff, "Responsibility and Technics in Levinas and Jonas: Two Strategies to the Disorientation of Ethics in the Modern World," *Philosophy Today* 55, no. 2 (2011): 127–143; Jan Cornelius Schmidt, "Defending Hans Jonas's Environmental Ethics: On the Relation between Philosophy of Nature and Ethics," *Environmental Ethics* 35, no. 4 (2013): 461–479; Micah H. Werner, "The Immediacy of Encounter and the Danger of Dichotomy: Buber, Levinas and Jonas on Responsibility," in *The Legacy of Hans Jonas: Judaism and the Phenomenon of Life*, 203–230.

Levinas: Nature as the Absolute Other to Whom I am Always Responsible

As much as Jonas's ethics of responsibility was a response to his WWII experience, so did Emmanuel Levinas's philosophy of alterity emerge out of his experience as a prisoner of war in a Nazi camp near Hanover, where he was treated as an "unnatural being," a sub-human who lost his personhood and dignity. Indeed, in the POW labor camp, as Levinas bitterly put it,[128] Bobby the dog, was the "last Kantian in Nazi Germany."[129] As Levinas saw it, the dog revealed a Kantian respect for humanity lacking in the behavior of fellow humans. Remembering the loyalty of the dog, Levinas pondered "whether or not that animal was owed the responsibility that each prisoner owed the others."[130] Like Jonas, Levinas maintained that responsibility characterizes the entire life of the subject as a response to the appeal of the other: the anxiety about the death of the other is the source of the disinterested obedience (or disobedience) to the prohibition against the murder of the other. And like Jonas, Levinas saw responsibility as the core of the ethical as such. But Levinas went further than Jonas by arguing that responsibility comes first; each person is responsible for the other who faces him. If Jonas argued for *collective responsibility* of humanity, Levinas argues for *infinite individual responsibility*: every person has an obligation to his/her neighbor, expanding gradually to cover all living humans. Levinas's

128 Emanuel Levinas, "The Name of a Dog, or Natural Rights," in his *Difficult Freedom: Essays on Judaism,* trans. Sean Hand (Baltimore: The Johns Hopkins University Press, 1997), 151–53. The French original appeared in 1975.

129 This famous statement generated considerable literature. See David Clark, "On Being 'The Last Kantian in Nazi Germany': Dwelling with Animals after Levinas," in *Animal Acts: Configuring the Human in Western History*, ed. Jennifer Ham and Matthew Senior (New York, London: Routledge, 1997), 165–198.; Claudia Welz, "A Wandering Dog as the 'Last Kantian in Nazi Germany': Revisiting the Debate on Levinas's Supposed Antinaturalistic Humanism," *Levinas Studies* 6 (2011): 65–88.

130 Jeffrey Bloechel, *Liturgy of the Neighbor: Emmanuel Levinas and the Religion of Responsibility* (Pittsburgh: Duquesne University Press, 2000), 60.

ethics is decidedly human-centered, and he repeatedly insisted that ethics is "against-nature, against the naturality of nature."[131] However, when the insights of Levinas's ethics are extended to nature, as postmodernist environmental ethicists have done, they become a powerful reformulation of environmental ethics. Levinas's ethics grounds the ethical in the account of the Other, namely, in alterity. Levinas spoke of two kinds of alterity: the other (*autre*), whose meaning is constituted by consciousness, and the Absolute Other (*Autrui*), who signifies a meaning beyond all intentional horizon.[132] The other is what sustains me and what I transform through work, but the Other resists all attempts at assimilation or conceptualization. The Absolute Other cannot be thematized or conceptualized, but can only be encountered directly, similar to Buber's notion of I-Thou relations. The metaphor for the Other is the "face," which signifies the frailty and vulnerability of the one who needs you and who is counting on you. The face is the revelation of the Other. As Levinas explains, "[t]he face is not in front of me (*en face de moi*) but above me; it is the other before death, looking through and exposing death. Secondly, the face is the other who asks me not to let him die alone, as if to do so were to become an accomplice in his death. Thus the face says to me: you shall not kill."[133] When we are "faced" by the Other, we are called to respond and as such we stand in a relation of ethical accountability, whether or not one is looking into the face of the other. The Other's needs and suffering face us and make us responsible for it in a disruptive, even somewhat violent manner. In the ethical moment, we are awakened to the precariousness of the Other.

Several postmodernist environmentalists have found

131 Emmanuel Levinas, *Of God Who Comes to Mind*, trans. Bettina Bergo (Stanford: Stanford University Press, 1998), 171.

132 For a good exposition of Levinas's philosophy, see Colin Davis, *Levinas: An Introduction* (Notre Dame: University of Notre Dame Press, 1996); Michael L. Morgan, *Discovering Levinas* (Cambridge: Cambridge University Press, 2007).

133 Emmanuel Levinas, "Dialogue with Emmanuel Levinas," in *Face to Face with Levinas*, ed. Richard A. Cohen (Albany: SUNY Press, 1986), 24.

Levinas's phenomenological description of the "face" most useful to environmental ethics, giving rise to eco-phenomenology.[134] If extended to nature, the principles of Levinasian ethics could be aligned with several non-anthropocentric environmental philosophies while moving environmental discourse beyond traditional theories. But can nature be identified with the Absolute Other? Is nature "the persecuted one for whom I am responsible"? Do animals have ethical "faces"? On these questions the debate is still raging: some interpreters argue that for Levinas, ethical relations are limited to the inter-human realm: the Other pertains to the human other to the exclusion of all others. Levinas's humanism is underscored by the fact that he repeatedly claimed it. By contrast, other interpreters hold that for Levinas, moral considerability indeed extends to the non-human realm: the facial status of animals derives analogically from the transference of human suffering to them. This interpretation is still anthropocentric rather than biocentric, because Levinas extends ethical responsibility beyond the human life only in so far as he sees an analogy between human and animal suffering.

Indeed, Levinas's position is humanistic because he is more interested in the one who is responsible than he is in the Other for whom one is responsible. Nonetheless, as Diane Perpich put it, Levinas suggests that "human ethics . . . is the 'prototype' for an extension of obligation to animals."[135] In the famous interview that Levinas held with students from the University of Warwick in 1986, Levinas stated that "it is clear that, without considering

134 See John Llewelyn, *The Middle Voice of Ecological Conscience: A Chiasmic Reading of Responsibility in the Neighborhood of Levinas, Heidegger and Others* (New York: St. Martin's Press, 1991), esp. 49–67; Peter Atterton, "'Face-to Face' with the Other Animal?" in *Levinas and Buber: Dialogue & Difference*, ed. Peter Atterton, Matthew Calarco and Maurice S. Friedman (Pittsburgh: Duquesne University Press, 2004), 262–281; William Edelglass, James Hatley and Christian Diehem, eds., *Facing Nature: Levinas and Environmental Thought* (Pittsburgh: Duquesne University Press, 2012).

135 Diane Perpich, "Scarce Resources? Levinas, Animals and the Environment," in *Facing Nature: Levinas and the Environment*, 67–94, quote on 91.

animals as human beings, the ethical extends to all living beings."[136] This is to say that because animals suffer, and humans know the torment of suffering, Levinas can say, "we do not want to make an animal suffer needlessly and so on." Not unlike Kant, he sees the obligations to animals as purely negative duties of omission. However, since Levinas was deeply rooted in the Jewish tradition, it is possible that he did regard the traditional prohibition on causing needless suffering to animals (*tza'ar ba'aley hayyim*) sufficient, and hence he did not elaborate the point. It is no coincidence that in Levinas's philosophy, the paradigm of the Absolute Other is the orphan, the widow, and the stranger, which are protected by biblical legislation of the Sabbatical Year. Jewish environmental legislation, therefore, provided Levinas with the deepest insight about infinite responsibility to the Other. For Levinas, then, to be human is to be first and foremost responsible for the Other; responsibility defines human subjectivity. Like Buber, Levinas does not specify what we need to do about the environment, but he enables us to see that the environmental crisis has made nature into the vulnerable and persecuted Other, toward whom we have infinite obligation.

Conclusion

Let me sum up the first lecture by saying the following: Judaism is a religious tradition whose law is believed to be divinely revealed. Normative Judaism specifies what one is expected to do in all aspects of life, including interaction with the natural world. Jews who define themselves in religious terms (be they Orthodox, Conservative, Reconstructionist, or Reform Jews) can find deep and rich insights within the Jewish tradition that support conservationist practices conducive to sustainability. The Judaic approach to nature revolves around the value of responsibility and

136 See Tamara Wright, Peter Hughes and Alison Ainley, "The Paradox of Morality: An Interview with Emmanuel Levinas," in *The Provocation of Levinas: Rethinking the Other*, ed. Robert Bernasconi and David Wood (London, New York: Routledge, 1988), 168–180.

follows from the belief that the Earth ultimately belongs to God and that humans have been given the task of protecting it by following certain guiding principles. In Jewish normative ethics, there is a close connection between ethics and nature: when human beings conduct themselves in accord with God's Will, the Earth is fertile, but when they sin toward each other and toward God, the Earth loses its fecundity, and consequently human beings suffer and their life loses vitality.

Jewish environmental ethics is characterized by the following features:

1. it focuses on human obligations, or duties, toward the natural world, rather than on the intrinsic rights of nature;
2. it focuses on action in specific situations and particular circumstances;
3. it highlights a long-term perspective and concerns itself with future generations, namely with sustainability of human practices;
4. it emphasizes the common good over private interest and aligns social justice and environmental well-being.

It is difficult to fit Jewish normative ethics into the academic environmental ethics. Jewish normative ethics is framed within a religious narrative of covenantal theology. Jewish normative ethics is neither anthropocentric nor bio-centric, but theocentric, because it sees the world to belong first and foremost to God rather than to humans, although humans were given the task of caring for the created world. The human task is not understood as managerial "control and command" but rather as attentive "stewardship" or "care-giving," analogous to the loving work of the gardener. Although Jewish normative ethics is framed legally, in Jewish law there is no tension between duties and virtues: the divine commands that specify action also facilitate the cultivation of character traits conducive to the right action toward the environment. Jewish eco-justice (or Eco-Kosher) links right conduct toward humans with the appropriate treatment of soil, vegetation, and animals. Finally, Jewish normative ethics does not exhibit the radical break between

theory and practice, because the Jewish sacred narrative shapes rules, attitudes, and acts in regard to a specific locale—the Land of Israel—and under very specific circumstances. Jewish normative ethics thus touches various issues debated by environmental philosophers, but it frames them differently.

One does not have to be an observant Jew or even Jewish to endorse this ethics of responsibility. The three Jewish philosophers I mentioned—Buber, Jonas, and Levinas—have inspired profound thinking about the human relationship to nature, even though only one of them was, technically speaking, an environmental philosopher. Already in the 1920s, long before the environmental crisis was recognized, Buber made it possible for us to think about nature as a moral subject. By recognizing the possibility of personal (i.e., subject-subject) relations with nature, he moved beyond the Kantian view of indirect duties toward nature. When the scope of the environmental crisis was first recognized, Jonas courageously and creatively addressed it by articulating a philosophy of nature that challenged the philosophic assumption that "ought" cannot be derived from "is." By insisting on the subjectivity of Being, Jonas grounded ethics in ontology, and conversely, endowed ontology with ethical meaning. In his philosophy, responsibility for the future of all biological life is the collective responsibility of humanity. Even more demanding was Levinas's radical understanding of responsibility, according to which to be human is to be infinitely responsible to the vulnerable Other. When Levinas's ethics is applied to nature, it offers an eco-phenomenology that makes each and every human being personally responsible. The Jewish ethics of responsibility is a profound and compelling response to the environmental crisis.

Lecture 2: Jewish Theologies of Nature

Introduction

The ecological crisis has led all world religions "to re-imagine the viable conditions and long-range strategies for fostering mutually enhancing human-earth relations."[137] The discourse of religion and ecology or religion and environment is theological, as religious scholars and practitioners explore their own traditions and find in them "core insights, orientations and injunctions and knowledge that if followed could have avoided the crisis and can now be at the basis of real solutions to it."[138] In the Abrahamic traditions, the primary theological concept that anchors religious environmentalism is *creation*.[139] Within this religious framework, the physical environment is understood as an inherently ordered cosmos that was intentionally brought into existence by a Creator

137 Mary Evelyn Tucker and John Grim, "Series Forward," C*hristianity and Ecology*, ed. Dietrich Hessel and Rosemary Radford Ruether (Cambridge: Harvard University Press, 2000), xv-xxxii.

138 Peter Beyer, "Who Shall Speak for the Environment? Translating Religious, Scientific, Economic and Political Regimes of Power and Knowledge in A Globalized Society," in *Religion and Ecology in the Public Sphere*, ed. Celia Deane-Drummond and Heinrich Bedford-Strohm (London: T & T Clark, 2011), 27.

139 On the centrality of creation in the Abrahamic faiths' approach to environmentalism, see His All Holiness Bartolomeus, Rabbi Arthur Hertzberg and Fazlun Khalid, "Religion and Nature: The Abrahamic Faith's Concept of Creation," in *Spirit of the Environment: Religion, Value and Environmental Concern*, ed. David E. Cooper and Joy A. Palmer (London, New York: Routledge, 1998), 30-41.

God who manifested divine Benevolence. The doctrine of creation has been the basis of environmental spirituality, calling believers to protect and preserve that which ultimately belongs to God.[140] The doctrine of creation has undergirded the concept of stewardship and the practice of creation care, shared by all three monotheistic religions. The ethics of creation care has enabled members of various faith traditions to work together in response to the environmental crisis.

The ethics of creation care is predicated on theological premises articulated first in Judaism, the oldest of the three monotheistic traditions. The Hebrew Bible spelled out the connection between the doctrine of creation and the doctrine of revelation: the Creator God revealed His Will to the Chosen People in the Torah (literally, "Instruction"), and the revealed Torah specifies how humans should treat the created world of nature in order to ensure its continued fecundity. In Lecture 1, I showed how the beliefs in creation and revelation are linked to the ideal of justice. The Bible teaches that Earth and all its inhabitants must be treated justly by following divine Will as expressed in divine commandments (*mitzvot*). In so doing, the created human being is able to transcend creatureliness and imitate God. Because the human being is created in the "divine image," the human is able to act in accordance with God's Will by observing divine commands. Creation in the image of God, then, entails responsibility: the human being is responsible *to* God and responsible *for* the world. Viewing the natural world as "creation" (*beriah*) endows it with religious meaning, since creation is a theological construct.

Lecture 2 explores how Jews over the centuries have interpreted the meaning of the belief in creation, resulting in different

140 For an overview of creation theology in religious environmentalism, see Laurel Kearns, "Saving the Creation: Christian Environmentalism in the United States," *Sociology of Religion* 57 (1996): 55-70; Laurel Kearns, "Role of Religions in Activism," in *The Oxford Handbook of Climate Change and Society*, ed. John S. Dryzek, Richard B. Norgaard and David Schlosberg (Oxford: Oxford University Press, 2011), 414-428.

conceptions of nature. The lecture argues that conceptions of nature in Judaism have evolved over time in response to changing historical circumstances and in conversation with other religious traditions and philosophical schools. Part I juxtaposes the rabbinic discourse on nature with Philo's, Part II compares conceptions of nature in medieval rationalist philosophy and in the Jewish mystical tradition, and Part III discusses approaches to nature in the modern period, with a focus on Orthodoxy and Zionism. Since the lecture covers the entire Judaic tradition, it cannot do justice to the richness of the ideas, texts, and individuals discussed herein. But telling the story as I do intends to make the following points. First, there is no one consistent Jewish theology of nature, but several theologies of nature that reflect the complexity of Judaism and its development over time. Second, the diversity of Jewish theologies of nature results from the interaction of Judaism with other religious civilizations, especially Christianity and Islam, as well as with a range of philosophical schools, interactions that involved both absorbing and incorporating non-Jewish ideas as well as negating polemics of ideas deemed foreign to Judaism. Third, since the various philosophical schools held different conceptions of science, theorizing about nature was linked to a debate about the meaning of "science" and about the cultural boundaries of traditional Jewish society. Explicating Judaic theologies of nature sheds light on the intersection of the discourse of Judaism and environment and the discourse on Judaism and science.

Part I: JEWISH THEOLOGIES OF NATURE IN ANTIQUITY

Rabbinic Judaism: The Sanctification of Nature

When we talk about "Judaism," we refer to the interpretation of ancient Israelite religion by the rabbis. Heirs to the Pharisees of the Second Temple period, the rabbis were a small intellectual elite that offered leadership to the Jewish People after the destruction of the Second Temple in 70 CE. The rabbis were scholars of Torah,

and Torah defined their Jewish identity in a country under foreign Roman rule. The rabbis functioned as teachers, judges, and prayer leaders, and their major social institution in Roman Palestine was the academy. The relationship between the academies of individual scholars and the central academy has been matter of much dispute, because it pertains to the relationship between the rabbis and the institution of the Patriarchate. Catherine Hezser offers a rather decentralized view, according to which the rabbinic movement was less institutionalized than previously assumed.[141] It was a network in which each rabbi had direct contact with a limited number of colleagues, and through them, indirect contact with other rabbis whom he could consult in case of need. Rabbis were connected through personal ties, and their relationship was mediated through colleagues, students, and relatives, and by means of exchange of letters. This shed light on the plurality of voices and views we find in the rabbinic corpus. Indeed, the literary documents that came down to us attempted to harmonize the rabbinic perspective and present a coherent religious outlook, but in reality, diversity of opinions prevailed, and unresolved disputes can be detected in the edited texts despite the harmonizing attempts of the editors.

The rabbinic movement generated a vast body of legal (Halakhic) and non-legal (Aggadic/Midrashic) texts, which the rabbis presented as Oral Torah. In the vast rabbinic corpus there are many references to the natural world, but it is difficult to tease out a systematic theology of nature, for several reasons. First, the rabbinic movement was inherently committed to open discourse and did not have an ultimate institutional authority that determined a final position. Second, rabbinic reasoning was exegetical, teasing out the meanings of Scriptures, which implies that rabbinic discourse was necessarily non-systematic. The rabbis were exegetes, orators, and moral teachers who expressed themselves through narratives, metaphors, analogies, parables, and anecdotes,

141 Catherine Hezser, *The Social Structure of the Rabbinic Movement in Roman Palestine* (Tübingen: Mohr Siebeck, 1997).

allowing for a large measure of hermeneutical freedom, debate, and disagreement. Third, the rabbis discouraged speculating about the totality, origins, and structure of the cosmos (both terrestrial and celestial realms) (Mishnah Hagigah 2:1). Cosmological speculations about the origins of the universe were known as *Ma'aseh Bereshit* (Account of Creation), and speculations about the celestial realms above were known as *Ma'aseh Merkabah* (Account of the Chariot), a reference to the divine Chariot envisioned by the prophet Ezekiel (Ezekiel 1:1). These speculations were treated as esoteric knowledge reserved for the few among the rabbinic elite and not fit for public consumption.[142] Although the rabbinic corpus consists of many allusions to the natural world, the "physical" is always interpreted in moral and theological categories; nature is not understood to be independent of God or of human beings, who were created in the image of God.[143] Precisely because humans were created in the image of God, the rabbis privileged human beings over all other creatures. Therefore, the rabbis do not describe natural phenomena for their own sake, but focus instead on the ethical consideration of human (or more specifically, rabbinic) involvement with natural phenomena.[144]

142 See Yair Furstenberg, "The Rabbinic Ban on Maaseh Bereshit (the Study of the Creation Story): Sources, Contexts and Concerns" in *In the Beginning: Jewish and Christian Cosmogony in Late Antiquity*, eds. S. Kattan and L. Jennott, Texts and Studies in Ancient Judaism (Tübingen: Mohr Siebeck, 2013), 39-63.

143 See Reuben Kimmelman, "The Rabbinic Theology of the Physical: Blessing, Body and Soul, Resurrection, and Covenant and Election," in *The Cambridge History of Judaism*, volume 4, The Late Roman-Rabbinic Period, ed. Steven T. Katz (Cambridge: Cambridge University Press, 2006), 946-976; Alon Goshen-Gottstein, "The Body as Image of God in Rabbinic Literature," *Harvard Theological Review* 87, no. 2 (1994): 171-95. Cf., Yair Loberbaum, *Image of God: Halakha and Aggada* (in Hebrew) (Tel Aviv: Schocken, 2004). Goshen-Gottstein and Loberbaum interpret rabbinic views differently: for Loberbaum, the "image" consists more than the somatic body and includes "personality, consciousness and sensations, in short, all the mental components." Loberbaum, *Image of God*, 333.

144 For example, in engaging the natural phenomenon of rain, the rabbis were concerned with rabbinic rain-making, since rabbis were regarded to be

Why were the rabbis reluctant to engage in cosmological speculations? We can only conjecture. Perhaps the rabbis wished to differentiate rabbinic Judaism from Greek philosophy, which was distinctly cosmological. This hypothesis makes sense if we recall that Roman Palestine had a thriving pagan culture that deified nature, and the rabbis had to offer a Judaic alternative to it. The rabbinic solution was not to ignore pagan culture, but to allow the use of natural symbols for decorative purposes only, while limiting the biblical prohibition on idolatry to cultic acts directed at fetishes. For that reason, the remains of synagogues in Roman Palestine had natural motifs characteristic of pagan art, including Victories, cupids, lions, griffons, Capricorns, eagles, vine motifs, wreaths, shells, and rosettes.[145] In addition to art, pagan culture expressed itself through myths about fantastic, imaginary entities, such primordial animals, the Phoenix, or the three-legged ass.[146] The rabbis were familiar with these fantasies and responded to them with their own fantastic tales. In rabbinic tales, nature is not a lived experience or a theoretical construct, but a graphic visualization of

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miracle workers on account of their possession of knowledge that could effect changes in the physical world. See Jonathan Wyn Schoffer, "Theology and Cosmology in Rabbinic Ethics: The Pedagogical Significance of Rain-Making Narratives," *Jewish Studies Quarterly* 12 (2005): 227-259. On the rabbis as miracle workers, see Haya Bar-Itzhak, "Modes of Characterization in Religious Narrative: Jewish Folk Legends about Miracle Worker Rabbis," *Journal of Folklore Research* 27, no. 3 (1990): 205-230.

145 James D. Anderson, "The Impact of Rome on the Periphery: The Case of Palestinian-Roman Period (63 BCE – 324 CE)" in *The Archeology of Society in the Holy Land*, ed. Thomas E. Levy (London, Washington: Leicester University Press, 1995), 466ff. On the use of pagan art in synagogues, see Lee Levine, *The Ancient Synagogue: The First Thousand Years* (New Haven, London: Yale University Press, 1999), esp. 560-579.

146 David Stern and Mark Jay Mirsky, eds., *Rabbinic Fantasies: Imaginative Narratives from Classical Hebrew Literature* (New Haven: Yale University Press, 1998); Maren R. Niehoff, "The Phoenix in Rabbinic Literature," *Harvard Theological Review* 89, no. 3 (1996): 245-265.; Reuven Kiperwasser and Dan Y. Shapira, "Irano-Talmudica I: The Three-Legged Ass and Ridya in B.Ta'nith: Some Observations about Mythic Hydrology in the Babylonian Talmud and in Ancient Iran," *AJS Review* 32, no. 1 (2008): 101-116.

an idea that the rabbis wished to explore, be it the problem of evil or life after death.

Since most of the rabbis in Roman Palestine resided in villages, it is not surprising that the rabbinic corpus is replete with references to the immediate physical environment in which the rabbis found themselves. In Roman Palestine, the rabbis came in daily contact with agriculture, and therefore rabbinic documents provide information about cultivated crops, such as grains, legumes, vegetables, and fruits.[147] In addition to information about wheat growing, viticulture, and fruit production, rabbinic texts also inform us about the decline of agriculture during the second and third centuries. The devastation of Judea in the battles with Rome, soil exhaustion, droughts, the new manor economy in the Roman Empire (in which large estates were built by ruthless, wealthy men who turned former small peasants into tenant farmers), and the processes of accelerated urbanization were among the social, economic, and political factors that impacted references to the natural environment in rabbinic sources. Yet, it is important to keep in mind that rabbinic texts did not simply mirror the reality the rabbis experienced; rather, the rabbis sought to construct ideal reality in accord with their theological agenda. Indeed, the rabbinic program aimed to sanctify nature so that Israel could become the truly holy nation it was chosen to be.[148] Natural objects (e.g., soil, vegetation, animals, and humans) are to be made holy, or sanctified, when Israel behaves in accord with the divinely revealed Torah. Through performance of the commandments, the physical world is sanctified.

Although the rabbis did not express themselves in systematic

147 See Ze'ev Safrai, *The Economy of Roman Palestine* (New York, London: Routledge, 1994); Daniel Sperber, *Roman Palestine, 200-400: The Land* (Ramat Gan: Bar Ilan University Press, 1978); Yehuda Felix, *Agriculture in Eretz Israel in the Period of the Bible and Talmud: Basic Farming Methods and Implements* (Jerusalem: Ruben Mass, 1990) (in Hebrew).

148 Michael Wyschogrod "Judaism and the Sanctification of Nature," *The Melton Journal* 24 (1991): 5-7; reprinted in *Judaism and Environmental Ethics: A Reader*, ed. Martin D. Yaffe, (Lanham, MD: Lexington Books, 2001), 289-96.

theology, neither was rabbinic Judaism lacking in conceptual coherence. Rather, the rabbinic discourse was a texture of interlocking "value concepts" that integrate the plurality of voices and views into an organic worldview.[149] To the extent that the rabbis engaged in cosmological speculations, they did so hermeneutically: they clarified the biblical text, resolved various textual inconsistencies or exegetical conundrums, or refuted alternative interpretations of the Bible articulated by Gnostic intellectuals or by Christian theologians. Many of the rabbinic discourses on creation were redacted into *Genesis Rabbah*, a Midrash on Genesis. Why were the rabbis so concerned with the details of the biblical creation narrative? Jacob Neusner offers a plausible answer: the rabbis turned to Genesis in order to address the political challenge of their own day—the failure of Emperor Julian to rebuild the Temple in Jerusalem (361-63 CE) and the emergence of Christianity as the official religion of the Roman Empire. These events challenged the rabbis' deepest beliefs about God's Benevolence and omnipotence, and they could only turn to the biblical narrative of creation in order to answer the questions of "where things were heading, how they should go on, and what their duties were."[150] To address their

149 See Max Kadushin, *Organic Thinking: Study of Rabbinic Thought* (New York: Bloch Publishing Company, 1938); Max Kadushin, *The Rabbinic Mind* (New York: Bloch Publishing Company, 1940; reprint 1972); Ephraim Elimelech Urbach, *The Sages: Their Concepts and Beliefs*, trans. Israel Abraham (Cambridge: Harvard University Press, 1987 [1979]). While these analyses refer to rabbinic views about the physical world, they fall short of identifying a distinctive rabbinic ecological view. Only in recent years, due to the rise of religious environmentalism and the new discipline of Animal Studies, scholars of rabbinic Judaism have begun to engage the rabbinic corpus with attention to the natural world in rabbinic texts. See, for example Julia Watts Belser, *Power, Ethics, and Ecology in Jewish Late Antiquity* (Cambridge: Cambridge University Press, 2015), esp. 34-83; Mira Beth Wasserman, *Jews, Gentiles and Other Animals: The Talmud and the Humanities* (Philadelphia: University of Pennsylvania Press, 2017), esp. 73-119; Beth A. Berkowitz, *Animals and Animality in the Babylonian Talmud* (Cambridge, England: University Press, 2018).

150 Jacob Neusner, *Confronting Creation: How Judaism Reads Genesis* (Columbia: University of South Carolina Press, 1991), 7.

deepest anxieties, the rabbis established the correlation between Torah and nature: When God created heaven and Earth, the Torah provided the plan by which God made the world.

Genesis Rabbah teaches that God consulted the Torah when He created the world, a doctrine that suggests some familiarity with Plato's teachings in the *Timaeus*, according to which the world was created by a craftsman (Demiurge).[151] The *Timaeus* was well-known to Jewish intellectuals in antiquity, a point to which we shall return below. For the rabbis, the message of the biblical narrative of creation was that God designed the world in the model of the Torah, and if people want to know how the world is supposed to be, they should consult the Torah. The Torah thus became the prism through which rabbinic Jews were supposed to encounter nature.

Genesis Rabbah affirmed that God worked with chaos and disorder (imaged as primordial animals) but nevertheless insisted that the world that God had created is good. The rabbis rejected the Gnostic view that there is a God above the world, an unknown God, who rules but is not revealed, although He should be worshipped. Unlike the Gnostics, who claimed that the physical world was brought into existence by an evil deity, the rabbis taught that there is only one Creator—YHWH—whose creation is good and should be celebrated. The rabbinic sages went even further to forge a link between the natural world of creation and the historical world of Israel, its life, and salvation.[152] According to the rabbis, the world was created because of Israel and for the sake of Israel. They "proved" this claim through exegesis of the biblical text, noting the correspondence between the story of creation and the history of Israel. In many cases, the Torah and the natural world attest

151 Neusner, *Confronting Creation*, 16. For close reading of the biblical narrative of creation explication in *Genesis Rabbah* in light of Plato's *Timaeus*, cf., Norbert M. Samuelson, *Judaism and the Doctrine of Creation* (Cambridge: Cambridge University Press, 1994), esp. 157-198. The parallels between the *Timaeus* and Genesis is also explored by Jaroslav Pelikan, *What Has Athens to Do with Jerusalem? Timaeus and Genesis in Counterpoint* (Ann Arbor: University of Michigan Press, 1997).

152 Neusner, *Confronting Creation,* 18.

to the same rules: nature serves God's Will even in respect to the history of humanity. Nature (and water in particular) did what God willed for humanity. For example, when God told the waters what to do, they listened and obeyed; but when Adam, the first human, received a commandment, he disobeyed.[153] The rabbis posited a correspondence between the laws of nature, the rules of history, and the conduct of individuals. Affirming the world that God had created, the rabbis celebrated nature and found in Israel's destiny evidence of the natural course of events from the beginning of the world to the end of time.

One of the rabbinic "value concepts" was expressed in the phrase *sidrey bereshit* (literally, the "order of creation"), referring to the lawfulness of nature that has existed since the moment of creation. This worldly order (*sidro shel olam*, or *siduro shel olam*) manifests stability and even an internal logic that is expressed mathematically through numbers, especially the number twelve.[154] The emphasis on the inherent orderliness of nature enabled the rabbis to make a moral point: human behavior is egregious when it effects a change in the created order. The sexual conduct of humans in the generation prior to the Flood was one such change in the "order of creation" and therefore had to be punished by God. That human conduct should accord with the order of nature echoes Stoic philosophy, which influenced many ideas in rabbinic thought.[155] However, the rabbis did not maintain that the order of the natural world is necessarily accessible to human reason;

153 Neusner, *Confronting Creation*, 47.

154 Kadushin, *The Rabbinic Mind* (New York: Bloch Publication Company, 1952), 143-145.

155 Saul Lieberman, *Hellenism in Jewish Palestine: Studies in the Literary Transmission, Beliefs and Manners in the I Century BCE – IV Century CE* (New York: Jewish Theological Seminary, 1950) has pointed out that many fundamental teachings of Stoicism appear in some form in the Bible, but ideas associated with Stoic thought appear more frequently and intensely in the Tannaitic period. Jonathan Schoffer highlighted the impact of Stoic ethics on rabbinic ethics. See Jonathan Wyn Schoffer, *The Making of a Sage: A Study of Rabbinic Ethics* (Madison: Wisconsin University Press, 2005).

instead they taught that nature is governed by God, who manages it continually. Indeed, the Jewish liturgy asserts that God, in His Benevolence, "renews the created world each and every day." Ongoing divine involvement makes miracles possible, one of the key "value concepts" of rabbinic Judaism. What is truly miraculous is not the exceptional breach in the orderliness of nature but rather the continual divine involvement that sustains what appears to us as fixed, regular nature. The rabbis considered God's omnipotence to be manifested in the orderliness of nature more than in violating that order in exceptional, temporary events.[156]

The rabbis recognized the orderliness and stability of the physical world in the expression "the world pursues its own course" (*olam ke-minhago noheg*) (BT Avodah Zarah 54b), but they curtailed the independence of nature by stating that nature is contingent upon the acceptance of the Torah by the Jewish People: had they rejected the Torah, the world would have reverted to primeval chaos.[157] One source claims that God had to reveal the Torah to Israel because human sin has disrupted the initial balance by which God created the natural order (BT Kiddushin 82 b). Although the Torah was revealed to Israel, certain animals, the animals of the righteous, exemplify the principles of the Torah and can therefore serve as models for human conduct. Presumably these animals do not sin, because they know intuitively what the law is and what is required of them, and they know how to apply the Torah to the world in which they live. Since the "animals of the righteous" live in perfect harmony with their Creator, humanity has much to learn from them, not only in terms of the principle of observing God's Will, but also specific lessons (BT Pesahim 53b). In one Talmudic source, animals not only observe the moral laws, but all of nature is perceived as fulfilling the Will of God in the performance of its

156 Reuven Kipperwasser, "The Order of the World: On the Relationship between Man and Nature in the Thought of the Rabbis" (in Hebrew), *Aqdamot* 5 (1998): 35-49.

157 See Shalom Rosenberg, "Concepts of Torah and Nature in Jewish Thought," in *Judaism and Ecology,* 189-220.

normal functions (JT Peah 1:1). Underlying all of these ideas is the conviction that the orderliness of nature corresponds to the Torah, the ideal blueprint of creation. This claim is crucial for the rabbinic program of making Israel into a holy nation: by revealing the Torah to Israel, God made available for Israel the ideal plan for the world and its maintenance and demanded that Israel observe the ideal plan. Only if Israel follows the Torah and its instructions will they be able to attain perfection in this world and in the world-to-come.

The centrality of Torah in the rabbinic worldview generated a paradoxical attitude toward the natural world. On the one hand, the rabbinic interpretation of the sacred text specified normative behavior, ethical values, and social ideals that shaped all aspects of Jewish life, including attitudes toward the natural world. Thus rabbinic Jews experienced natural phenomena such as a storm or tree blossoming as an expression of God's power in nature, which was acknowledged by stating obligatory blessings. The ritual act of blessing was the main mechanism by which rabbinic Jews sanctified the natural world, transforming the physical to the spiritual.[158] On the other hand, the veneration of and dedication to Torah study in rabbinic culture brought about the distancing of rabbinic Jews from the natural world. Torah study was viewed as equivalent in worth to all other commandments, so much so that if one stops his Torah study to appreciate the beauty of nature, "Scriptures regards him as if he has forfeited his soul" (Mishnah, Avot 3:7).[159] Precisely because rabbinic Judaism placed Torah at the center of Jewish life, rabbinic Jews would experience the natural world through the prism of Torah and not as a physical reality.[160] Rabbinic Judaism

158 The logic of blessing is explained most insightfully by Reuben Kimmelman in "The Rabbinic Theology of the Physical," cited above.

159 A detailed discussion of this Mishnaic text is available in Jeremy Benstein, "One, Walking and Studying ....": Nature vs. Torah," in Yaffe, ed., *Judaism and Environmental Ethics*, 206-229.

160 See Hava Tirosh-Samuelson, "Nature in the Sources of Judaism," *Daedalus: Journal of the American Academy of Art and Sciences,* Special Issue: "Religion and Ecology: Can the Climate Change?" ed. Mary Evelyn Tucker and John A. Grim (2001), 99-124; "Judaism," *The Oxford Handbook of Religion*

and its program for the sanctification of nature brought about a certain distancing between Jews and the physical reality in which they lived.

When the rabbis reflected about the totality of the physical world, they did not refer to it as "nature" (*teva*) but rather "creation" (*beriah*) or "world" (*olam*).[161] The word "nature" entered Hebrew parlance in the Middle Ages as the Hebrew translation of the Arabic term *tabi'a*, which in turn translated the Greek term, *physis*.[162] Only in the Middle Ages did rabbinic Jews begin to think about the physical world as "nature," namely, an ordered cosmos that behaves according to its own innate laws. This change resulted from the encounter between Judaism and Islamic rationalism that led to the rise of Jewish philosophy in the tenth century. Does that mean that prior to the Middle Ages, no Jewish thinker mentioned the Greek term *physis*? Not at all! In the ancient Greek-speaking diaspora (especially in Egypt), Jewish philosophers who had access to Greek philosophy began to interpret Scriptures in light of the Greek concept of *physis,* and the shared ground was the biblical notion of Wisdom (*Hokhmah*).[163] The greatest of Jewish philosophers in antiquity was Philo of Alexandria (d. ca. 55 CE), but Philo's outstanding accomplishments are often excised out of the story of "Judaism," because Philo was eclipsed by the rabbis.

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and Ecology, ed. Roger S. Gottlieb (Oxford: Oxford University Press, 2006), 29-64.

161 See Alon Goshen-Gottstein, "Creation," in *Contemporary Jewish Religious Thought*, ed. Arthur A. Cohen and Paul Mendes-Flohr (New York, London, Sydney, Singapore: The Free Press, 1987), 101-106.

162 The pre-Socratic philosophers understood the term *physis* in the sense of primordial matter; process; primordial matter and process; and origin, process and result. See Gerard Nadaf, *The Greek Concept of Nature* (Albany: SUNY Press, 2005), 17-22. The Arabic translation of the Greek term retained the diversity of meanings. See below, note 169.

163 On Torah as divine Wisdom in Hellenistic Judaism, see Tirosh-Samuelson, *Happiness in Premodern Judaism: Virtue, Knowledge and Well-Being* (Cincinnati: Hebrew Union College Press, 2003), 68-81.

Philo of Alexandria: Torah and the Law of Nature

Philo was born into the aristocracy of Egyptian Jewry; his parents were either born Roman citizens or received citizenship grants from Julius Caesar.[164] Philo's brother, Alexander, was the high imperial tax official in Egypt and was well connected to the Roman Imperial family as well as to the family of Herod Agrippa II, who ruled Judea in the early 40s CE. Alexander's son, Tiberius Julius Alexander, became the Procurator of Judea in 46 CE and later, under Nero, Prefect of Egypt. Tiberius Julius adopted the Roman civil religion, namely, became an apostate, whereas Philo, by contrast, remained a loyal Jew and deeply involved in the affairs of the Jewish community. In 39 CE, Philo headed the delegation to Rome to protest anti-Jewish riots that erupted in 38 CE, reflecting the changing power struggle between Jews and Greeks in Egypt. The mission was unsuccessful, and the riots were quelled only in 41 CE, generating virulent anti-Jewish writings.

Philo wrote in Greek for an audience of Greek-speaking Jews in Egypt as well as for Greek-speaking educated Romans, with the intent of rendering the biblical text in philosophical categories and highlighting the intellectual merits of Judaism. For Philo, Judaism was not only a philosophy but the best philosophy, superior to all other philosophical schools in his day! Philo received the best Greek education available to members of the upper classes in the Roman Empire, immersing himself in poetry, drama, rhetoric, philosophy, and the natural sciences. He was intimately familiar with Greek philosophy, consulting the works of Plato, Aristotle, the Stoics, the Epicureans, and the Skeptics. Plato's dialogues, the *Timaeus* and the *Phaedrus*, were Philo's favorites, and their imprint on his thought is unmistakable. Indeed, Philo developed his commentary on Genesis through conversation with Plato's *Timaeus*.[165]

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164 The literature on Philo is too immense to be encompassed here. For a new comprehensive intellectual biography, see Maren Niehoff, *Philo of Alexandria: An Intellectual Biography* (New Haven: Yale University Press, 2018).

165 See David D. Runia, *Philo and the Timaeus of Plato* (Leiden: Brill, 1986).

Philo interpreted the Hebrew Scriptures philosophically, because he believed that the Mosaic Torah expressed deep philosophical truths taught through figurative speech. He articulated the very original claim that the Torah of Moses was *a written copy of the laws of nature*, thus offering a Judaic response to Stoicism. Philo made clear that the Bible teaches about the structure of the universe created by God as much as the Bible articulates the norms that should govern human conduct so that human beings could live in accordance with nature. By exposing the philosophical meaning of Scriptures—both the narratives and the laws—Philo explained how life in observance of Scripture is actually life in accordance with nature, which leads humans to the attainment of happiness.[166] Philo's project was undoubtedly tinged with polemics and apologetics, since he was trying to convince Jews of his day to remain Jewish despite the allure of the dominant Hellenistic culture, and he was trying to convince Greek and Roman intellectuals that Judaism was intellectually meritorious. But Philo's philosophical exegesis should not be dismissed as mere polemics or apologetics; in fact, it was "one of the more considerable *tours de force* in the history of thought," as James Dillon put it.[167] Philo's scriptural exegesis was philosophically sophisticated and rhetorically inventive, no less creative than the rabbis whose exegesis of Scriptures became normative Judaism.

Philo was the first Jewish theologian of nature. He was thoroughly familiar with Greek natural philosophy and was the first to use the term "natural philosophy" in his writings.[168] Philo presented Moses as a "natural philosopher," showing how his

166 See Tirosh-Samuelson, *Happiness in Premodern Judaism*, 81-100.

167 James Dillon, *The Middle Platonists: A Study of Platonism 80 B.C. to A.D. 220* (London: Duckworth, 1977), 143.

168 On Philo's philosophy of nature, see Harry A. Wolfson, *Philo: Foundations of Religious Philosophy, Judaism, Christianity and Islam* (Cambridge: Harvard University Press, 1948); David Winston, *Logos and Mystical Theology in Philo of Alexandria* (Cincinnati: Hebrew Union College Press, 1985); James Dillon, *The Middle Platonists*, 139-183.

knowledge of nature was evident in Scripture.[169] Philo's philosophy of nature posited a hierarchy of beings, both physical and non-physical, arranged from the most incorporeal being, God, to the foundational elements of the material world. According to Philo, the internal principle of organization, the intelligible order of the universe, cannot be perceived by the senses; it is only accessible to the human intellect, which is ontologically akin to it because it is likewise rational. However, the rationality and orderliness of the universe is manifested in all levels of reality, because the universe was modeled accordingly. Thus, the intelligible order is "stamped" or "sealed" into every level of reality, and the task of the philosopher is to grasp it.[170] By virtue of this hierarchy, Philo explains how the perceptible world of nature relates to the abstract idea of Nature, which operates as an organizational principle throughout the structure of the physical world.

Philo used the term *physis* to refer to the following: (a) the physical cosmos as a whole, or the totality of the natural world; (b) the specific characteristics of features that make a given thing what it is, that is, its nature; (c) the intrinsic principle of change that determines how a given thing behaves "by nature"; (d) a certain level of the hierarchy of Being, ontologically inferior to God but superior to material things; and (e) the general laws that underlie the multiplicity of natural phenomena, namely, "the laws of nature." Such multivalent usage of the term *physis* reflects the various sources that framed Philo's thought. The first meaning (a) is characteristic of all Greek philosophical literature, beginning with the works of the natural philosophers (*physiologoi*) of the fifth century BCE, who sought to identify the overarching principle

169 Hindi Najman, "The Law of Nature and the Authority of Mosaic Law," *The Studia Philonica Annual* 11 (1999): 55-73; Hindi Najman, "Copying Nature, Copying Moses," in her *Seconding Sinai: The Development of Mosaic Discourse in Second Temple Judaism* (Leiden, Boston: Brill, 2003), 70-105.

170 This Philonic idea is evident in the etymology of the Arabic words *tab'* and *tabi'a* and their Hebrew equivalents, which rendered the Greek term *physis*. See Nader al-Bizri, "The Conceptions of Nature in Arabic Thought," in *Nature: For a Different Kind of Globalization* (New York: Other Press, 2005), 65-92.

that underlies all nature phenomena. Meanings (b) and (c) are most characteristic of the writings of Aristotle, who explored the term "nature" in *Physics* II:1 and *Metaphysics* V:4, and for whom "nature" is the intrinsic principle of change and motion for all living things. The fourth meaning of "nature" (d) is characteristic of the way Plato's dialogues, especially the *Timaeus*, were understood by the Middle Platonists, the school of thought that flourished in Alexandria between the first century BCE and second century CE, combining ideas from Plato and Aristotle. Meaning (e) reflects the Stoic doctrine of natural law, according to which the divine order of nature legislates a system of moral laws that provide a normative structure for human conduct. Regardless of the sources that shaped Philo's usage of *physis*, his writings articulated a teleological picture of nature that highlighted nature's rationality as well as its ethical import. The physical world is not inert matter, or stuff, but an organized, beautiful, and intelligible whole that was created by God according to a perfect model, the intelligible world of Ideas, which Philo called Logos.[171]

Philo's doctrine of Logos illustrates an original fusion of Platonic philosophy and Scriptures. On the one hand, the Logos is the expressed or uttered thought of God, following the language of Genesis that relates how God created the world through speech (*logos*). On the other hand, the Logos signified the world of intelligible Ideas or Forms, which serves as the paradigm or archetype for everything that exists in the actual world. The Ideas are the infinite archetypes of the actual world as the Ideas within the Logos or the Mind of God. The Logos is understood to be a copy or image of God. The Logos is the paradigm of human minds as well as of other things and the representation of God in the creation of the sensible world. In turn, the human is the "image of an image" (Op. 25; L.A. 3:96), or the cast of that image. In relation to God, the

171 See Harry A. Wolfson, *Philo: Foundations of Religious Philosophy: Judaism, Christianity and Islam* (Cambridge: Harvard University Press, 1948); David Winston, *Logos and Mystical Theology of Philo of Alexandria* (Cincinnati: Hebrew Union College Press, 1985).

Logos is an image or representation, and in relation to humanity, a paradigm or an archetype.

Philo's doctrine is clearly dependent on Plato's *Timaeus*. There, Plato depicts the creation of the world by a divine craftsman, the Demiurge. Being good, the craftsman wanted his creation to be as good as possible. Therefore, when the Demiurge was shaping the world, he looked toward an eternal and perfect model, and like all craftsmen, he used material that he found prior to the act of creation. Philo states: "God being God knew beforehand that a beautiful copy would never be produced apart from a beautiful pattern, and that no object of perfection would be flawless which was not made in the likeness of an original discerned only by the mind" (Op. 4, 16). Therefore, "when God was fashioning the world, He employed the Logos as His instrument, so that the arrangement of all things that He was completing might be faultless" (*Migration* I, 6).

The Logos contained the Ideas that served as patterns for the creation of the world. These patterns were used in the creation of the heavens, of all living and nonliving beings, of the world elements, and even of matter. Harry Wolfson explains that Philo "uses the term Logos in the sense of Nous, both as the mind of God which is identical with His essence and as a created mind which is distinct from His essence."[172] As an image of God (*eikon*), the Logos, or the intelligible world of Ideas in its totality, functions as the model for the material universe that God had created. The Logos is both an instrument (*organon*) that God used in creating the world as well as a cosmic power (*dynamis*) that is present in the world: as such, the Logos binds all things together and causes them to cohere. The Logos is the rational plan that governs the life of the universe. Philo's Logos doctrine was an ingenious solution to the tension between a more orthodox Platonism and the views of the Stoics as much as it was a compromise between the Greek philosophical sources and Philo's religious belief that God created the world.

172 Wolfson, *Philo*, 253.

The Logos of God is not a static entity, but a dynamic force that functions as the principle of rationality that pervades the universe. God, "the Father and Maker of the world," created the world and continues to sustain it and govern it after the act of creation. The act of creation expresses the goodness of God, which Philo considers the "creative power" of God, in contradistinction to the "regal power" by which God rules or governs the world.[173] The precise relationship between the Logos and the Powers of God is not always clear, but it seems that the Logos is ontologically prior to the Powers of God. The Philonic discussion of divine Powers probably reflects the impact of Stoic doctrine of seminal reason-principles (*logoi spermatikoi*) as much as it offers an early attempt to sort out the ontological status of divine attributes. The Powers are aspects of the divine Logos, which are the active elements of God's creative thought. The Logos functions as the "place" of the Ideas, the "container."

The two Powers of God, Goodness and Rulership, are often discussed in reference to Justice (*Dike*) and Wisdom (*Sophia*). Philo was familiar with the reflections on Sophia in the Jewish Wisdom literature, where Wisdom is said to be that by which God established the world (Proverbs 3:9). It is in Wisdom that all the works of God in the world are performed (Ps. 104:24), and Wisdom is imparted to men by God (Proverbs 2:6). By Philo's day, Wisdom was identified with the Revealed Law and with the Word of God, as we see in the *Wisdom of Ben Sira* and the *Wisdom of Solomon*, and was personified as female. In Philo's writing, too, Wisdom is understood as "female" in relationship to Logos, which is "male."[174] But Philo went much further than the Jewish Wisdom writers in analyzing Sophia, who is equivalent to Logos, but not identical with the Logos.

Sophia is envisioned as an organic cause of the world "through whom the universe came into existence." Philo's depiction of Sophia

173 See James Dillon, *The Middle Platonists*, 161.

174 The gender valence of Philonic metaphysics is explicated in Sharon Lea Mattila, "Wisdom, Sense Perception and Philo's Nature Gradient," *Harvard Theological Review* 89, No. 2 (1996): 103-129.

ascribes to her many of the epithets that Plato used to denote Matter in the *Timaeus*: She is "mother and nurse of the all" (*Ebr*. 8, 31), a usage suggested to Philo by Proverbs 8:22-23 where the Hebrew word *a-m-n* can be vocalized variously to mean either *amon* (i.e., nursling), *aman* (i.e., artisan), *omen* (i.e., nurse), or *imam* (i.e., their mother). The female life-principle assisted the supreme God in his work of creation and the continued governance of the created world. As such, Sophia, like Logos, operated as an "instrument" in the making of the world, an "active principle which shapes the ideas or paradigms derived from the world of forms into their corporeal objects in the material world."[175]

Philo's speculations about Logos, Sophia, and the Powers of God resonate with the Stoic teachings about the power of God (*dynameis*) that pervade the world throughout but do not exist as incorporeal beings outside the world. But Philo's views can also be read as a critique of Stoicism. The Stoics were materialists, and they understood the immanence of God in the world to mean that the divine Powers that pervade the world are made out of fire, the active principle out of which the world came into being. In Stoic thought, the powers are conceived as beings themselves—material things—and they are said to reside in material things, in the sense of their being intermingled with them. Philo was critical of this materialistic view, and his response to the Stoics is evident in his discourse on universal Nature.

Like the Stoics, Philo regarded the cosmos as a rational organism, fashioned by a semi-immanent Nature, as much as it is created by a transcendent God. But unlike the Stoics, Philo did not identify God with Nature as much as he did not identify Nature with Logos. For Philo, universal Nature is "the original, the earliest and the real cause" of all living creatures. Nature is "the foundation, or root, or whatever name you give to the beginning which precedes all else." Put differently, "uncreated, and eternal, universal Nature fashions

175 Mattila, "Wisdom," 128.

and even generates the material world."[176] Nature too operates in an iconic fashion, that is to say, it shapes the corporeal objects according to paradigms that lie beyond the material world. The "right reason" (*orthos logos*) of Nature is the Law by which Nature operates, and it is identified with the Law of the transcendent God, which Moses, the philosopher-prophet-king, revealed to Israel. In Philo's hierarchical schema, universal Nature functions between the material world and the non-material, intelligible world of Forms, namely the Logos. The non-corporeal Ideas in the Logos are the "seals" after which the sensible world is molded. Universal Nature uses these incorporeal patterns to bring forth finished products in the world of sense. In this regard, Nature functions like the master craftswoman, and it is by virtue of her power to shape and organize material things in accordance with an essential "right reason" that Nature can be regarded as the Law of Nature:

> Nature is uncreated yet she generates life, needs no nourishment yet gives it, changes not yet gives growth, admits neither of diminishment nor increase yet gives the ages of life in succession... she knows neither old age nor death. And why should we count it strange that the uncreated does not deign to use the good which belongs to the created? (Sacr. AC 98-100)

Nature then is identified with the cosmos she has formed, and like the cosmos, she is a living organism, having both "masculine" and "feminine" aspects. Her feminine side is material, suffering, and passive; the matter she has formed is somehow also part of her.

To summarize, Philo's conception of nature refracts the biblical notion of creation through the lens of Greek philosophy, blending elements from Plato, Aristotle, and the Stoics. God, "the Father and Maker of the World," created the Logos prior to the creation of the physical world, for which the Logos served as a paradigm. While the physical world is perceived by the human senses, the intelligible order of the world is accessible only to the intellect. The

176 Mattila, "Wisdom," 122.

Logos, Sophia, the Powers, and Nature are all abstract concepts that manifest different aspects of the intelligible order of the universe, which is evident in the rational structure and orderliness of the physical world.

The most original contribution of Philo to Jewish reflections on nature is found in the claim that the Law of Moses is a perfect written copy of the Laws of Nature. This idea reflects, on the one hand, the Jewish need to legitimate the authority of Mosaic Law against polemics of non-Jews, and on the other, the influence of the relatively novel construct of "laws of nature," which was coined by the Stoics. In the Stoic theory of natural law, it is not that the gods prescribe certain activities because they lead to just or good results but rather that the rightness of conduct can be seen to consist precisely in its conformity to the order created by divine reason. What is right or good is so, because it is prescribed by the gods.

It is easy to see why the Stoic doctrine of natural law was attractive to Philo, a Jew who believed that God revealed the moral law to Moses and the People of Israel. Philo gave the Stoic doctrine of natural law a distinctly Judaic flavor when he claimed that the Torah of Moses is the most perfect written copy of the natural law. In Philo's day, the authority of Mosaic Law was a hotly debated issue among the various factions of Judaism (e.g., the Pharisees and the Sadducees) as well as between Jews and Gentiles. The internal Jewish debate pertained to the scope of the concept of "Torah," especially in regard to the relationship between Written Torah and Oral Torah and the boundaries of the scriptural canon. Between Jews and Gentiles in the Hellenistic Near East, the debate was about the authority of the Jewish legal tradition, a particularistic tradition that conflicted with the universalistic tendencies of philosophy and the prevalent civic religion of the Roman Empire. The Jewish insistence on loyalty to their ancestral laws appeared odd to Gentiles, giving rise to the charge that Jews are misanthropic. In a philosophical environment that preached philosophic universalism, Jewish particularism indeed required explanation. Philo's version of the Stoic doctrine of natural law

provided the philosophical justification of Jewish particularism.

The key to Philo's theory is the portrayal of the prophet Moses as a perfect philosopher-ruler, the historical person who actualized the Platonic ideal ruler. What the Stoics claimed of Homer, Philo claimed of Moses, portraying him as a sage who acquired all the moral and intellectual virtues. Moses actualized the Stoic ideal of human perfection because he exercised the virtue of *apatheia*, the absence of passion. As the ideal Stoic sage, Moses's prophecy was noetically perfect, "the Mosaic mind ... the closest possible approximation of the Divine mind."[177] As David Winston puts it, in noetic prophecy, "the prophet's sovereign mind is entirely preempted by the divine Spirit, so that he become a passive 'medium' for the Deity's message, a conductor, as it were, for a higher source of energy."[178] In this mind-to-mind communication, the rational soul of Moses received the divine voice in a non-physical, non-sensual manner. Moses's perfectly rational soul grasped the fundamental principles of the universe, the unified vision of the intelligible world, and communicated it in figurative speech and a series of laws. As a revelation from God, the Torah of Moses contains, albeit esoterically, the structure of the universe that Moses comprehended.

By arguing that the Laws of Moses are copies of the laws of nature, Philo insisted on the rationality of the Mosaic Law, its universality, and objectivity. While only the Jews are enjoined to observe the Law of Moses, these laws cannot possibly be misanthropic because they in fact fit the very structure of the universe as created by God. And by arguing that the written Law of Moses is a copy of the Law of Nature, Philo could bolster the authority of Mosaic Law in the context of Greek philosophical debate about the authority of written versus unwritten laws. Philo presents Moses as perfect Stoic sage as well as the philosopher-king, thus proving that the Jews were ruled by a philosopher. To non-Jews, the message is clear: Moses is a

177 David Winston, "Judaism and Hellenism: Hidden Tensions in Philo's Thought," *Studia Philonica Annual* 2 (1991): 11.

178 Winston, "Judaism and Hellenism," 13.

perfect philosopher, whose laws are perfect because they imitate the Law of Nature. To Jews, the message was somewhat different: there is nothing un-Jewish about the engagement of philosophy and in theorizing nature. In fact, Moses, the perfect philosopher, was the teacher of Pythagoras! To interpret the Bible philosophically is therefore the most Jewish activity of all, and to read the Bible literally or anthropomorphically is an act of sheer idolatry.

Philo's doctrine of the Logos will undergird his allegorical exegesis of Scripture: the biblical text is necessarily allegorical because it mirrors the structure of reality in which the perceptible world is a copy of a paradigm, the Logos. Since Mosaic revelation mirrors the structure of reality, it is a mistake to read Scriptures either only literally or only allegorically: Scripture should be read both literally and allegorically. In his biblical commentaries, Philo showed how the literal level fits the level of sense perception and human embodiment; the figurative level is derived from comparison between humans and natural objects whose function is to teach certain ethical lessons, and the symbolic level is accessible only to the intellect and does not involve sense perception at all. The Philonic corpus thus consists of extensive references to the natural world of animals and plants, depicting Moses himself as a "good superintendent" of nature (i.e., "steward"), so that the Laws of Moses illustrate how humans should treat plants and animals. Philo's exposition of biblical laws concerning nature spells out their specific ecological wisdom.[179]

As profound and creative as Philo was, his philosophic rendering of Scriptures did not become normative Judaism. After the destruction of the Second Temple in 70 CE, it was the rabbis rather than Philo who became the authoritative interpreters of ancient Israelite religion, giving their interpretations of the Written Torah the status of Oral Torah. Rabbinic reflections became normative Judaism, whereas Philo's writings were preserved by Christians (who regarded Philo as one of the Church Fathers), and Hellenistic

179 Philo's interpretations of biblical laws about the land, plants, and animals.

Judaism basically disappeared after the destruction of Alexandrian Jewry in the riots of 115-117.[180] Until the fifteenth century, rabbinic Jews did not have direct access to the Greek writings of Philo, but Philo's ideas impacted Judaism indirectly. As we shall see below, echoes of Philo's theology of nature reverberate in both medieval Jewish philosophy and Kabbalah, although their understanding of nature diverged.[181]

Part II: MEDIEVAL JEWISH THEOLOGIES OF NATURE

Medieval Jewish intellectuals developed two distinctive theologies of nature: the rationalist philosophers followed Aristotle's philosophy of nature, whereas the Jewish mystics, especially the Kabbalists among them, were inspired by Platonic and Neoplatonic ideas of nature. Both Aristotelian philosophers and Kabbalists asserted that the world was created by God and that the Torah is the paradigm of creation, but the philosophers and Kabbalists interpreted this claim quite differently. For the philosophers, the act of "creation" pertains to bringing the cosmos into existence and instilling in it innate principles of change and growth, whereas for

180 David D. Runia, *Philo in the Early Christian Literature: A Survey* (Leiden: Brill, 1993); David Runia, *Philo and the Church Fathers: A Collection of Papers* (Leiden: Brill, 1995).

181 Tracing that process through which Philo's ideas influenced medieval Jewish philosophy was the gist of Harry Wolfson's scholarship. See Harry A. Wolfson, *Repercussions of the Kalam in Jewish Philosophy* (Cambridge: Harvard University Press, 1979). For Wolfson, premodern Jewish philosophy was a continuous intellectual strand that began with Philo and ended in Spinoza. See Harry A. Wolfson, *The Philosophy of Philo*. Volume I: *Philo: Foundations of Religious Philosophy in Judaism, Christianity, and Islam* (Cambridge: Harvard University Press, 1947); Harry Wolfson, *From Philo to Spinoza: Two Studies in Religious Philosophy* (Milburn: Behrman House, 1977). Philo's influence on Kabbalah is more indirect, primarily through Plotinus and the adaptation of Neoplatonism in Jewish mystical tradition. See Moshe Idel, "Jewish Kabbalah and Platonism in the Middle Ages and Renaissance," in *Neoplatonism and Jewish Thought*, ed. Lenn E. Goodman (Albany SUNY Press, 1992), 319-352.

the Kabbalists, "creation" was a process of emanation that began within the Godhead when the Hidden God became known in ten Powers called *Sefirot*, which serve as paradigms; the physical cosmos emanated from God and is structured like God.

The debate between the philosophers and the Kabbalists about the meaning of "creation" reflected a deeper debate about the meaning of science. The Jewish Aristotelian philosophers defined "science" (*madda*) as natural philosophy, as explicated by Aristotle and his Muslim interpreters. For the Jewish philosophers, Aristotle was the authoritative source of scientific truth, without which one could not understand either Torah or nature. When the Jewish philosophers discuss "the science of nature" (*hokhmat ha-teva*), they have in mind Aristotle's natural philosophy. By contrast, the Kabbalists denied that Aristotle's natural philosophy is authoritative; instead, they claimed that the revealed Jewish tradition is divine Wisdom (*hokhmah*) that is epistemically superior to Aristotelian science. The Kabbalists adhered to Platonic conception of science, which cohered with the belief that God created the world by a speech act; for the kabbalists, the world is a linguistic construct, or a book, that has to be interpreted hermeneutically. By explicating the philosophic and kabbalistic theologies of nature, we clarify how the discourse on Judaism and environment intersects with and the discourse on Judaism and science.

Moses Maimonides: Torah and Aristotle's Natural Philosophy

Cultural Transformation

After the Islamic conquest of the seventh century, the Jewish civilization underwent profound transformation, economically, socially, and culturally. By the tenth century, about 80 percent of the Jews lived in the orbit of Islam and took part in a civilization that boasted rapid urbanization, vibrant commerce and trade, and brilliant science and philosophy. Legally, Jews in Muslim lands were considered *dhimmi* (i.e., protected people) although they suffered

from various legal disabilities. Economically, Jewish life changed profoundly as Jews forsook agriculture and farming, concentrating instead on commerce and trade in thriving urban centers, where they benefited from "technological progress, trade expansion, and economic growth."[182] Jews participated in many aspects of economic life, except the civil service and bureaucratic positions, which were closed to non-Muslims. However, these legal restrictions were not enforced: especially in Muslim Spain outstanding Jews actually held positions in the bureaucracy of the Muslim state as financiers, diplomats, physicians, and scientists, and this class of Jewish courtiers cultivated philosophy and science, which they regarded as compatible with rabbinic Judaism.

Jewish philosophy emerged in the tenth century in response to the rise of Islamic rationalism. In the eighth and ninth centuries, the Abbasid rulers sponsored a massive translation movement that made available Greek, Hellenistic, and Roman philosophy and science in Arabic.[183] The translators (often Christian converts to Islam) relied on earlier translations of philosophy and science from Greek into Syriac, transmitting to the Muslim world Greek thought as presented, understood, and interpreted in the late Roman Empire.[184] As A. I. Sabra put it, this was not a passive process of "reception," but an active process of "appropriation," which gave rise to a spirit of critical inquiry that facilitated the rigorous

182 Martisella Boticini and Zvi Eckstein, *The Chosen Few: How Education Shaped Jewish History, 70-1492* (Princeton: Princeton University Press, 2012). The authors argue that this shift was not due to imposition of land taxes on Jews that made agriculture prohibitive but rather the result of the fact that the rabbis instituted obligatory public education, making the Jews (at least Jewish males) exceptionally literate. The shift from farming to commerce in the Islamic period was the result of the voluntary choice of Jewish farmers.

183 Dimitry Gutas, *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbasid Society* (London, New York: Rutledge, 1998).

184 Edward Grant, *History of Natural Philosophy: From the Ancient World to the Nineteenth Century* (Cambridge: Cambridge University Press, 2007), 61-68.

philosophical studies in medieval Islam.[185] Islam, however, set up a clear distinction between two types of knowledge and their respective methodologies: the science of sacred texts (e.g., Quranic exegesis, the science of Hadith, and Muslim jurisprudence with the preparatory linguistic disciplines) was distinguished from the "sciences of the ancients." Whereas the former was integral to Islam, the latter was labeled as "foreign sciences," whose validity and authority could be questioned.[186]

"Foreign" scientific knowledge was absorbed into the framework of Islam in two main ways: speculative theology (*kalam*) and philosophy (*falsafa*). Both were rationalist enterprises that used philosophical categories, but they offered two different ways of "Islamicizing" philosophical and scientific traditions. Kalam (literally, "speech" or "discourse") began by reflecting on the meaning of Quranic statement and was closely affiliated with early Sufi mystical practices, on the one hand, and the Muslim legal science of jurisprudence (*fikh*) on the other hand. By using logic and technical philosophical vocabulary, Muslim theologians gave rationalist exposition to the religious tenets of Islam, a faith that was still seeking articulation in this formative phase. By contrast, Islamic rationalist philosophy domesticated Greek philosophy, dominated by the Aristotelian (i.e., Peripatetic) school of late antiquity. Beginning with Al-Kindi (d. 870), flourishing in Alfarabi (d. 950) and Avicenna (d. 1037) in the Islamic East, and culminating in the works of ibn Bajja (d. 1138) ibn Tufayl (d. 1185), and Averroes (d. 1198) in the Islamic West, Islamic philosophy articulated a worldview that explained how all existent things, from the most corporeal (i.e., Prime Matter) to the most spiritual (i.e., God who is the Unmoved Mover and Necessary Being) form the hierarchical Great Chain of Being. This was a comprehensive philosophy in

185 A. I. Sabra, "The Appropriation and Subsequent Naturalism of Greek Science in Medieval Islam: A Preliminary Statement," *History of Science* 25, part 3, no. 69 (1987): 223-243, esp. 226-227.

186 See Sayyed Nasr and Oliver Leaman, eds., *History of Islamic Philosophy* (London: Routledge, 1996).

which nothing, including scientific knowledge, "was independent from a religious point of view, since the world was brought into existence by God and its constitution is formed by God."[187]

The all-inclusive character of medieval Islamic philosophy was in part due to the unique fusion of Aristotelian philosophy and Neoplatonism, the religious philosophy articulated by Plotinus (d. 270) in Alexandria and then spread to Rome, where it dominated the outlook of educated Romans well into the sixth century. Medieval Muslim philosophers regarded Neoplatonism not as a replacement of Aristotelian philosophy but as attempts to solve various problems within Aristotelian philosophy.[188] Therefore, they combined Aristotle's natural philosophy with the Neoplatonic doctrine of emanation: the world emanated from God necessarily in a hierarchical series of intermediaries, known as Separate Intellects. In this Neoplatonized Aristotelianism that dominated medieval Islam, Nature was reified as a distinct ontological rung in the Great Chain of Being that emanated from God, and Nature was manifested differently in the celestial realm of the heavens and the terrestrial realm of the sublunary world. Put differently, (upper-case) Nature was an ontological category, whereas (lower-case) nature was a cosmological category.

Arabic-speaking Jews could not remain indifferent to the rise of Islamic rationalism. A Jewish response was necessary, since Muslim theologians used their new mastery of logic to demonstrate the intellectual superiority of Islam over the two other monotheistic religions, Judaism and Christianity. In formal public debates, Jewish scholars had to defend the verity of rabbinic Judaism against representatives of the other monotheistic religions. Moreover, a rationalist defense of rabbinic Judaism was necessary because of the critique of rabbinic Judaism by the Karaites (sectarian Jewish

187 Oliver Leaman, *A Brief Introduction to Islamic Philosophy* (London: Polity, 1999), 53.

188 Christina D'Ancona, "Greek into Arabic: Neoplatonism in Translation," in *Cambridge Companion to Arabic Philosophy* (Cambridge: Cambridge University Press, 2005), 10-31.

Scripturalists), who denied the authority of the rabbis, challenged the concept of Oral Torah, and denounced the irrationality of rabbinic tales. Rabbinic Jews had to defend the rabbinic traditions against the Karaite critique, but the more they became familiar with Muslim philosophy, the more they were exposed to the natural philosophy of Aristotle. At least on the surface, Aristotle's natural philosophy conflicted with rabbinic Judaism: whereas rabbinic Judaism asserted that God created the world by Will, that God provides and sustains the world, and that God intervenes in the natural order through miracles, Aristotle held that the world was not created but was eternal, that nature is an immanent principle of change, that the laws of nature are fixed and unchanging, and that God does not intervene in nature by suspending natural laws. Could a Jew remain loyal to the rabbinic tradition while endorsing Aristotle's naturalism? Moses Maimonides (d. 1204) answered the question in the affirmative.

Maimonides argued that the conflict between rabbinic Judaism and Torah is only apparent; when both are properly understood, the conflict is resolved. He went even further to argue that the Torah could be properly understood only if one knows Aristotle's natural philosophy. By explaining the relationship between Torah and nature, Maimonides made it possible for rabbinic Jews to devote their life to Torah study and at the same time to engage in the scientific study of nature. Maimonides not only made it intellectually possible to live a Torah-centered life while engaging in the scientific study of nature, he insisted that only Jews who engaged in the study of nature could attain the religious goals of rabbinic Judaism: the knowledge of God. The ideal Jew is the one who studies nature scientifically. Maimonides conveyed his novel reinterpretation of rabbinic Judaism in an intricate manner that resulted in conflicting interpretations and even fierce opposition. As I explain how Maimonides integrated Torah and Aristotelian natural philosophy, one could not fail to identify the similarity to Philo, although Maimonides took his cue from Aristotle rather than from Plato.

Maimonides's Life and Works

Moses Maimonides was the most important Jewish philosopher in the Middle Ages and perhaps in the history of Judaism.[189] He was born in Cordoba, Spain in 1138, but the family was forced to leave Andalusia after 1148, when the Almohads (the Muslim rulers of Morocco who adhered to a fanatical form of Islam) conquered Andalusia and forced Jews and Christians to convert to Islam.[190] In

189 For recent intellectual biographies of Maimonides, consult Herbert A. Davidson, *Moses Maimonides: The Man and His Works* (Oxford: Oxford University Press, 2005); Joel L. Kraemer, *Maimonides: The Life and World of One of Civilization's Greatest Minds* (New York: Doubleday, 2008); Sara Stroumsa, *Maimonides in His World: Portrait of a Mediterranean Thinker* (Princeton: Princeton University Press, 2009); Moshe Halbertal, *Maimonides: Life and Thought* (Princeton: Princeton University Press, 2013); Micah Goodman, *Maimonides and the Book that Changed Judaism: Secrets of "The Guide for the Perplexed"* (Philadelphia: Jewish Publications Society, 2015). This book was originally published as *The Secret of the Guide of the Perplexed* (in Hebrew) (Tel Aviv: Dvir, 2010), and I cite the Hebrew original. The authoritative English translation of Maimonides's *Guide* is Shlomo Pines, trans., *The Guide of the Perplexed* (Chicago: University of Chicago Press, 1963). This edition is used herein, when page numbers of the Guide are listed.

190 On the anti-Jewish persecution of the Almohads, see Maribel Fierro, "The Religious Policy of the Almohads," in *The Oxford Handbook of Islamic Theology* (New York: Oxford University Press, 2016), 679-692. Maimonides was still a child when these events took place, and their precise impact on his family remains obscure. The fact that the family moved to Fez is odd, since Fez was the capital of the Almohad regime. That has led some historians to speculate that Maimonides and his family were forced to convert to Islam outwardly while retaining their Jewish identity privately. When the family could, it left Fez and resumed public practice of Judaism in Egypt. This experience may have led Maimonides to take a rather lenient position toward forced conversion to Islam in his "Epistle Concerning Conversion" (*Iggeret ha-Shemad*), also known as "Epistle on Martyrdom" (*Iggeret Kiddush ha-Shem*), which was written to a Jewish respondent who was forced to nominally profess Islam, apparently during the Almohad persecutions. Maimonides held that mere declaration of the Muslim confession of faith under duress does not render one a non-Jew. The text is discussed in David Hartman, *Epistles of Maimonides: Crisis and Leadership*, trans. Abraham S. Halkin (Philadelphia: Jewish Publication Society, 1985), 46-90; Joel Kraemer, *Maimonides: Life and World*, 104-115; Yair Loberbaum and Haim

1159, the family settled in Morocco, where they may have been forced to live outwardly as Muslims; in 1165, the family moved to Egypt, and there Maimonides rose to be not only the leader of Egyptian Jewry (*rais al-Yahud*) but also the physician in the court of the Ayyubid Sultan, Salah al-Din and his son, Al-Afdal. Maimonides uniquely combined legal authority, philosophic and scientific expertise, and political influence, and brought them to bear on his revolutionary interpretation of rabbinic Judaism. Maimonides is the prime example of a Jewish attempt to integrate religion and science, or more specifically, harmonize rabbinic Judaism with Aristotelian science.

Maimonides wrote three types of texts: medical, halakhic, and philosophic-scientific.[191] As a practicing physician, Maimonides's knowledge of the human body was based on the Hippocratic tradition as summarized by the Roman scientist-philosopher, Galen (d. 216). Maimonides wrote summaries of Galen's work for his own use and expounded on "a variety of medical issues (e.g., hygiene and regimen, asthma, hemorrhoids, toxicology, sexual medicine) at the request of his patrons."[192] Maimonides's legal (halakhic) works—the *Commentary of the Mishnah* and the *Mishneh Torah* (Code of Jewish Law)—were formulated in light of philosophical principles that Maimonides listed at the opening of the *Mishneh Torah*, his code of Oral Law. The *Mishneh Torah* codified not only Jewish practice, but also standardized and systematized "halachot

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Shapira, "Maimonides "Epistle on Martyrdom in Light of Legal Philosophy" *Dine Israel* 25 (2008): 123-169, which considers the debate between David Hartman and Haym Soloveitchik concerning the legal merits of the letter. Herbert A. Davidson, *Moses Maimonides: The Man and His Works* (Oxford, New York: Oxford University Press, 2005), 501-509 holds that the letter was not written by Maimonides.

191 For full and very detailed description of each category, the distinct methodology of each category and their interrelation, consult Herbert A. Davidson, *Moses Maimonides*: *The Man and His Works* (Oxford, New York: Oxford University Press, 2005).

192 Zvi Langermann, "Maimonides and the Sciences," in *The Cambridge Companion of Medieval Jewish Philosophy*, ed. Daniel H. Frank and Oliver Leaman (Cambridge: Cambridge University Press, 2002), 158.

of beliefs."[193] In so doing, Maimonides made clear that the study of Jewish law requires philosophical expertise and spelled out what Jews should believe. In the *Guide for the Perplexed*, his primary philosophical text, Maimonides explained how these same philosophical principles explain the correct interpretation of Scriptures. For Maimonides, both the Written and Oral Torah could not be understood without Aristotle's natural philosophy (including both physics and metaphysics). Maimonides held that what the rabbis called *Ma'aseh Bereshit* (Account of Creation) should be explicated in light of the science of physics, and what the rabbis called *Ma'aseh Merkabah* (Account of the Chariot) is to be explained by the science of metaphysics (MT, *Sefer Ha-Madda* 4:10). This was a radically innovative message that required Jews to become informed about Aristotle's natural philosophy and to interpret their sacred texts in light of it.

Nature as a Source of Knowledge about Divine Action

Maimonides is known as a negative theologian. That is to say, he maintained that God's essence remains in principle unknowable, and we can only speak about it negatively. The positive predicates that abound in religious language pertain not to God's essence but to God's actions in the world. It is the very observation of nature (namely, the study of physics) that tells us how God governs the world. Maimonides's *Guide* is filled with scientific information and presupposes scientific theories, but it is not meant to teach science per se. Rather, the *Guide* spells out the general *principles* that account for what we see in nature. What are those principles? First, in the natural world we see the combination of *change and permanence*: endless individuals come to be, mature, and die, but species remain constant. It is the form that determines the characteristic activities of members of the species. Second, in a given species, *most* members behave in characteristic ways, but

193 Isadore Twersky, *Introduction to the Code of Maimonides (Mishneh Torah)* (New Haven, London: Yale University Press, 1980), 77.

occasionally there are individuals that deviate from the norm because of their specific material conditions. Matter is the source of disorder, but these "pockets" of disorder do not negate the characteristic activity of the species that is determined by the form.[194] Nature in the sub-lunar world is *stable and orderly* because *for the most part* individuals of species act according to the form of their species. Third, in the world of nature we see complex living organisms (plants or animals) with multiple parts that function as an organized whole. What we call "nature" is the force that holds natural objects together (*Guide* I:72).

But what exactly does "nature" mean? As Raymond Williams has noted, "nature" is one of the most difficult words to define because of its complex structure and meaning.[195] R. G. Collingwood has identified sixty-six distinct definitions of nature and has shown how the conception of nature is subject to change along with scientific knowledge.[196] If one turns to *The Dictionary of Medieval Latin from British Source*s, one can find twenty-five distinct meanings for "nature" (*natura*) and twenty-nine for "natural" (*naturalis*).[197] The English word "nature" comes from the Latin word *natura*, which translated the Greek word *physis*. The Latin terms encompass "complex meanings and uses, which originally meant birth or origin, parentage, original stock," indicating the "inborn or inherent qualities or characteristic of a person or thing."[198] In Greek philosophy, *physis* stood in conflict to law (or what moderns would call "culture") as well as in contrast to that

194 I owe this expression to Micah Goodman, *The Secrets of the Guide* (in Hebrew), 264.

195 See Raymond Williams, *Problems in Materialism and Culture* (London: Verso , 1980), 68. For the variety of meanings of "nature," see *A New English Dictionary on Historical Principles*, ed. J. A. H. Murray (Oxford: Clarendon Press, 1901-1933), vol. 6, Pt 3, 41-42.

196 R. G. Collingwood, *The Idea of Nature* (Oxford: Clarendon Press, 1945).

197 Arthur O. Lovejoy and George Boas, *Primitivism and Related Ideas in Antiquity* (Baltimore: Johns Hopkins Press, 1935), "Appendix."

198 Gordon Kaufman, "The Problem for Theology: The Concept of Nature," *Harvard Theological Review* 65 (1972): 337-366, quote on 339.

which is made by humans, namely art. Greek philosophers wrestled with the question of how to grasp what nature is if the natural world exhibits constant change. That question was resolved in a variety of ways that gave rise to complex philosophies of nature, which would become relevant to the Jewish conception of nature.

As stated above, the Hebrew equivalent for "nature" is *teva*, and the word entered into Hebrew parlance not from Greek or Latin but from Arabic.[199] The Hebrew word *teva* is a translation of the Arabic word *tabi'a*, which derives from the root term *tab'*.[200] The word *teva* was coined by Samuel ibn Tibbon in his *Perush ha-Millot ha-Zarot* (Explanation of Foreign Terms), a philosophical dictionary that he created in order to render the Judeo-Arabic philosophic discourse of Moses Maimonides, the revered philosopher, whom he never actually met.[201] Capturing the meanings of *physis* and its Latin translation, *natura,* in Greco-Roman philosophical texts, the Arabic word *tabi'a* was used by Muslim philosophers to denote three things: (a) "what is inherent in the identity of things as what belongs to their essence/quiddity"; (b) "the adaptations that are impressed on things upon their creation, hence designating the eschatological state of being created with the predisposition to serve particular purposes and realize a certain destiny"; and (c) "the particulars of individuals, as well as acts as the essential first principle behind the motion and rest of that which it inheres, and is thusly the source of its alteration or permanence."[202] To reason

199 Jacob Klatzkin, *A Thesaurus of Jewish Terms and a Philosophical Anthology* (in Hebrew) (New York: Philip Feldheim, 1968), vol. 2, 55.

200 Nader El-Bizry, "The Conceptions of Nature in Arabic Thought," in *Keywords for a Different Kind of Globalization: Nature*, ed. Nadia Tazi (New York: Other Press, 2005), 65.

201 As we noted above, prior to the coinage of the word *teva,* Jewish thinkers referred to the physical world in the term *olam* and *beriah*. See Israel Efros, "The Philosophical Terms and Ideas of Abraham bar Hiyya (the Prince)," and "More about Abraham bar Hiyya's Philosophical Terminology," in his *Studies in Medieval Jewish Philosophy* (New York: Columbia University Press, 1974), 171-152.

202 El-Bizry, "Conceptions of Nature," 66-67.

about nature, then, included both theorizing about what makes a thing what it is in contradistinction to other things, as well as which principles explain motion and change in the physical world humans know through their senses. To speculate about "nature" means to reflect on the immanent order of the physical world.

For Maimonides as well as for Philo, the immanent order of the cosmos was impressed on matter by God. Indeed, the etymology of the Arabic word *tabi'a* as well as the Hebrew word *teva* mean that nature is *impressed* or *imprinted* in material things, causing them to develop in a particular way so as to actualize their innate nature.[203] The physical world manifests *purposefulness*: things do not exist in vain and do not happen randomly or by chance; rather everything, precisely as Aristotle taught, operates for the sake of actualizing its own nature, its own internal form. But in Aristotle's philosophy, there is no divine involvement in the world, since the God of Aristotle is a thought that thinks itself, whereas for Maimonides, the stability, orderliness, permanence, and purposefulness of the natural world are the empirical evidence for divine management of the world.

God's wise management of the natural world is what Maimonides calls the "divine ruse" (in Hebrew *ormah*; in Arabic, *talatuf*) (*Guide* III:30). In the natural world, the "divine ruse" is manifested in the fitness between Matter and Form over time: the body is able to consume only certain foods that are necessary for its growth at a particular time (*Guide* 3:32). This fit expresses the "goodness" of God and the identification of divine Will and divine Wisdom. Only in God, whose unity is indivisible, Will and Wisdom are identical: God wills what he knows, and the result is that God's voluntary action is wise. Maimonides applied the notion of "divine ruse" to the prophecy of Moses. When Moses asked God "to know your ways" (Ex. 33:13), God refused to reveal His Essence (i.e., His "Face"), but did reveal to Moses His "Back," namely, the "Glory of

203 Philo used the Greek word *physis* in the sense of God's "signet," which led me to hypothesize that Philo might have been the source of the Arabic and Hebrew translation of *physis*.

God" (*Kavod*) (*Guide* I:74). The "Glory" refers to the "goodness" of God's ways, and signifies the order of the natural world. The revelation to Moses was yet another example of the "divine ruse" by which God governs human beings through nature: through Moses, the perfect philosopher and perfect prophet, God manages human affairs, taking into consideration their particular material conditions.

God's Relationship with the Physical World

What is God's relationship with the physical world He has created? Here lies a major challenge in the interpretation of Maimonides: on the one hand, Maimonides's negative theology insisted that God is utterly transcendent to the world, but on the other hand, he taught us that we can learn something about divine action by observing the physical world. If so, there is indeed some relationship between God and the world. So, how does God relate to the world?

According to Aristotle's physics, God is the efficient cause of the world: God causes all motion and all change in the world and He brings all this about by rotating the spheres. Maimonides seems to affirm the Aristotelian account (*Guide* I:70) when he depicts the world as an organic whole in which "every internal motion derives from the motions of the heavens, and it is God who ultimately moves the heavens by keeping the outer sphere in permanent motion."[204] In the *Mishneh Torah* (Yesodey ha-Torah 1,5), he is even more explicit, stating that God "directs the sphere with a power that has no end or limit, with a power that never ceases to operate, since the sphere revolves perpetually, and it is impossible that it should revolve without a power that causes it to revolve." God then has a relationship with the uppermost orb, as Maimonides explains in *Guide* I:70 when he states, "the deity ... is the mover of the highest heaven, by whose motion everything that is in motion within this heaven is moved; at the same time, he, may he be exalted, is

204 Marvin Fox, *Interpreting Maimonides* (Chicago: Chicago University Press, 1990), 236.

separate from this [that is, the highest] heaven and not a force subsisting within it." This cryptic comment attempts to retain the radical transcendence of God while affirming that God has some relationship with the highest heavens, without being present inside the orb. As Gad Freudenthal explains, Maimonides went out of his way to differentiate between the highest orb and the rest of the heavens and he even suggests (*Guide* II:30) that the distinction between the highest orb and the heaven "is every bit as significant as between the heavens and the earth."[205]

Why does this point matter to our interpretation of Maimonides? Here is the answer: had Maimonides endorsed Aristotle's physics wholeheartedly, the world would have emanated from God *necessarily* and would have been governed strictly by the fixed laws that are not subject to change. Maimonides was not willing to endorse this naturalism and finds various ways to limit it or soften it. Therefore we find that Maimonides was rather ambiguous: on the one hand, God is indeed the Prime Mover of the world—"He is the principle and the efficient cause of all things other than himself" (*Guide* I:16, p. 142)—but on the other hand, God is not a force in the world and has direct relationship only with the outermost orb, which Maimonides identifies with what the rabbis called Aravot. The force that emanates from the outermost orb and "governs the body of living beings" is what we call "nature" (*Guide* I:72, p. 188). That force radiates or emanates from the uppermost orb through a series of intermediaries, the tenth and last of which is the Active Intellect. In several places in the *Guide*, Maimonides speaks about the Active Intellect as the Separate Intelligence that bestows the form of the species onto the material world (*Guide* I:62; 68; II: 11; 12, 18). Maimonides's Aristotelianism, then, was not identical to Aristotle's philosophy, because he followed the Muslim Aristotelian philosophers (especially Alfarabi and Avicenna), who understood the "active intellect" of Aristotle's *On the Soul* 3:5 to be

205 Gad Freudenthal, "Maimonides' Philosophy of Science," in *Cambridge Companion to Maimonides*, ed. Kenneth Seeskin (Cambridge: Cambridge University Press, 2005), 163.

a transcendent substance, which they identified with the tenth and last Separate Intelligence that emanates from the First Cause.

The Active Intellect is crucial for the connection between Torah and nature in Maimonides's theory. The union between the human mind and the Active Intellect is the acme of knowledge according to Maimonides, a perfection that he will ascribe to the prophet Moses. Maimonides argued that the Torah that Moses revealed to Israel mimics nature, which is governed by God through intermediaries, especially the Active Intellect. The Torah of Moses teaches philosophy in figurative and narrative language, so in the Bible the divine management of the world is expressed by using the divine name *Elohim* (in contradistinction to Yahweh). In the *Guide* I: 2, Maimonides explains that the divine name *Elohim* is an equivocal term that means "judges or rulers"; in relation to humans and in reference to God, it denotes divine governance of nature. From here it is a small step to identify *Elohim* with Nature, as indeed Jewish thinkers after Maimonides did. The identification of God and nature is commonly attributed to Baruch Spinoza in the seventeenth century, but Moshe Idel brilliantly showed that Spinoza's idea could be traced to Maimonides and to medieval Jewish philosophers and kabbalists who took seriously the fact that the numerical value of *elohim* (eighty-six, according to the numerology of the Hebrew alphabet) is identical to the numerical value of *ha-teva* (i.e., "the nature").[206] Spinoza's Pantheism had medieval Jewish antecedents.

The Origin of the Universe and Prophecy: A Puzzle

Maimonides was committed to negative theology because he insisted on the radical transcendence of God, but later Jewish Aristotelian philosophers such as Levi ben Gershom (Gersonides) (d. 1344) would argue that the causal relationship between God and the world makes it possible to speak positively, albeit analogically, about

206 Moshe Idel, "Deus Sive Natura: The Metamorphosis of a Dictum from Maimonides to Spinoza," *Maimonides and the Sciences*, ed. Robert S. Cohen and Hillel Levine (Dordrecht: Kluwer, 2000), 87-110.

God's essence: what exists in contingent things imperfectly exists primarily and perfectly in God.[207] The philosophical debates about divine attributes (i.e., theology) are directly related to discussion of the origins of the universe and the causal relationship between God and the world (i.e., cosmology). Rabbinic Judaism, of course, asserted that God created the world, but we already noted that the rabbis debated the precise meaning of the creative act and the order of the biblical narrative of creation. The medieval philosophers further explored the precise meaning of the act of creation: Did God create the world *ex-nihilo,* or did God create the world out of pre-existing matter? Two centuries prior to Maimonides, Jewish philosophers wrestled with the precise meaning of creation as they attempted to prove the rationality of rabbinic Judaism to Muslim intellectuals who valued rationalism, and Saadia Gaon (d. 942) offered the first systematic conceptual analysis of various theories about the origins of the world.[208] Maimonides was very familiar with the views of his predecessors, but he did not think that the doctrine of creation could not be rationally demonstrated. Instead, he asserted that the arguments in favor of creation are rationally more compelling than the arguments in favor of the eternality of the world.[209]

Maimonides intentionally obfuscated his views of the origins of the universe because he set up an *insoluble puzzle* when he asked his readers to correlate three views on the origin of the universe

207 On Gersonides's theory of divine attributes, see Seymour Feldman, "Levi ben Gershom (Gersonides)" in *Routledge History of Jewish Philosophy*, ed. David H Frank and Oliver Leamans (London, New York: Routledge, 1997), 379-398.

208 On Saadia Gaon's analysis of various theories about the origin of the universe, see Collette Sirat, *History of Medieval Jewish Philosophy* (Cambridge: Cambridge University Press, 1985), 23-31.

209 The secondary literature about the origin of the universe is extensive and cannot be cited here. Most useful are Kenneth Seeskin, *Maimonides on the Origins of the World* (Cambridge: Cambridge University Press, 2005); Kenneth Seeksin, *Maimonides: A Guide for Today's Perplexed* (West Orange, NJ: Behrman House, 1996), 43-62; Charles Manekin, *On Maimonides* (London: Thomson Wadsworth: 2005), 38-53.

with three opinions on prophecy. This is the so-called "cosmogony-prophetology puzzle,"[210] which has exercised the readers of Maimonides for centuries. I will not rehearse this complex debate but only tell you that according to one interpreter, Sara Klein-Braslavy, Maimonides probably did not have a definitive view on the origin of the universe, because he thought that at present the human intellect is unable to resolve the matter.[211] There was no conclusive demonstration of either the world's eternity or its creation. This conclusion, however, was categorically rejected by Marvin Fox, who insisted that Maimonides found some merit in each of these positions and that he offered "a syncretistic unification of elements of each of them" by affirming "the truth of each one up to a point and in a restricted context."[212] A third reader, Barry Kogan, may be right to suggest a middle ground between these readings, according to which all Maimonides had to do was show that the view that God created the world after absolute non-existence at a single point in the past and in conformity with God's Will and purpose is not impossible.[213] This is the view that Maimonides ascribes to the Mosaic faith when he asserts that the belief in creation "is undoubtedly a fundamental principle of the Law of Moses our teacher, peace be upon him, and is the second to the fundamental principle of belief in the unity of God" (*Guide* II:13).

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210 This phrase was coined by Warren Z. Harvey, "A Third Approach to Maimonides' Cosmogony-Prophetology Puzzle," *Harvard Theological Review* 74 (1981): 287-301. For an overview of the scholarly debate about what Maimonides truly believed about creation, see Norbert M. Samuelson, "Maimonides' Doctrine of Creation," *Harvard Theological Review* 84:3 (1991): 249-71.

211 Sara Klein-Braslavy, "Interpretation of Maimonides on the Term 'Create' and the Question of the Creation of the Universe" (in Hebrew), *Da`at* 16 (1986): 39-55; Sara Klein-Braslavy, *Maimonides' Interpretation of the Story of Creation* (in Hebrew) (Jerusalem: Reuben Mass, 1987).

212 Marvin Fox, *Interpreting Maimonides*, 293.

213 Barry Kogan, "The Problem of Creation in Late Medieval Jewish Philosophy," in *A Straight Path: Studies in Medieval Philosophy and Culture*, ed. Ruth Link-Salinger (Washington, DC: The Catholic University of America Press, 1988), 161-164.

I conjecture that Maimonides had to endorse the traditional views of temporal creation for legal (Halakhic) reasons, since it functioned prominently in the calculations of the calendar.[214] Nonetheless, Maimonides recognized that there are arguments in favor of the opposing Aristotelian view, which are valid on specific points but on the whole less compelling than the Mosaic view. Maimonides resolves the tension between the two opposing views of the world's creation *ex-nihilo* and eternality by offering a middle position: taken as a whole, the cosmos is contingent and created in such a way that God willed it to be: after absolute non-existence, without recourse to a preexistent matrix, and at a point in the past distant from the present. But in terms of its individual parts, the created universe conforms for the most part to the principles of Aristotelian physics, which allows for rational necessity in the universe and causal knowledge.

Moses the Natural Philosopher

The connection between the theories of the origins of the universe and the phenomenon of prophecy is crucial to understanding the place of nature in Maimonides's reinterpretation of rabbinic Judaism. Maimonides gives a whole new meaning to the belief in revelation in his rationalist exposition of the phenomenon of prophecy, especially the prophecy of Moses, "the master of all prophets" and the "master of all philosophers." Indeed, the prophecy of Moses is the crux of the claim that *the Torah of Moses corresponds to the natural world* because Moses has fully comprehended how God manages the natural world.[215] The correspondence of the Torah and the natural world is not an entirely new idea, since it was first articulated by Philo. Indeed, there is considerable similarity between Philo and Maimonides on this point, even though Maimonides did not have direct access to Philo's writings. As we have explained, Philonic

214 Maimonides, *Mishneh Torah*, Hilkhot Kiddush ha-Hodesh 9:3-4.

215 The most elaborate explication of this point is available in Eliezer Hadad, *The Torah and Nature in Maimonides' Writings* (in Hebrew) (Jerusalem: Magnes Press of the Hebrew University, 2011).

ideas reached Maimonides through the intermediaries of Muslim philosophers who were familiar with the works of the Christian Church Fathers, among them, Philo.[216] The two Jewish philosophers were quite different in their philosophical orientation, since Philo largely endorsed Plato's philosophy, whereas Maimonides was closer to Aristotle (although his Aristotelianism was suffused with Platonic themes). Both Jewish philosophers, however, presented the prophet Moses as a natural philosopher and the Torah of Moses as a Law that corresponds to the natural order.

Maimonides offered a rationalist and naturalist interpretation of the phenomenon of prophecy. He endorsed the views of the Muslim Aristotelians that prophecy is not a gift from God or a miracle in which the laws of nature are violated by God but rather a natural human achievement when certain conditions are present. Prophecy occurs in those individuals who possess three perfections: perfection of moral character, perfection of the intellect, and perfection of the imagination. The first perfection is attained if one lived in accordance with the doctrine of the Mean as elaborated by Aristotle, the second perfection is attained by those who study philosophy and its related sciences, and the third perfection happens naturally in individuals whose imaginative faculty is particularly developed. The prophetic experience takes place when abstract knowledge saturates the human intellect and is translated by the imagination into visual or pictorial language. However, the prophets' imagery reflects their individual differences due to their specific physical and social location. This process is totally naturalist and is rooted in the very processes of nature, in which God is not directly involved. God can, however, exercise freedom by preventing prophecy from occurring.

If the phenomenon of prophecy is natural, does that mean that

216 See Harry A. Wolfson, *Repercussion of the Kalam in Jewish Philosophy* (Cambridge: Harvard University Press, 1979); Harry A. Wolfson, *The Philosophy of the Kalam* (Cambridge: Harvard University Press, 1976); Harry A. Wolfson, *The Philosophy of the Church Fathers* (Cambridge: Harvard University Press, 1974).

the Torah of Moses is also "natural"? Maimonides indeed states that the "Torah has a relationship to nature" (*Guide* II: 40), but his exposition of Mosaic prophecy insists on the fundamental difference between Moses and all other prophets. In the *Mishneh Torah* (Hilkhot Yesodey ha-Torah 7:8), Maimonides delineates the differences: Moses was addressed by God directly, whereas all other prophets were addressed through an intermediary; Moses received his prophecy in broad daylight, whereas others prophesied while being less aware; Moses experienced no fear and trembling, whereas the other prophets were overcome with dread; finally, Moses could prophesy whenever he wished, whereas others were totally dependent on God's Will for their prophecy. These differences are all ascribed to the fact that Moses transcended human corporeality. That is to say, Moses suppressed his senses, appetites, and desires to the utmost minimum so that his body no longer functioned as a "veil" between him and God, so that he "attained the angelic." Transcending human corporeality, Moses contemplated the natural world and apprehended how God manages it. Maimonides, as I have argued elsewhere, was too good a philosopher not to know that this claim cannot be demonstrated philosophically.[217] Therefore, he asserted the uniqueness of Moses's prophecy as a central dogma of the Thirteen Principles of the Jewish faith (namely, dogmas) that Jews are obligated to affirm if they are to experience the bliss of immortality, which the rabbis called "the world-to-come" (*olam ha-ba*).

Maimonides's seventh Principle of Judaism asserts the supreme excellence of Mosaic prophecy as well as the difference between Moses and all other prophets. Maimonides both offers a naturalistic explanation of the phenomenon of prophecy and presents Moses's prophecy as one of the mysteries, or inner, hidden teachings of the

217 Hava Tirosh-Samuelson, *Happiness in Premodern Judaism*, 224-229. On the role of the Thirteen Principles in the philosophy of Maimonides, see Menachem M. Kellner, *Dogma in Medieval Jewish Thought: From Maimonides to Abravanel* (Oxford, New York: Oxford University Press, 1986).

Torah (*sitrey torah*). Moses transcended normal human cognition and reached the level of the "angelic" in terms of his cognition. Maimonides equated the Separate Intellects with the "angels" of the Jewish tradition. When Moses prophesied at Sinai, his intellect united with the Active Intellect, which the Jewish tradition calls *ishim*. This act of conjunction enabled the prophet Moses to grasp the structure of the physical world in its totality in one intuitive grasp. Maimonides insists that Moses's corporeal body was not involved in this cognitive experience itself, even though Moses did not become an angel himself and did not lose his corporeal nature entirely. After the prophetic experience, the prophet Moses translated the pure abstract knowledge he attained during the out-of-body experience into human language that all Israel could understand. This is precisely what the rabbis meant when they insisted that the "Torah speaks in human language of men" (*dibrah Torah bi-leshon beney adam*).[218] The Torah of Moses is perfect not only because Moses's cognition was perfect, but also because his imagination was perfect. The deep and correct understanding of the Torah shows how it *corresponds to nature and how the Torah governs humanity as God governs nature*. Ideally, Jews should study Torah in light of nature and conversely study nature in light of the Torah.

Let me recap how the Torah relates to nature. First, the Torah manifests purposefulness or teleology, since its commandments are designed to enable human beings to actualize their intellectual potential. The entire system of commandments is an elaborate teleological structure designed to enable human beings to reach intellectual perfection and be like God in some respect. This is what the Torah meant when it stated that God created the human in the "divine image." It is the capacity to cognize truth that makes the human in some way "like God" (yet another major source of ambiguity in Maimonides's teaching). Second, the Torah illustrates

218 On this principle in Jewish philosophy, see Amos Funkenstein, "Medieval Exegesis and Historical Consciousness," in his *Perceptions of Jewish History* (Berkeley: University of California Press, 1993), 88-130.

the fit between fixed, universal, formal principles and changing material particulars. The commandments of the Torah take into consideration the specific material conditions of humanity. A primary example is the commandment to sacrifice animals to God. The system of sacrifices was but a concession for the relatively low level of intellectual development at that point in human history. Because human beings needed to worship God through concrete objects, the Torah commanded the sacrifice of animals. The later abolition of the sacrificial cult was not an accident of history but an expression of a higher level of intellectual development, when prayer replaced sacrifice as a means for communication with God. As in nature, the Torah manifests the "divine ruse" in its attentiveness to the progress of humans. Third, both Torah and nature illustrate the principle of *"for the most part."* As much as in nature not all material individuals conform to the form of the species, so in the Torah the commandments do not pertain to what is good for each and every individual in specific cases, but for what is good for the human species as a whole.[219] The general law is applied to individual cases "for the most part." The ultimate goal of the Torah is to shape human self-management in order to enable humans to achieve their ultimate end, the knowledge of God, to the extent that God can be known by humans.

Nature, Society, and Human Perfection

The knowledge of nature, according to Maimonides, enabled Moses to set up the most perfect political order in which human beings live the well-ordered, balanced life, which is necessary for the attainment of the ultimate end of human life: the perfection of the rational soul. From Alfarabi, Maimonides absorbed the application of Plato's political theory to a monotheistic religion: the philosopher-ruler Plato is the prophet whose religious law governs the ideal state.[220] Whereas Alfarabi did not name Muhammad as

219 Haddad, *The Torah and Nature in Maimonides' Writings*, 189.

220 Maimonides's indebtedness to Alfarabi has been documented by many

the ideal philosopher-ruler-prophet, Maimonides did so in regard to Moses. The Torah of Moses establishes the ideal polity in which human beings attain the "well-being of the body" (*tikkun ha-guf*) and the "well-being of the soul" (*tikkun ha-nefesh*).[221] By "well-being of the body," Maimonides refers first to physical health, which is accomplished when the lower, physiologically related functions of the soul are governed by the upper, cognitive function, the rational soul. Physical health requires self-control and wise management of the body, enabling a person to do what is "just right," not "too much" and not "too little," not "too early" and not "too late," precisely as Aristotle explained in the *Nicomachean Ethics* and Maimonides endorsed (with a few important modifications). By doing the right thing for the right reason, human beings cultivate the moral virtues that for Maimonides belong to the "well-being of the body" rather than to the "well-being of the soul." The latter is accomplished only when human beings acquire true beliefs and actualize their rational potential to acquire the theoretical virtues, wisdom and intelligence. The ultimate end of human life, then, is the perfection of the intellect, by which human beings are in some way like God.

The quest for perfection takes place in the corporeal world and makes possible for those individuals who live by the perfect law to aspire to perfection. The perfect Law (i.e., the Torah) secures the intrinsically good life, and those who live by its commandments enjoy well-being of body and soul. Those who grasp the true, inner meaning of the Torah are able to actualize their rational potential and achieve intellectual perfection. For the individual Jew, the perfection of the intellect is what the rabbis meant when they spoke about "the world-to-come" (*olam ha-ba*). This is "the ultimate and perfect reward, the final bliss that will suffer neither interruption

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studies. See Howard T. Kreisel, *Maimonides' Political Thought: Studies in Ethics, Law, and the Human Ideal* (Albany: State University of New York Press, 1999); Abraham Melamed, *The Philosopher-King in Medieval and Renaissance Jewish Thought*, edited with a forward by Lenn E. Goodman (Albany: State University of New York Press, 2003).

221 I discuss it in detail in *Happiness in Premodern Judaism,* 231-238.

nor diminution" (MT Hilkhot Teshuvah 9:2). For Maimonides, the intellectual state known as "world-to-come" has nothing to do with the apocalyptic or eschatological drama of the messianic age as depicted in rabbinic sources. Indeed, for Maimonides, the messianic age is understood in strict naturalist categories: nature will remain the same and the only difference will be *political*. In the messianic age, Israel will be liberated from foreign domination and Jews will live in peace in their sovereign polity, governed by the Torah, which will enable them to attain the "final perfection" of human life: the love of God, to the extent that God can be known. In the messianic age, there will be no impediment to the study of philosophy, and all Jews will experience the ideal life. The attainment of "the world-to-come" does not depend on the messianic age; the individual Jews who live by the strictures of Torah, understand its philosophic-scientific truths, and actualize their rational potential can experience the "world-to-come" prior to the messianic age. The "world-to-come" is the cognitive perfection that denotes the bliss of contemplation of eternal truths, the activities that perfected intellect experience after the death of the body. Maimonides's intellectualist, individualistic, and elitist understanding of the afterlife would incur major criticism and repeated attacks throughout the Middle Ages. There were many reasons for the criticism, including the fact that Maimonides predicated the attainment of the afterlife, which is the goal of Jewish religious life, on the knowledge of nature by means of philosophy and science.

Maimonides concludes the *Guide* with the famous parable about a king who is ensconced in his palace and the people who stand in proximity to the king. The parable divides human beings into classes arranged in a hierarchical order. Each class represents a certain phase in the perfection of knowledge, from utter ignorance through several levels of intellectual perfection in an ascending order that corresponds to the hierarchy of the sciences. The ladder of perfection culminates in the knowledge of God by the prophets, who "direct all the acts of their intellect toward an examination of the beings with a view to drawing from them proofs with regard

to him." The highest phase of the knower of God is the intimate presence of the knower in the inner chambers of the king's palace. The meaning of the parable is that those who live by the Torah can attain moral and intellectual perfection, culminating in the final perfection: the intellectual love of God.

What makes his interpretation so unique is the insistence that this contemplative activity results in action when the knower of God imitates divine governance of nature in the social realm of human affairs. Politics is not only the means to attain human perfection, it is also the realm where human perfection is expressed when humans "walk in God's ways."

Knowledge of Nature and Human Treatment of Nature

In sum, Maimonides articulated a very intricate and complex theory about the relationship between nature and Torah, or cosmos and Scripture. According to this theory, Jews who seek to live a religious life must study the natural world by means of available philosophy and science. Nature is the arena that manifests divine action, and the only positive knowledge we can have of God comes from understanding the causal structure of nature. The archetype for that approach is no less than the prophet Moses, a perfect philosopher and a perfect prophet, whose knowledge of nature resulted in legislative activity, namely, the Torah of Moses. Properly interpreted, the Torah of Moses corresponds to nature and its laws create the perfect social order within which humans can attain perfection. Those who live by the laws of the Torah can reach the highest form of knowledge available to humans, the knowledge of God, which results in the immortality of the intellect. The prescriptions of the Torah instruct those who observe it about proper management of all aspects of life, including attitudes toward their own physical body, the physical environment, and non-human natural objects. The more one understands the structure of nature (i.e., cosmology), the more one can fathom the meaning of the Torah's laws that govern human actions toward nature (i.e., ethics).

The connection between knowledge of nature and action toward nature is made clear in the *Mishneh Torah*. There, Maimonides codified the rabbinic program for the sanctification of nature: the laws of Sabbath, festivals, and holy days that sanctify time are codified in MT Zemanim; the laws that sanctify relations between men and women within the institution of marriage are codified in MT Nashim; the laws the sanctify the human body, that is, sexual relations and the food humans consume, are codified in MT Kiddushin; and the laws that govern land management in relation to social justice are codified in MT Zera'im.

Together, all these laws establish the well-balanced social order as well as the well-balanced human personality that are necessary for the attainment of human perfection. Those who live by Mosaic Law treat the physical environment wisely: they do not exploit natural resources for their own greedy needs, they do not treat animals with cruelty, and they do not live selfishly. Rather, they understand the connection between social justice and the well-being of the land, they avoid wanton destruction of natural resources, and they prevent the unnecessary suffering of animals. The ecological wisdom of rabbinic environmental legislation, then, illustrates the perfection of the Torah and its correspondence to the wisdom of nature. Unlike the rabbis of the Mishnah and Talmud, for whom the commandments of the Torah sanctify nature, by investing physical entities with religious meaning that transcends nature, Maimonides suggests that the Torah is perfect because it corresponds to nature. The transcendence of nature in the attainment of intellectual perfection is also part of nature, in the sense that it can be explicated by philosophic and scientific theories.

Torah as the Code of Nature in Kabbalah

Maimonides's Aristotelian theology of nature is very different from the conception of nature in Kabbalah, the Jewish mystical tradition. The very inclusion of Kabbalah in this series of lectures on religion and science is not self-evident, since Kabbalah presented itself as

a critique of the science of its day (namely, Aristotelianism) and it is commonly, but mistakenly, believed that Kabbalah is inherently anti-science. In truth, the story is much more complex, because of the ambiguity of the word "science" and because of the complexity of Kabbalah and its use of scientific information.[222] We need to include Kabbalah in our exposition of Jewish theologies of nature, because Kabbalah has been a major strand within Judaism from the twelfth century to our own day. It is simply impossible to speak about Judaism without reference to Kabbalah, since Kabbalah greatly elaborated and enriched the sacred myth of Judaism.[223] Furthermore, in the early modern period, Kabbalah influenced the conceptions of nature of European philosophers, chief among them Benedict Spinoza.[224] Pantheism, which was adopted by the

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222 See Hava Tirosh-Samuelson, "Kabbalah and Science in the Middle Ages, Preliminary Remarks," in *Science in Medieval Jewish Cultures*, ed. Gad Freudenthal (Cambridge: Cambridge University Press, 2011), 476-510. The following section is based on this essay.

223 The literature on Kabbalah is too vast to be cited. The best overview that presents Kabbalah as an elaboration of the Judaic sacred myth is Moshe Idel, *Kabbalah: New Perspectives* (New Haven: Yale University Press, 1990).

224 Benedict Spinoza (d. 1677), the main example of early modern Pantheism, was influenced by Kabbalah. Spinoza was a born into an ex-converso family in Amsterdam in 1632 but was excommunicated from the Jewish community of Amsterdam in 1656. On Spinoza's indebtedness to Kabbalah, see Johan Aanen, "The Kabbalistic Sources of Spinoza," *The Journal of Jewish Thought and Philosophy* 24 (2) (2016): 279-299; Rocco A. Astore, "Was Spinoza a Kabbalist? The Influence of Jewish Mysticism in Book I of the *Ethics*," *Inquiries: Social Sciences, Arts and Humanities* 8, no. 11 (2016): 1-21. Spinoza's Pantheism became a major point of disputes among Jews in the late nineteenth century and early twentieth century. Spinoza was critiqued by Hermann Cohen (d. 1918), the German-Jewish Neo-Kantian philosopher, for his failure to value the moral insight of Jewish ethical monotheism. See Yitzhak Y. Melamed, "Cohen, Spinoza and the Nature of Pantheism," *Jewish Studies Quarterly* 25 (2015): 1-10. By contrast, Zionism enthusiastically accepted Spinoza as a forerunner and the person who made possible secular modernity. The heresies for which Spinoza was expelled from the Jewish community of Amsterdam were welcomed by Zionists who sought to reverse the ban. See Yirmiyahu Yovel, *Spinoza and Other Heretics: The Adventures of Immanence* (Princeton: Princeton University Press, 1991). For the Zionists,

Romantics in the nineteenth century, would greatly influence environmental thought of the twentieth century.[225] Finally, and most pertinent to us, medieval Kabbalah and its eighteenth-century offshoot, Hasidism, have been the main inspiration for contemporary Jewish eco-theology today.[226] The gist of the kabbalistic approach to nature was to see nature itself as a linguistic construct made out of the letters of the Hebrew alphabet and ten Powers known as *Sefirot*.

Kabbalah and Ancient Esotericism

Kabbalah is the Jewish esoteric tradition that emerged in the twelfth century in Provence and flourished in Spain in the thirteenth century, to be further elaborated in the sixteenth century, after the Jews were expelled from Spain in 1492.[227] Kabbalah traces its roots to rabbinic esotericism, especially the speculations known as Hekhalot and Merkabah literature. This corpus is rooted in the activities of anonymous Jews (perhaps even non-rabbinic groups) who cultivated ecstatic experience in which the religious practitioner would undergo out-of-body experience with the goal of reaching the divine palaces (*Hekhalot*) and there to envision the beauty of God. The extant texts ascribe the experience of known

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Spinoza's identification of God and nature was not a heresy. The debate on Spinoza's Pantheism reflects the tension between "creation" and "nature" discussed in this lecture.

225 See Stephen R. L. Clark, "Pantheism," in *Spirit of the Environment: Religion, Value and Environmental Concern*, 42-56.

226 The indebtedness of contemporary Jewish environmentalism to Kabbalah is expressed most elaborately by David Mevorach Seidenberg, *Kabbalah and Ecology, God's Image in the More-than-Human World* (Cambridge: Cambridge University Press, 2015); David Mevorach Seidenberg, "Kabbalah and Ecotheology," *Encyclopedia of Religion and Nature* ed. Bron R. Taylor (London: Continuum, 2005), 945-950. I explore the impact of Kabbalah on contemporary Jewish environmentalism in Lecture 3.

227 For an overview of Kabbalah and the precise relationship between Kabbalah and "Jewish mysticism," see Hava Tirosh-Samuelson, "Jewish Mysticism," in *The Cambridge Guide to Jewish History, Religion and Culture*, ed. Judith R. Baskin and Kenneth R. Seeskin (Cambridge: Cambridge University press, 2010), 399-423.

rabbinic figures (e.g., Rabbi Nehunya ben Ha-Qanah, Rabbi Yishmael, and Rabbi Akiba), but there is no way to prove that these rabbis actually underwent such experiences. It is more likely that ascribing the experience to rabbinic figures intended to give them authority.

The Hekhalot and Merkabah literature was produced between the second and sixth centuries, and in it, anonymous Jewish mystics asserted the link between the Hebrew language and God's creative power. For example, *Hekhalot Zutarti* (The Lesser Palaces) focuses on the omnipotent presence of God, assuming that power is concentrated in the divine Name; the mystic to whom the divine Name is revealed is able to impact the physical world, namely, engage in magic. The prototypical mystic in this corpus, Rabbi Akiba, is depicted as one who is authorized to transmit the revelation of the divine Name to humanity. Because of his knowledge of the divine Name, Rabbi Akiba was able to go through the experience and come out unscathed. The Name, however, is dangerous and must be guarded and remain esoteric, divulged only to those who are worthy of it. The successful experience of the mystic who reached the divine palace culminates in the visualization of God's luminous, non-corporeal body. The *Hekhalot Zutarti* therefore contains a unit depicting the Stature of God (*Shiur Qomah*), which lists God's limbs and organs, each of which has a name (in fact several names) composed of letters of the Hebrew alphabet, and each is given a precise measurement in Persian units of measurement. Knowledge of the precise measurements of the divine stature does not emerge out of exegetical activity, nor is it presented as a reward for observance of the commandments; rather it is factual (or "scientific") knowledge, or wisdom. Those who possess wisdom attain immortality in the afterlife.

In the extant texts, the information about the divine stature is tied exegetically to the biblical text of the Song of Songs: God is identified with the male lover and Israel with the female beloved. Thus from the very inception of the Jewish mystical tradition, the secrets about God gained through ecstatic experiences were

expressed in erotic language manifesting desire to become intimate with, and even one with, God. Most relevantly, the pursuit and attainment of knowledge about God, the empowerment of the knower to effect changes in the self or in the physical world, and the ability of the knower to interact with God were all linked to the Hebrew language. The foundational assumption of the Jewish mystical tradition is that Hebrew is the language by which God created the world and through which God communicates his omnipotent power, the most concentrated form of which is the divine Name.

Sefer Yetzirah: Nature as a Linguistic Construct

The foundation of this linguistic theory was the anonymous *Sefer Yetzirah* (The Book of Creation). *Sefer Yetzirah* stood at the heart of the Jewish esoteric speculations about the origin and structure of the universe (i.e., *Ma'aseh Bereshit*) and is the earliest expression of the notion that nature is a text. A rewrite of the biblical Book of Genesis, *Sefer Yetzirah* delved into the mysteries of creation, depicting God as a Great Magician/Artist who created the world by manipulating the twenty-two letters of the Hebrew alphabet and the ten Sefirot.[228] Together these constitute thirty-two "wondrous pathways of wisdom," whose infinite permutations, through deconstruction and recombination, explain space, time, and life (especially human life). The Sefirot were understood either as ideal numbers or as Powers that govern the creation of the physical cosmos.

As a rewrite of Genesis, *Sefer Yetzirah* sought to capture the paradox of the creative process: on the one hand, the Sefirot express unlimited creative energy, but on the other hand, the creative energy is shaped through the limit of the number ten. The Jewish intellectuals who generated *Sefer Yetzirah* understood creation

228 On *Sefer Yetzirah* as a revision of Genesis, its dependence on Plato's *Timaeus,* and its linguistic theory, see Yehudah Liebes, *Ars Poetica in Sefer Yetzirah* (in Hebrew) (Jerusalem: Schocken, 2000).

as a linguistic process and regarded the cosmos as a linguistic/mathematical construct made from infinite permutations of the letters of the Hebrew alphabet, which have numerical values. Since the physical universe, or nature, is a book, knowledge of nature is possible only to those who possess the linguistic and textual skills to decipher the Book of Nature. According to *Sefer Yetzirah*, God the Author/Poet constructed the three-dimensional world from more elemental units, or "building blocks," of the cosmos. *Sefer Yetzirah*'s theory of letters and Sefirot amounted to a "linguistic ontology" and a "cosmic semiotics," phrases the capture the linguistic quality of creation.

The terse, poetic, and dense text of *Sefer Yetzirah* did not depict natural processes of the created world but rather the first principles—the ten Sefirot and the twenty-two letters—that God "inscribed" and "engraved" into the ideal model of the universe. In the linguistic/numerical model of *Sefer Yetzirah*, the universe is described as a three-dimensional cube whose sides desire to extend infinitely. Did the anonymous author of *Sefer Yetzirah* invent these ideas? Not really! As I explained above, these ideas were the core of Plato's cosmological theory as expressed in the *Timaeus*, a text that was studied by many Neo-Pythagorean mathematicians in antiquity and by Jewish philosophers such as Philo. In the *Timaeus*, Plato described the universe as a geometrical model constructed of the elemental numbers. The mathematical approach reflected a very different understanding of "science" than the one articulated by Aristotle, Plato's student.

James A. Weisheipl succinctly put it that Plato "denied the status of true 'scientific' knowledge to any theory of the natural world. For Plato, ultimate understanding of the phenomenological world was to be sought in mathematics and dialectics, which alone deserves the name of 'science.'"[229] In the Platonic worldview, scientific knowledge pertains not to the natural world perceived

229 James A. Weisheiple, "Aristotle's Concept of Nature: Avicenna and Aquinas," in *Approaches to Nature in the Middle Ages* (Binghamton: Medieval and Renaissance Texts and Studies, 1982), 143.

by the senses but to the intelligible Forms, the eternal, timeless, changeless realities that are arranged in a hierarchical order, dominated by the Form of the Good, and function as the first principles (*archai*) of the world. Properly speaking, only knowledge of the intelligible Forms constitutes "science" (*Timaeus* 27d028a), but such knowledge is the privilege of the gods and of a small number of their friends (Phaedrus 278a). By contrast, knowledge whose objects are sensible particulars is no more than "opinion" (*doxa*), an inferior type of knowledge that is similar but not identical with true knowledge. The two orders of reality—the intelligible and the sensible worlds—yield different orders of knowledge

Plato had to explain how it is possible to know the ever-changing sensible world, if true knowledge (*episteme*) can have as its objects only the intelligible Forms which remain inaccessible to human beings. Plato answered this question in the *Timaeus* by offering a theory about the creation of the sensible universe by an artist god, the Demiurge (or Craftsman), who is good but not omnipotent, and who orders the primordial stuff (*khora*) in accordance with a "perfect paradigm" of intelligible Forms, governed by the Form of the Good. The sensible universe is but a copy (*eikon*) of the "perfect paradigm," presenting as much as possible beauty, symmetry, order, harmony, and simplicity. In the Platonic model of the universe, all sensible particulars, including heavenly bodies, are made out of only four elements: fire, air, water, and earth. Their internal structure is calculated in numerical values of elementary components expressed geometrically in spatial models. These distinct components are few in number, simple, indiscernible, and indestructible; everything in the universe is made of them and all change can be reduced to interactions between the elementary components that can be described in mathematical terms. Such knowledge is the privilege of the gods and a small number of humans.

The similarity between Plato's *Timaeus* and *Sefer Yetzirah* is undeniable. We do not know and cannot prove that the people who composed *Sefer Yetzirah* had access to Plato's *Timaeus*, but since Plato's *Timaeus* was known to Jewish authors in the Hellenistic

world, chief among them Philo, it is very plausible that Philo's interpretation of Genesis could have been the source of *Sefer Yetzirah*. As Moshe Idel explains, *Sefer Yetzirah* "presented an elaborate cosmology which is grounded in the assumption that combinations of letters are both the technique to create the world and the material of this creation."[230]

Whether Philo was the "missing link" between *Sefer Yetzirah* and Plato's *Timaeus* or not, the main point is that all three sources viewed the creation of the universe as a productive (i.e., poetic) process brought about by an artistic creator/author. In both cosmologies, elements—indivisible abstract entities (i.e., numbers or letters that have numerical values)—are real, and their combination creates space or spatial relations that can be expressed geometrically. Both texts were about the first principles of the universe and both presented their context as the highest forms of knowledge, that is, as "science." Most importantly, in both books, the science of numbers/letters did not pertain to the empirical world known through the senses, because "Nature is but a metaphor for reality."[231] In *Sefer Yetzirah* as in the Platonic dialogue, mathematics does not connect with physics as the domain of motion and change, because physics belongs to the imperfect world of Becoming, whereas the mathematical models pertain to the ideal world of Being.[232]

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230 Moshe Idel, *Golem: Jewish Magical and Mystical Traditions on the Artificial Anthropoid* (Albany: SUNY Press, 1990), 29. The link between Philo and *Sefer Yetzirah* was established by Yehudah Liebes, *Ars Poetica*, 105-120 and was supported by Giulio Busi, "'Engraved, Hewed, Sealed': Sefirot and Divine Writings in *Sefer Yetzirah*," *Jerusalem Studies in Jewish Thought* 21 (2007): 1-12. For the significance of *Sefer Yetzirah* in Jewish intellectual history, see Tzahi Weiss, *"Sefer Yesirah" and Its Contexts: Other Jewish Voices* (Philadelphia: University of Pennsylvania Press, 2019).

231 Amos Funkenstein, *Theology and Scientific Imagination: From the Middle Ages to the Seventeenth Century* (Princeton: Princeton University Press, 1986), 33.

232 Since the text of *Sefer Yetzirah* was the product of a long editorial process, it is possible that the influence of *Timaeus* was due to another intermediary source, for example, the commentary on the *Timaeus* in the Jabirian

There are also differences between *Sefer Yetzirah* and the Platonic dialogue. In *Sefer Yetzirah*, the letters are not merely devices for mathematical calculations (as letters used also by the Greeks). Because letters were the primordial "stuff" from which the universe was created, the spatio- temporal model of the universe presented in *Sefer Yetzirah* was inseparable from the meanings and connotations of Hebrew words in the Hebrew language and from the beliefs of the Jewish religion. The model of the universe in *Sefer Yetzirah* was culturally specific: it was distinctly Jewish. At the center of the spatial order stood the Jerusalem Temple, and in the center of the temporal order was the Sabbath, the eternal present. Being at the center, and centrality per se, is the attribute of God according to *Sefer Yetzirah*. This is why *Sefer Yetzirah*'s attempt to provide a scientific explanation of the universe is inseparable from myth. The abstract theories of *Sefer Yetzirah* were inseparable from the sacred narrative, or myth, of Judaism about the relationship between God, the People of Israel, and the Land of Israel.

Sefer Yetzirah conflated science and myth and linked science to magic. It aimed to disclose the operative set of instructions or program of the creative process. The mastery of this abstract knowledge, or more precisely information, has productive and practical results. Since the letters are the primordial stuff of the cosmos, possessing the science of letter combination could lead the knower to control and manipulate the world made out of the letters. Moreover, the knower can even bring new entities into existence, that is to say, engage in magic. Magic was the praxis based on the belief that human beings were able to control, coerce, and manipulate the occult forces of creation by means of ritual techniques. The absorption of magic in *rabbinic Judaism* is evident in the famous story about Rabbi Hanina and Rabbi Oshaya, who presumably possessed the knowledge of *Sefer Yetzirah*, on the basis of which they were able to create a calf (BT Sanhedrin 65b).

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alchemical tradition. See C. Anne Wilson, "Jabirian Numbers, Pythagorean Numbers and Plato's *Timaeus*," *Ambix* 35, Part I (1988)1-13.

The Talmudic traditions about the creation of the artificial man, the Golem, were also predicated on mastery of information provided in *Sefer Yetzirah*. Scholars debate the degree to which *Sefer Yetzirah* itself was a magical text, a part of the Greek magical tradition. For us, the important point is even if *Sefer Yetzirah* was not technically a magical text and only used magical knowledge of antiquity for its own purposes, the perception of *Sefer Yetzirah* as a magical text in antiquity and early Islamic centuries was warranted.

Kabbalah: Science, Myth, and Mysticism

The historical process by which Kabbalah emerged in the twelfth century is still obscure, but it is clear that *Sefer Yetzirah* played a very important role. Commentaries on this text, written between the tenth and the twelfth centuries, first by philosophers and later by people who identified themselves as kabbalists, gave rise to kabbalistic theosophy, namely, the depiction of divine inner life. The process began in the ninth century and should be understood as part of the revival of Hellenism in early Islam, the same process that gave us Jewish philosophy.[233] The translation movement we mentioned above not only made Greek and Hellenistic philosophy and science available in Arabic, but also a large body of Hermetic texts on magic, astrology, and alchemy, along with Pahlavi and Indian astronomy, astrology, mathematics, and medicine, and Iranian astrology. All of these scientific traditions inspired numerous attempts to reconcile the pagan philosophical heritage with Islamic religious beliefs.

Jewish intellectuals in the Islamic East who defended rabbinic Judaism had to account for the highly anthropomorphic descriptions of God in the Hekhalot and Merkabah corpus, descriptions that were especially problematic to sectarian groups such as the Karaites, who disliked the embodied conception of God. In this polemical environment, *Sefer Yetzirah* became very important,

233 Steven Wasserstrom, "Sefer Yetzirah and Early Islam: A Reappraisal," *Journal of Jewish Thought and Philosophy* (1993): 1-30, quote on p 3.

and Saadia Gaon (d. 942), the first medieval Jewish philosopher, wrote a *Commentary on Sefer Yetzirah* with the intention of demythologizing the ancient text and establishing it as a text worthy of philosophical consideration.[234] According to Saadia Gaon, God, the numbers, and the Hebrew letters were not creative forces in themselves, but only abstract principles that describe mathematical relations between existing entities in the physical world. Other Jewish theologians in Italy (i.e., Shabbatai ben Abraham Donnolo) and North Africa (i.e., Dunash ibn Tamim) debated with Saadia Gaon as they composed their own commentaries on *Sefer Yetzirah*.

The engagement with *Sefer Yetzirah* was taken under the influence of Ismailism, a highly intellectualized variant of Shiite Islam that supported the Fatimid Caliphate.[235] The intellectual religious order of the Ikhwan al-Safa (Brethren of Purity) of Basra during the ninth century shared the interest in linguistic ontology, cosmic semiotics, and number symbolism characteristic of *Sefer Yetzirah*, and their scientific encyclopedia blended scientific elements from Neo-Pythagoreanism, Neoplatonism, Hermeticism, and Aristotelianism.[236] Like *Sefer Yetzirah*, Ismaili thinkers regarded the cosmos as a symbolic structure and viewed numbers as key to uncovering the unity and harmony that underlie multiplicity in the physical world.

These ideas became very influential among Jewish thinkers in

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234 On Saadia Gaon's Commentary on *Sefer Yetzirah,* see Hagai ben Shammai, "Saadya's Goal in His Commentary on Sefer Yezirah," in *A Straight Path: Studies in Medieval Philosophy and Culture*, ed. Ruth Link-Salinger (Washington, DC; Catholic University Press, 1988).

235 On Ismailism, see Farhad Daftary, *The Ismailis; Their History and Doctrines* (Cambridge: Cambridge University Press, 1990); Farhad Daftary, *A Short History of the Ismaili: Traditions of a Muslim Community* (Princeton: Marcus Wiener Publishers, 1998); Paul E. Walker, *Early Philosophical Shiism: The Ismaili Neoplatonism of Abu Ya'qub of Sijistani* (Cambridge: Cambridge University Press, 1993).

236 On the Ikhwn al-Safa and their nature symbolism, see Lenn E. Goodman, trans. and ed., "The Identity of the Ikhwan," in *The Case of the Animals versus Man before the King of the Jinn: A Tenth-Century Ecological Fable of the Pure Brethren of Basra* (Boston: Twayne Publishers, 1978), 35-44.

Muslim Spain from the tenth to the twelfth century, when Jewish philosophers (e.g., Solomon ibn Gabirol, Abraham ibn Ezra, Moses ibn Ezra, and Abraham bar Hiyya) perpetuated the Ismaili blend of Hermeticism, Neoplatonism, and Neo-Pythagoreanism, the very hybrid that Maimonides had rejected as intellectually inferior. Judah Halevi (d. ca. 1140), who was critical of the Jewish Aristotelian philosophers, maintained that Jews do not need to avail themselves to Aristotelian natural philosophy, because they have their own authentic tradition of *Sefer Yetzirah*, whose explanatory power is superior to contemporary scientific theories.[237] In Part IV of the *Kuzari*, Halevi in effect offered a commentary on *Sefer Yetzirah* and its theory of language: unlike all other languages in which signs arbitrarily designate things, the divine language, Hebrew, signifies the essence or nature of created things. This notion was shared by the German Pietists and by Kabbalists in Provence and Spain. By the end of the twelfth century, various groups of Jews composed commentaries on *Sefer Yetzirah*, and these texts contributed to the emergence of kabbalistic theosophy.

German Pietism: The Natural, Supernatural, and the Supranatural

In Germany, a group of Jewish Pietists known as Hasidey Ashkenaz greatly contributed to the notion that God is a multilayered Deity, and that the physical world, or nature, is the symbolic expression of God. The German Pietists were the social elite in the Jewish communities of the Rhine Valley, who viewed themselves as the latest link in the chain of esoteric oral traditions about the correct meaning of Scripture and appropriate way of praying.[238] The German

237 On Judah Halevi and Sefer Yetzirah, see Raphael Jospe, "Early Philosophical Commentaries on the *Sefer Yezirah*: Some Comments," *Revue des etudes juives* 146 (190): 369-415.

238 The sociocultural context of German Pietism is analyzed in Ivan Marcus, *Piety and Society: The Jewish Pietists of Medieval German* (Leiden: Brill, 1981). David Shyovitz has recently challenged the sectarian perception of the German Pietists. His work is discussed below.

Pietists were familiar with *Sefer Yetzirah* through the commentary of Donnolo and the translation and commentary of Saadia Gaon, but they developed their own systematic theory of Hebrew language as the grammar of reality. For them, *Sefer Yetzirah* was a set of instructions for the creation of the humanoid (Golem), a practice already found in the rabbinic corpus. Ironically, by engaging in magic on the basis of *Sefer Yetzirah*, the German Pietists reversed the intent of Saadia Gaon's Commentary and recovered magical theories and practices of antiquity.

The German Pietists developed theosophical speculations that appropriated the anthropomorphism of the ancient Shiur Qomah tradition and applied the measurements not to the Creator but to the Form that is constituted within the imagination of the Pietists. Since God is not a body, God possesses no form or shape; God can only be apprehended in the mind of the visionary. The measurements specified in the ancient esoteric works were not attributed to the Creator; rather, they represented the proportion of the Glory (*Kavod*) as it is visualized through the imagined forms within the prophetic or mystic consciousness.[239] The German Pietists articulated symbolic language to refer to the realm of the Chariot (Merkabah), and that symbolism had clear sexual overtones. The major symbol of the divine realm was the Nut (*egoz*), a reference to Song of Songs, in which the female beloved descends to the "nut orchard" (*ginat egoz*). The symbol possessed androgynous qualities: the feminine quality of the Glory was identified with the Shekhinah (the standard Talmudic term for the divine Presence) and was imaged as the crown, prayer, the divine voice, the King's daughter, the bride who sits to the left of the Groom, God. These ideas would be further developed in kabbalistic theosophy in Provence in the late twelfth century.

Numerology was central to the speculations of the German

239 For an elaborate exposition of German Pietists' contemplative practices and esoteric speculations, see Elliot R. Wolfson, *Through the Speculum that Shines: Vision and Imagination in Medieval Jewish Mysticism* (Princeton: University of Princeton Press, 1994), 168-189.

Pietists, who, on the basis of the numerical value of Hebrew letters, linked speculations about the divine Throne, the divine attributes, and nature. For example, the German Pietists noted that the numerical value of the divine name—Elohim—and the Hebrew word for "the divine Throne"—*ha-kisse*—have the same numerical value, eighty-six. This is also the same numerical value of the phrase "*zeh dayyan*," meaning "He is a Judge." In the writings of German Pietists, Elohim is not only identified with the Throne of Glory but also with the attribute of Judgment (*middat ha-din*). Thus the key to decode how nature functions was to be found in the numerical association between the divine Name, the Throne, and the attribute of divine Judgment. This semiotic approach to nature bears the impact of *Sefer Yetzirah* and illustrates a shamanic (or poetic) conception of nature. After the word '*teva*' was introduced into Hebrew, Jewish intellectuals noted that the numerical value of *ha-teva* (meaning "the nature") is also eighty-six, and this idea, as we have suggested above, would even influence Spinoza in the seventeenth century.

The relationship between God and nature in the teachings of German Pietists has been a subject of scholarly disputes. The debate revolves around the Pietists' understanding of miracles. On the basis of Ps. 111:4—"He has created remembrance as his wonders"—the Pietists developed a concept of miracles that could be interpreted in conflicting ways. According to Joseph Dan, the German Pietists maintained that

> the Creator in His goodness and graciousness implanted in nature wonders and matters
>
> which are not part of nature's way, and are not understood or explicated by reference to the course of nature, so that God's pious believers will be able to learn about the wondrous and supernatural capacity of the Creator who cannot be understood by the laws of nature and is superior to them.[240]

240 Joseph Dan, *The Esoteric Theology of Ashkenazi Hasidism* (in Hebrew), (Jerusalem: The Bialik Institute, 1968), 88.

According to this reading, the German Pietists focused on the deviation from the natural order which God had created, in order to fathom the mysteries of the Creator. It is precisely the exception to the order that provides a clue about the Creator and His Attributes. By focusing on the deviant exception, Dan surmised that the Pietists held a negative attitude toward the natural world. Put differently, "investigation of the laws of the cosmos does not bring man to recognition of God's goodness, but on the contrary reveals the ways in which God lays burdens on man and makes things difficult for him."[241]

This interpretation has been recently challenged by David Shyovitz, who argues that the German Pietists "were keen observers of their natural surroundings, and described and perhaps even engaged in experiments intended to shed light on nature's workings."[242] Highlighting the similarities between the German Pietists and their Christian neighbors, Shyovitz claims that the German Pietists "did not limit themselves to routine, prosaic natural phenomena, but also sought to understand and instrumentalize the wonders of nature that were of growing interest and anxiety to Christian theologians and natural philosophers, as well as to producers and consumers of magical, mechanical, and literary texts. The Pietists expressed their theological take on nature and its meaning by citing and interpreting texts from within the Jewish tradition—but they also engaged with the same texts and genres beings utilized in Christian discourses on nature and its meanings, such as lapidaries, 'books of secrets,' travel narratives, and literary accounts of the wonders of the east. Such materials could have been transmitted via both written and oral means, and attest to the contructive role of polemic and preaching as a means to conveying

241 Dan, *Rabbi Yehudah he-Hasid* (Jerusalem: Merkaz Zalman Zhazar, 2006), 145.

242 David I. Shyovitz, *A Remembrance of His Wonders: Nature and the Supernatural in Medieval Ashkenaz* (Philadelphia: University of Pennsylvania Press, 2017), 71.

ideas within and between competing cultures."[243] In Shyovitz's interpretation it is precisely the prosaic, the mundane—"the natural"—that is thought to encapsulate higher spiritual truth. In other words, if Dan saw in German Pietists a group that manifested "disdain for science and fascination with the supernatural,"[244] Shyovitz argues that German Pietists were attentive to their natural surroundings precisely because they ascribed "theological meaning to the ordered workings of the natural world." Who is right?

Both scholars are right and wrong in regard to different aspects of German Pietism. Shyovitz is right to document the German Pietists' interest in the natural world and to note that nature is understood very broadly to include the exceptional and the fantastic. This indeed was quite common in the twelfth century, because the category of the natural also included the supernatural. Shyovitz, however, is wrong to equate this interest in nature as evidence of interest in "science" in the Aristotelian sense of the term. By contrast, Dan is right to understand that the Pietists' interest in nature cannot be separated from their linguistic conception of nature, but he fails to differentiate between "supernatural" (i.e., the breakdown of nature's law) and "supranatural" (i.e., the position within the cosmic hierarchy that is above the terrestrial, corporeal world). The "wonders" that God implanted in nature are not supernatural, but supranatural.

German Pietists regarded nature as a linguistic construct and developed a complex program of ascetic practices to fathom the hidden Will of God that is manifested in nature. It is possible that the destruction of Jewish communities in the Rhine Valley during the First Crusade (1096), in which many Halakhically bound Jews chose to commit suicide rather than convert to Christianity, stimulated the German Pietists to write down received esoteric traditions in order to preserve them for posterity. It is also possible that the conquest of Jerusalem by the Crusaders in 1099 further exacerbated the

243 Shyovitz, *A Remembrance of His Wonders*, pp. 71-72.
244 This is how Shyovitz characterizes Dan's position.

awareness of divine hiddenness and the inscrutability of God's Will. The Pietists responded to the new challenges by exerting themselves even harder to decipher the hidden Will of God and interpreting the "hints" that God implanted in nature. They articulated an intense spiritual program whose point of departure was the Fear of God, which leads to resourcefulness (*ormah*) and enables the Pietists to add many more limitations and restrictions and obligations to prevent them from sin. Assuming that the reward is proportional to the pain, the Pietistic practices created a distinctive way of life which (ironically enough) resembled the spiritual practices of Christian religious orders. It is also intriguing to compare the German Pietists to Maimonides, since both referred to resourcefulness as a strategy to discover how nature works. If Maimonides employed it to explain how the "divine ruse" operates in nature, the German Pietists used it to denote human resourcefulness to decipher the hidden divine Will. This suggests a different valuation of human agency: whereas for Maimonides, humans are utterly insignificant by comparison to God, the German Pietists (and the Kabbalists after them) accorded enormous power to humans: the power to transform the natural world through magic and to empower God through theurgy.

Kabbalistic Theosophy: Nature and God's Personality

In discussing German Pietism, we have shifted the cultural context from Islam to Christendom. In medieval Christendom, Jews were both a protected minority, viewed as the Witness People to Christian truth, as well as a persecuted religious group hated for their alleged killing of Christ.[245] Especially from the thirteenth century onward, the protection of Jews by popes and secular rulers (kings and

245 On the complex status of Jews in medieval Christendom and the shift from theological protection to religious persecution in the thirteenth century, see Jeremy Cohen, *The Friars and the Jews The Evolution of Medieval Anti Judaism* (Ithaca: Cornell University Press, 1982); Kenneth Stow, *Alienated Minority: The Jewish of Medieval Latin Europe* (Cambridge: Harvard University Press, 1990); Robert Chazan, *Reassessing Jewish Life in Medieval Europe* (Cambridge: Cambridge University Press, 2010).

emperors) was replaced by systemic discrimination, attacks on the validity of rabbinic Judaism, exclusion, forced conversions, and expulsions. With some exceptions, in Christian Europe, Jews did not own land and did not engage in land cultivation. From the twelfth century on, the Jewish involvement in moneylending was a primary source of their livelihood as well as a major cause of popular animosity, governmental exploitation, and theological criticism. To some extent, the emergence of Kabbalah in the late twelfth century and its dissemination in the thirteenth century could be seen as a Judaic response to these social conditions. Kabbalah had a strong anti-Christian intent, even though there are conceptual similarities between kabbalistic theosophy and Christian Trinitarian theology, a point noted already by Jewish critics of Kabbalah in the thirteenth century. Although the roots of Kabbalah can be traced to the ancient Near East, medieval Kabbalah was a Christian phenomenon that shared the symbolic mentality of medieval Christianity as much as it articulated a Jewish response to it.

By the end of the twelfth century, a new text began to circulate in Provence under the title of *Sefer Ha-Bahir* (Book of Brightness). The text presented itself as an ancient rabbinic Midrash, presumably written by Rabbi Nehunya ben Ha-Qanah, a major figure in rabbinic esoterica. *Sefer Ha-Bahir* employed many parables to teach truths about an earthly king, his royal family, his loyal and disloyal subjects, and his majestic palace. The earthly king, of course, was a parable of God, whose personality was depicted by using numerous symbols, many of which were taken from the world of nature. This was no coincidence, since *Sefer Ha-Bahir* sought to reveal the mysteries of God, the divine Creator or Author of nature. As in *Sefer Yetzirah*, *Sefer Ha-Bahir* used the term Sefirot, but in the medieval text, the Sefirot are not intermediary entities between God and the world but rather forces within the Deity. The God of *Sefer Ha-Bahir* is a unity within plurality of ten Sefirot, a dynamic system that pulsates with energy and functions as the source of vitality of all levels of reality. The Sefirot make manifest the concealed identity of the divine person and function as the blueprint, or model, for all the

processes in the physical world.

Sefer Ha-Bahir did not explain exactly how the Sefirot relate to the concealed aspect of God, the *Eyn Sof* (literally, "No End" or "Without Limit"). Later Kabbalists would do so with the help of philosophical vocabulary derived from the Neoplatonized Aristotelianism of their day. As I have explicated elsewhere, Kabbalah did not negate rational philosophy, but often interacted with it.[246] The crucial point here is that the *Bahir* presented the ten Sefirot as aspects of the divine personality, whose creative potency and vitality was decidedly sexual. Emanating from the hidden source and arranged hierarchically, the ten Sefirot disclosed God's hidden personal identity and their interaction with each other was impacted by human deeds, especially the deeds of Israel. The Sefirotic system disclosed the mysteries of divine reality through symbolic language that conceals that which it seeks to reveal.

The Sefirot constitute a dynamic system, or better still, an ecosystem. I say "ecosystem," because the *Bahir* presented God as a living reality, the origin of life itself. Not coincidentally, the text uses organic imagery to depict the mysteries of divine life. The *Sefirot* are symbolized by trees (*Ilanot*), and the entire system is imaged as the Orchard (*Pardes*), the Nut (*Egoz*), the Pomegranate (*Rimon*), the Palm Tree (*Tamar*), or the Grape Cluster (*Eshkol*). These natural objects function symbolically, expressing the organic unity of the divine world despite its multiplicity of forces, its inherent dynamic reality, and its reproductive capacity.[247] Since reproduction requires the unity of the male and the female, *Sefer Ha-Bahir*, more explicitly than the German Pietists, elaborated on the androgynous qualities of God. In the *Bahir* (and thereafter in theosophic Kabbalah), the life of God cannot be reduced to an abstract, static concept such as the causal order of the universe,

246 Hava Tirosh-Samuelson, "Kabbalah and Philosophy, 1200-1600," *Cambridge Companion of Medieval Philosophy,* ed. Daniel H. Frank (Cambridge: Cambridge University Press, 2005), 218-257.

247 Marie-Dominique Chenu, *Nature, Man and Society in the Twelfth Century* (Chicago: The University of Chicago, 1968) [1957]), 99-145.

because divine reality is constantly changing, contrary to the Maimonidean-Aristotelian view that God is changeless and static. As much as the divine life creates everything that exists and affects all creative processes in the material world, it is also affected by the cosmos that it has brought into existence. In particular, human deeds, especially the deeds of Israel, affect the well-being of the Sefirotic system, because humans more than anything else mirror God, being created in the image of God. When Israel performs the commandments properly, they empower the Deity, and when they commit sins, they diminish the power of God. Most importantly, human deeds affect the well-being of the last and tenth *Sefirah* (known as Malkhut or Shekhinah), which is the feminine aspect of God.[248]

The parables of the *Bahir* depict the Shekhinah-Malkhut as the Queen, Bride, Sister, Wife, Daughter, and Matron that stands at the side of the masculine, divine power, usually the King. She is sometimes portrayed in terms reminiscent of Gnostic terminology as "the daughter of light" who came "from a faraway country" and resides in the world. She has a receptive quality, functioning as a vessel or container for the energy that she receives from the Powers above her (very similar to the Platonic concept of space as Container). Because the Shekhinah contains the energy of all the divine potencies above her, She is symbolized as an ocean, a passive symbol, but in relationship to the extra-divine world, she functions as an active force. Hence She is depicted as a mother who takes care of her children, functioning as the presence of God that never leaves Israel. The Shekhinah is most vulnerable to the temptation

248 Kabbalah understood the Deity as an androgyne and interpreted the dynamics of divine life as an ever-changing interaction between the masculine and feminine dimensions of divinity. The focus on sexuality and gender in Kabbalah makes sense if we realize that the Kabbalists sought to decipher the mysteries of creation, which in human beings means the mysteries of procreation and reproduction. See Hava Tirosh-Samuelson, "Gender in Jewish Mysticism," in *Jewish Mysticism and Kabbalah: New Insights and Scholarship*, ed. Frederick Greenspahn (New York: New York University Press, 2011), 191-230.

of evil, which in the *Bahir* is understood as a separate reality that can pollute the divine. It is only through the performance of the commandments that Israel can subdue evil and empower God. In the *Bahir*, the contours of kabbalistic theosophy, sexual symbolism, and theurgy are fully in place. They will be elaborated by Kabbalah, which spread in thirteenth century Spain, especially *Sefer Ha-Zohar*.

Medieval Kabbalah thus developed its ideas in Provence and Christian Spain through commentaries on *Sefer Ha-Bahir* and on *Sefer Yetzirah*. The teachings of Kabbalah were transmitted first orally and then committed to writing, but Kabbalah was transmitted only within certain families and was restricted to the initiated few. The esoteric teachings of Kabbalah were regarded as "divine science" that surpasses human reason and can be known only through divine revelation, as interpreted by an authoritative teacher who transmits the sacred, living tradition to his son or trusted disciple. Kabbalah regarded itself as a speculative discourse that explains the first principles of the universe (i.e., the Sefirot and the Hebrew letters), whose knowledge enables the knower to attain personal immortality. Kabbalah regarded its teachings to be superior to the empirical information of the Aristotelian philosophers. In the debate about Maimonides during the thirteenth century, Kabbalah took the side of the anti-Maimonists and promoted its own exposition of Scriptures as the true, authentic "divine science" that is much superior to Aristotelian science. Although Kabbalah did not develop independently of Jewish Aristotelianism, the difference between them was that kabbalistic texts regarded nature as a symbol of God, or a mirror of God, whereas the Jewish Aristotelians did not interpret nature symbolically. Ironically, Kabbalah, which was anti-Christian, shared the symbolic mentality of medieval Christianity.

Creation as Emanation

The Kabbalists understood the physical world as a symbolic text to be deciphered or decoded by linguistic-numerical practices.

Like Plato and the Neoplatonists, the Kabbalists did not regard the perceptible physical world to be the real world, because the sensible world of natural objects is but a mirror of God. Elliot R. Wolfson explicated that kabbalistic notion, saying,

> In the crucible of kabbalistic symbolism, the motif of nature as a mirror assumes a new form. Not only is it the case that nature reflects the glory of God, but in the most elemental sense is that glory, for only the latter is real, although by necessity it is invested by the garment of the former.[249]

The kabbalistic claim that nature mirrors God operated within a spatial model of transcendence that was consonant with the emanationist ontology that the Kabbalists adopted from medieval Neoplatonic Jewish philosophy. But a close look at the idea of nature as mirror of God shows that in Kabbalah, the physicality of the natural world disappears, because nature itself was perceived as a symbolic text.[250] Kabbalists were not interested in the observation of the physical world of nature for its own sake but in fathoming the mysteries of divine life (i.e., the Sefirotic world) that were symbolized in nature. The corporeality of nature is precisely what the Kabbalah sought to transcend and surpass, and it claimed to do so by decoding (or deconstructing) symbolic nature.

Following the approach of *Sefer Yetzirah*, medieval Kabbalah took seriously the notion that creation is a speech act: God spoke and the world came into being. Nature is a linguistic construct, the result of permutations of linguistic information that needs to be decoded by those who are privy to its grammatical rules, so to speak. Such knowledge enables the knower, i.e., the Kabbalist, not only to manipulate the natural world (namely, engage in magic) but also to participate in the life of God, who is mirrored in nature (namely,

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249 Elliot R. Wolfson, "Mirror of Nature Reflected in the Symbolism of Medieval Kabbalah," in *Judaism and Ecology*, 305-331, quote on 313.

250 See Hava Tirosh-Samuelson, "The Textualization of Nature in Jewish Mysticism," in *Judaism and Ecology*, 390-404.

engage in theurgy).[251] The life of the Kabbalist is constituted by the act of decoding symbols, the symbols of nature through which the Kabbalist communicates with God and participates in God's inner life. This act of decoding is possible because God revealed the Torah, the coded code of nature. In contrast to Maimonides and the Jewish Aristotelian tradition, in Kabbalah the Torah is not viewed as a scientific text that speaks about events in the physical world of nature and human history, but a divine document that speaks symbolically about the mysteries of God. Therefore, the narrative of creation is not merely a story of cosmogony (i.e., how the world came into being) but a story of theogony (i.e., how God emerged from His utter concealment into self-revelation).

Kabbalah regarded the Sefirot as both paradigms of events in the extra-deical world as well as the formal causes of these events. The governing hermeneutical principle is that Scripture speaks about the mundane worlds while hinting at the supernal worlds. In other words, the exoteric meaning of the biblical text pertains to physical processes that brought about the existence of the corporeal world, but the esoteric meaning pertains to processes within the Godhead that function as the efficient causes of change in the physical world. Reminiscent of the Ismaili approach to the Quran, this principle guided the kabbalistic interpretations of Genesis and the narratives of creation in the Psalms, but Kabbalists did not agree on the hermeneutical details.

The kabbalistic worldview was distinctly hierarchical, and the term *olam* (translated as "world," "realm," or "region") was used to denote an ontological state as well as a particular rung in cosmic

251 See Moshe Idel, "On Judaism, Jewish Mysticism and Magic," in *Envisioning Magic*, a Princeton Seminar and Symposium, ed. Peter Schäfer and Hans G. Pippenberg (Leiden: Brill 1997), pp 195-214. The kabbalistic view of language as creative power blurred the distinction between magic and theurgy. In Kabbalah, language could be used to create (or destroy) physical entities as well as impact the Deity. In the early modern period, the difference between practical Kabbalah and speculative (or theoretical) Kabbalah disappeared, and that would play a role in the later emergence of Hasidism in the eighteenth century.

hierarchy. Thus the inter-deical world of the Sefirot was referred to as "the realm of unity" or the "realm of concealment," in contrast to the extra-deical world, which was referred to as the "realm of separation" or the "realm of disclosure." By the fourteenth century, kabbalistic cosmology was consolidated into the doctrine of the four realms: "Emanation" (*atzilut*), "Creation" (*beriah*), "Formation" (*yetzirah*), and "Making" (*asiyah*), terms that hearken back to the language of Isaiah:40. The first realm referred to the ten Sefirot, the second realm consisted of the angels (which the philosophers identified with the Separate Intellects), the third realm included the celestial bodies in their orbs (*galgalim*), and the fourth realm referred to the terrestrial world in the sub-lunar region. In the lowest of the four worlds, all beings are also arranged hierarchically in ascending order, from minerals, to plants, to animals, culminating in the human animal that has a corporeal body and a non-corporeal soul. The four realms are linked by divine efflux (*shefa*), an energy that permeates all levels of reality and is usually depicted by symbols of water or light to convey unbounded, nurturing, divine Benevolence.

When the Kabbalists unpacked the mysteries of creation, they identified the process of creation with emanation, through which the Hidden God (*Eyn Sof*) became increasingly more known and the dynamic of the divine life increasingly more manifest. The natural world (the macrocosm) thus expresses the fullness and complexity of divine reality, and the human being (the microcosm) who was created in the image of God is the one creature most able to decipher that complexity. Since Kabbalah claims to decode the mysteries of life, it is not surprising that the Sefirotic system is gendered: the upper nine Sefirot constitute the divine male to the last *Sefirah*, who function as female. The mysteries of life, including divine life, are decoded by using a symbolic code, and many symbols are taken from nature. A primary example of kabbalistic nature symbolism is the Rose-Lily of *Sefer Ha-Zohar,* the most imaginative and influential kabbalistic text.

Nature Symbolism in the Zohar: The Rose-Lily

Sefer Ha-Zohar (Book of Splendor) was an extensive commentary on the Torah composed by a mystical fraternity in Castile in the last quarter of the thirteenth century. One of the figures in the group was Moses de Leon (d. 1305), who functioned as the editor of the Zoharic anthology and who is known from other compositions. The *Zohar* was written in Aramaic in order to give it the aura of an ancient text, but the language of the *Zohar* was suffused with many invented words. The *Zohar* dramatized the act of Torah study by depicting the second-century rabbi Simon bar Yohai as the center of a group of rabbis who strolls through the Holy Land while discussing the mysteries of the Torah. In highly poetic language and in continuity with *Sefer Yetzirah*, the *Zohar* speaks about the creative act, combining metaphors of light (e.g., "illuminating") with metaphors of writing (e.g., "engraving"), both of which are given a sexual meaning: the stylus, the implement of writing, is also the phallus of the divine male androgyne.

In powerful homilies about the creative power of writing, the *Zohar* penetrates the mysteries of the creative act that resulted in the making of the world, but the *Zohar* does not articulate a consistent theory of creation. Some segments of the *Zohar* speak more evidently on emanation expressed in numerous metaphors, while other segments of the *Zohar* present the doctrine of creation, but also without conceptual consistency. According to one text, "the creation of all the worlds occurred simultaneously, at one and the same time." According to another text, "water was the first element and everything was created from it," but according to still another version, "the dust beneath the Throne of Glory was the principal element in the world."[252] There are Zoharic texts in which everything that exists in the world was concealed in the heavens and the Earth that were created on the first days, so that the work of creation during the six days was just an act of revelation, that

252 Isaiah Tishby, Wisdom of the Zohar, trans. David Goldstein (Oxford: Littman Library of Jewish Civilization, 1989), vol. 2, 553.

is, of realizing things that already existed in potentiality. In other texts, heavens, earth, and water acted as artisans who assisted the Creator during the days of creation. All of these reflections resonate with the language of rabbinic homilies that depict the creation of the world from some preexistent elements, and like the rabbinic discourse, the *Zohar* does not offer a consistent exposition of the doctrine of creation.

The *Zohar* presents the primary activity of Torah study as taking place not within the confines of a school but rather outdoors, in the landscape of the Holy Land. The narratives of the *Zohar* are situated in nature, on trails, in caves, under rocks, by river banks, at a spring, or under the shadows of trees.[253] In those natural settings, the protagonists expound on the meaning of Torah. The task of the Zoharic homily is to disclose profound truths, revealing the mysteries that lie beyond sensual perception and ordinary conceptual knowledge. The Zoharic act of disclosing mysteries is emotionally intense; when theoretical problems are resolved, textual riddles are solved and mysteries are disclosed, and the protagonists of the Zohar experience intense joy, expressed in weeping, hugging, and kissing, activities conveyed by highly erotic language.

The *Zohar* is erotic literature par excellence![254] The very word *zohar* (literally, "radiance," but figuratively, "enlightenment") is understood as a creative energy that generates life, vitalizes or sustains the entire Great Chain of Being, and gives rise to creative (i.e., poetic) activities of individuals. This erotic energy is generative and reproductive, and is symbolized in sexual language as the

253 See Melilah Hellner-Eshed, *A River Issues Forth from Eden: On the Language of Mystical Experience in the Zohar* (in Hebrew) (Tel Aviv: Am Oved, 2005), 138; Pinchas Giller, "The World Trees in the Zohar," in *Tree, Earth and Torah: A Tu-B'shvat Anthology,* ed. Ari Elon, Naomi Mara Hyman and Arthur Waskow (Philadelphia: Jewish Publication Society, 2000), 128-134. Eitan P. Fishbane, *The Art of Mystical Narrative: A Poetics of the Zohar* (Oxford: Oxford University, 2018), esp. 223-279 where Fishbane insightfully analyzes the fantastic imagination of the *Zohar* as examples of "magical realism."

254 Yehuda Liebes, "Zohar and Eros" (in Hebrew), *Alpayyim* 9 (1994): 67-119.

unification of Male and Female principles. In the earthly world, this is represented throughout the world of nature, culminating in the unification of human males and females within the structure of the family, between husband and wife. Their reproduction mirrors the unification of the divine Male and Female (*Sefirot Tif'eret* and *Malkhut*, respectively). When Jews, or the Kabbalists among them, perform the divine commandments with the proper mystical intentions (*kavanah*), they can bring about the unification of the male and female dimensions of God. This is precisely what the hero of the *Zohar* is said to achieve in the experiences depicted in the homilies of the *Zohar*.

Elsewhere, I suggested that the *Zohar* was an elaborate didactic drama that has to be understood against changes in Jewish-Christian relations in the thirteenth century: the establishment of the preaching orders and the emergence of medieval theater, both of which inculcated Christian values and norms to lay audiences in the thriving urban centers.[255] Christian preaching dehumanized Jews by associating them typologically with certain animals (e.g., the dog, the hyena, the goat, and the pig) and Christian morality plays, designed to inculcate Christian virtues, repeatedly reinforced distrust and disdain of Jews by identifying them collectively with Judah Iscariot, who betrayed Jesus to Roman authorities. The anti-Jewish tenor of Christian preaching and of morality plays was part of the comprehensive Christian campaign to delegitimize rabbinic Judaism, and the *Zohar* could be seen as an elaborate Jewish response to these changes in order to spiritually uplift persecuted Jews. It was no coincidence that the protagonists of the *Zohar* are depicted as itinerant preachers who alone can truly understand the hidden meaning of Scripture.

The anti-Christian intent of the *Zohar* becomes evident if we look more closely at its central natural symbol—the Rose-Lily—based on the nature imagery of the Song of Songs. The rabbis

255 Tirosh-Samuelson, *Happiness in Premodern Judaism,* 291-342; Cf. Fishbane, *The Art of Mystical Narrative*, 54-127.

interpreted this biblical text as an allegory: the female beloved was Israel, and the male lover was God. But who is the true Israel? That was a major debate between Jews and Christians. Beginning with Origen, Christian readers understood Israel to mean the Church, the Bride of Christ; the male lover, the Bridegroom, was Christ.[256] For the following millennium, the Song of Songs served Christian readers as the context for the development of Christian mystical erotic spirituality that culminated in the commentaries of the twelfth century, produced by monks of the Cistercian orders or by the Augustinian Canons of the School of Saint Victor in Paris. The former interpreted the Song of Songs as "mystical contemplation adapted to the cloister," whereas the latter "reflected a moral teaching attitude to the stresses of life in the world."[257] These commentaries personalized the love between the Church and Christ as the love of the human soul and Christ. The most influential of these commentaries was Bernard of Clairvaux's *Sermones super Cantila Canticorum* (Sermons on the Song of Songs), which instructed the monastic community in correct Christian living. Bernard read the Song of Songs as an expression of personal mystical experience, a spiritual marriage between the soul and Christ.

As the commentaries personalized the interpretation of the Song of Songs, they also feminized the Church.[258] Not coincidentally, the Virgin Mary emerged as the main symbol of the Church, as Mary was identified with the Bride of the Song of Songs. Since the Bride in the Song of Songs characterizes herself as the "rose of Sharon" (*havatzelet ha-sharon*) and the "lily of the valleys" (*shoshanat ha-amaqim*), the rose was interpreted symbolically to refer to the virtues of Mary: the white rose signified "virtue, virginity, and love of God" and the red rose symbolized "charity, spirituality and annihilation

256 See Anne E. Matter, *'The Voice of My Beloved: The Song of Songs in Western Medieval Christianity* (Philadelphia: University of Pennsylvania Press, 1990).

257 Matter, *Voice of My Beloved*, 14-15.

258 See Ann W. Astell, *The Song of Songs in the Middle Ages* (Ithaca, London: Cornell University Press, 1990)

of vice."[259] In the twelfth century, the Rose-Lily of the Song of Songs was no longer just a natural object or a literary trope; it became a full-fledged religious symbol that sacramentalized nature while spiritualizing the religious worshipper. In the symbolic mentality of the twelfth century, natural symbols provided the key to unlocking the mysteries of salvation.

The homilies of the *Zohar* offer a Jewish counter-reading in which the true identity of the Rose-Lily is the Assembly of Israel (*knesset Yisrael*). I conjecture that precisely because the Rose-Lily became so central to Christian spirituality, the first homily in the introduction of *Zohar* focuses on that key symbol:

> Rabbi Hizkiya opened, *like a rose among thorns, so is my beloved among the maidens* (Song of Songs 2:2). Who is a rose? Assembly of Israel. For there is a rose, and then there is a rose! Just as a rose among thorns is colored red and white, so Assembly of Israel includes judgment and compassion. Just as a rose has thirteen petals, so Assembly of Israel has thirteen qualities of compassion surrounding her on every side. Similarly, from the moment Elohim God is mentioned, it generates thirteen words around the Assembly of Israel and Protects Her; then it is mentioned again. Why again? To produce five sturdy leaves surrounding the rose. These five are called Salvation, they are five gates. Concerning this mystery it is written: I raise the cup of salvation (Psalms 116:13). This is the cup of blessing, which should rest on five fingers—and no more—like the rose sitting on five sturdy leaves, paradigm of five fingers. This rose is the cup of blessing.[260]

It is quite evident that the *Zohar* is not interested in the rose-lily

259 Barbara Seward, *The Symbolic Rose* (New York: Columbia University Press, 1960), 23.

260 Daniel Chanan Matt, *The Zohar, Pritzker Edition* (Palo Alto Stanford University Press, 2004), Vol. 1, 1-2.

as a natural object per se, as a botanist would be.[261] What matters to the *Zohar* is that the Rose-Lily of the Song of Songs symbolizes several levels of reality at the same time. On the mundane, historical level, the Rose-Lily is the historical People of Israel; on the supra-mundane level, the Rose-Lily is the last and tenth *Sefirah Malkhut-Shekhinah*. By providing the symbolic key to the interpretation of the Song of Songs, the *Zohar* asserts unambiguously how the scriptural text has to be understood and the true meaning of the Rose-Lily, most likely in order to rebut the Christian interpretations. In Christian visual code, the rose played

> an eminent place alongside the lily. It became especially significant in connection with the late medieval cult of the rosary. In cosmic terms, a blooming rose, the sign of Mary's motherhood, symbolized rejuvenation of mankind and nature. Like the lily, the white rose became a symbol of virginity and the purity of the Mother of God; the red rose became both a symbol of the part Mary played in Christ's Passion and of other perfect love. In other Christian association, the rose was a symbol of the saints' bloody martyrdom that came to be applied to Christ, the king of all martyrs.[262]

The spiritual rivalry between Judaism and Christianity was also clear in the relation to the natural context where the meeting

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261 The precise botanic identity of the rose-lily has been a matter of dispute among modern botanists and scholars of the Bible. The Rose-Lily of the Song of Songs has been variously identified as the genus *Rosa*, the tulip, the genus *Narcissus Tazetta*, (i.e., lily) or the white lily (*Lilium condidum L.*). See Harold N. Moldenke, *Plants of the Bible* (Waltham: Chronical Botanical Company, 1952); Winifred Walker, *All the Plants of the Bible* (Garden City: Doubleday and Company, 1979); Michael Zohari, *Plants of the Bible* (Cambridge: Cambridge University Press, 1982). Obviously, it does not really matter which plant is identified; what matters more is the symbolic meaning that the Kabbalists ascribed to the imagined plant.

262 Werner Telesco, *The Wisdom of Nature: The Healing Powers and Symbolism of Plants and Animals in the Middle Ages* (Munich, London, New York: Prestel, 2001), 38.

between the Bride and the Bridegroom took place: the "nut garden." Christian readings equated the "garden" of the Song of Songs with the Garden of Eden of Genesis, and this exegetical identification was manifested in the corporeal world in the gardens of medieval monasteries. As Chenu explains, "the earthly paradise of Eden was seen as an image of the Church, in which the redeemed had access to Christ, the Tree of Life, and already here below could be to live the *vita beata*."[263] The *Zohar* articulated a counter-reading: the garden of the Song of Songs and the Edenic Garden refer not to the cloistered space, but to the supernal world of the Sefirot, and the lovers of the Shekhinah/Rose-lily (i.e., the protagonists of the *Zohar*) meet not in the human-made garden, but outdoors. The trees under which the protagonists sit and expound Torah evoke the Sefirot of the supernal garden, depicted symbolically in the Garden of Eden of Genesis. The two main trees in the Garden of Eden—the Tree of Life and the Tree of Knowledge of Good and Evil—symbolize the two main Sefirot: Tiff'eret and Malkhut/Shekhinah, respectively, and the Bridegroom and the Bride in the Song of Songs. As much as the Rose-Lily was not the Virgin Mary but the Shekhinah, the true Tree of Life was not Christ but *Sefirah* Tiff'eret, the Husband of the Shekhinah in kabbalistic symbolism.

The Sefirotic Garden is a living reality (as *Sefer Ha-Bahir* already taught) and its vitality comes from the river (*nahar*) that "issues forth from Eden" (Genesis 3:10). The river, another key nature symbol, refers to creative energy or overflow that springs from the Eyn Sof and vitalizes the Sefirotic Garden and by extension all levels of reality. Melilah Hellner-Eshed has shown that the river functions as a key motif and offers coherence to the Zoharic metaphysics, cosmology, psychology, and hermeneutics. The only one who could enter the supernal Garden (the Orchard) is the Kabbalist who possesses the symbolic key that opens the "gates" of the divine world. Since the entry point is the Malkhut/Shekhinah, to enter the divine Garden requires the male Kabbalist to unite with

263 Chenu, *Nature, Man and Society*, 153.

Her, an erotic unification between the soul of the Kabbalist and the divine (female) spiritual reality.[264] This unification is the goal of kabbalistic worship, and it is accomplished most successfully by Rabbi Shimon bar Yohai, the protagonist of the *Zohar*.

In an extended homily (*Zohar* 1:221a), the *Zohar* explored the unification between the soul of the Kabbalist and the Shekhinah, symbolized by the Rose-Lily. The homily identifies the Rose-Lily with the Assembly of Israel and explains her liminal and inherently unstable identity. The Rose-Lily changes in accord with the energy She receives from the Powers above her: when She receives energy from the Sefirah Hesed, she acts mercifully, and when She receives energy from the Sefirah Gevurah (God's attribute of Judgment), She acts harshly. In the kabbalistic interpretation of this key symbol, when the Kabbalist unites with the Shekhinah/Rose-Lily, his consciousness is also unstable, dynamic, and changing, in contrast to the continuous, uninterrupted consciousness symbolically represented by the river which issues forth from Eden.

That unitive (i.e., mystical) consciousness is attained when the female Shekhinah unites with Tiff'eret, as a result of which the Kabbalist, the world, and the entire cosmos benefit from the overflowing of divine erotic energy. This is the ultimate state of bliss that the Kabbalists aim to achieve, and which the hero of the Zohar has achieved. He is not an ordinary mystic, but a shaman endowed with supernatural Powers that impact the supernal world of the Sefirot and transform the physical world through miracles. Rabbi Shimon Bar Yohai is depicted as a shaman who brings rain and overcomes demonic Powers, and even the angel of death is afraid of him. Rabbi Shimon bar Yohai acts as a mediator between the corporeal and supernal realms, channeling the divine energy from the male Sefirah, Yesod, to the female Sefirah, Malkhut/Shekhinah, with whom Rabbi Shimon bar Yohai's soul unites at his death.[265]

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264 Hellner-Eshed, *A River Issues Forth from Eden*, 268-296.

265 The fact that Rabbi Shimon bar Yohai, who functions as a messianic figure, is associated with both the Male and Female Sefirot is too reminiscent of the feminization of Jesus in Christian mysticism. See Carolyn Bynum, *Jesus*

While the protagonist of the *Zohar* is not a messiah, he is depicted as a messianic figure engaged in redemptive activity that sustains the Jewish People.

In short, the Rose-Lily, the Garden, and the River illustrate how scriptural natural imagery provided the key to the mysteries of reality as well as to hidden meanings of Scripture. Reading nature symbolically meant that nature is not autonomous and that it does not have immanent teleology. Rather nature, like the Torah, has overt and covert aspects: its physical, corporeal dimensions "cover" or "wrap" a spiritual reality that is not accessible to sensual perception or logical reasoning. Like the Torah (its coded code), nature has overt (*nigleh*) and covert (*nistar*) dimensions and requires specialized knowledge to be understood. The interpretation of both nature and Torah is a hermeneutical act of "peeling off" external, material barks (*kelippot*) in order to get to the internal spiritual core. In the textual activity of scriptural exegesis, the peeling off of the Torah literary "garments" (the literal meaning of the biblical text) is imaged as undressing the beautiful Maiden; in the natural world, the act is symbolized in "peeling off the barks" (*kelippot*) of the text in order to reach the kernel (*luz*). Since in the medieval worldview matter was the source of evil, it is understandable why the *Zohar* symbolized materiality, corporeality, or physicality by evoking the memory of primordial animals, the Leviathan, the Sea Monster, and the Serpent, which Scripture mentions as opposing power to God.[266]

These mythic animals symbolize the reality of evil, the Other Side (Sitra Ahra) that continually threatens the forces of purity and holiness, symbolized by the hind (*ayelet*), yet another nature symbol of the Shekhinah. Thus the *Zohar* depicts the Sitra Ahra as the great monster that lives in a special river and from there goes out and swims in many other rivers where the other monsters, his servants and his aided, have their homes. When the great monster

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as Mother: Studies in the Spirituality of the High Middle Ages (Berkeley: University of California Press, 1982).

266 On the reification of evil in the Zohar and the association of evil with primordial Animals, see Tishby, *Wisdom of the Zohar*, vol. 2, 447-508.

marshals its strength, it makes war on the forces of holiness and penetrates the sea of the Shekhinah, which it subdues and defiles. It is only the observance of the Commandments by the Kabbalists that can change the power struggle between the forces of holiness and the forces of impurity, restoring God's supremacy. More typically, the Zohar symbolizes the Sitra Ahra as the primordial Serpent of the Garden of Eden, which in the *Zohar*, on the basis of rabbinic midrashim, depicts as a demonic sexual force that threatens to conquer and subdue the Shekhinah/Hind (*Zohar* III, 249a-249b). She is rescued (i.e., redeemed) from the demonic forces by the Kabbalists, who empower Her in their theurgic Torah study. The characters of the Zohar are depicted as "knights of Torah," whose performance of the commandments protects the forces of holiness against the realm of evil, manifested in the social realm by Christendom. The *Zohar* is not interested in the workings of corporeal nature, but in the salvation of Israel from tribulations of the terrestrial, corporeal world.

Nature and Redemptive Activity in Lurianic Kabbalah

The symbolic mentality of the *Zohar* will shape Jewish spirituality for centuries, as Kabbalah would emerge to be the dominant interpretation of rabbinic Judaism, supplanting Maimonidean philosophy. In the sixteenth century, the Zoharic anthology became a canonic text, second only to the Talmud, a process of sacralization aided by the printing of the *Zohar* in Italy in two editions: 1558 in Mantua and 1559 in Cremona. The printing of the *Zohar* was but one aspect of the growing interest in Kabbalah among Jews and non-Jews during the sixteenth century, but whether this interest is causally related to the Expulsion from Spain or not is a matter of scholarly dispute. During the sixteenth century, Kabbalah reached its apex in the works of two very creative mystics who met in Safed: Moses Cordovero (d. 1570) and Isaac Luria (d. 1572). Cordovero systematized kabbalistic doctrine and attested a philosophical bent of mind; Luria, by contrast, delved deeply into the mysteries of

creation and speculated not just about the emanation of the Sefirot from God but about God's contraction into Himself (*tzimtzum*) prior to the emanation of the Sefirot and the coming to be of the other three worlds.

According to the Lurianic myth, the self-manifestation of God and the self-manifestation of the cosmos are two sides of the same coin. In the primordial condition, only the presence of God, the *Eyn Sof*, imaged as limitless divine light, existed. The divine reality, however, was not utter simplicity, because it already consisted of a mixture of good and evil, or powers of Judgment and powers of Mercy, which are associated with feminine and masculine forces, respectively. Whether to cathartically cleanse the divinity from forces of evil or simply to make room for non-divine reality, the first event in the creative process was the withdrawal (*tzimtzum*) of the divine light and the emergence of primeval space (*tehiru*), within which the next phase of the process will take a shape. A ray of light entered into the vacated space and formed the shapeless matter into ten Sefirot constellated in the form of a human, the macroanthropos (*Adam Qadmon*).

The details of the process vary greatly, but all interpreters agree that the constellated divine structure was unable to sustain the divine light, either because there was a "mechanical" flaw in the "vessels" that were to contain the light or because of the need to refine the structure in order to further remove any form of impurity. The result was the same: the divine "vessels" were shattered and became the "shards" or "shells" (*kelippot*) that are the basis of the corporeal world that we experience through the senses. The Breaking of the Vessels (*Shevirat ha-kelim*) separated most of the lights of the divine Compassion from the lights of divine Judgment, but now-shattered and fully materialized forces of Judgment were animated with the strength of holy sparks that were trapped in the *kelippot*. In corporeal reality, the particles of divine light, the holy sparks estranged from their sublime and transcendent origins, vitalize the world and compel humans to rescue them or release them from their entrapment.

After the "Breaking of the Vessels," divinity sought to mend itself through a complex process known as *Tikkun* (i.e., "mending," "healing," or "restoration"). Conceived in biological categories of "conception," "pregnancy," "suckling," and "maturation," the process depicts a Deity that gives birth to itself as the Primordial Human was reconfigured in new Gestalts (*partuzfim*, literally meaning "faces" or "countenances"). Presumably, these reorganized forms possessed stability and strength that the earlier manifestations of light lacked. Each of the five Gestalts contains the full structure of ten Sefirot, and the entire structure is repeated throughout the four levels of reality: "Emanation" (*Atzilut*), "Creation" (*Beriah*), "Formation" (*Yetzirah*), and "Actualization" (*Asiya*), known already in pre-Lurianic Kabbalah. The terminology of Lurianic Kabbalah would be influential in the modern period because it gave rise to Hasidism, a Jewish movement of spiritual renewal in the eighteenth century.

The intricate and highly erotic process described by Lurianic Kabbalah could be completed only through human acts through the performance of the commandments with the appropriate mystical intentions (*kavanot*). The elaborate theogonic and cosmogonic myth of Lurianic Kabbalah provided the theoretical rationale for the spiritual practices of the Kabbalists. The task of the kabbalistic virtuoso, whose own soul has been healed by living the mystical way, is to repair the broken universe and the broken Deity.[267] In the mending or healing of the world and of God lies the messianic import of Lurianic Kabbalah. Luria understood himself in messianic terms but did not declare himself publicly as a messiah. In the seventeenth century, Lurianic Kabbalah would inspire a messianic movement, although the messianic claimant himself, Sabbatai Zevi (d.1676), was inspired not by Lurianic Kabbalah but by the *Zohar* and other kabbalistic texts.

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267 For the best exposition of Lurianic Kabbalah, its social context, and spiritual practices, see Lawrence Fine, *Physician of the Soul, Healer of the Cosmos: Isaac Luria and His Kabbalistic Fellowship* (Palo Alto: Stanford University Press, 2003).

Kabbalah and Nature: A Paradoxical Legacy

We discussed Kabbalah in some detail because the kabbalistic theology of nature has inspired contemporary Jewish eco-theology. The kabbalistic attitude toward nature, however, is quite complex, and it is not self-evident that Kabbalah can ground contemporary Jewish environmentalism. Kabbalists claimed to possess knowledge of the secret code of the created/emanated universe, an act that began with the emanation of the Sefirot from the *Eyn Sof* within the Deity and encompasses all levels of reality. Since Kabbalah sought to decode the mysteries of life, it is not surprising that Kabbalah symbolized divine activity as the rhythm of penetration and withdrawal, attraction and recoiling, and expansion and contraction: the same dynamics that operate in the reproduction of all life, especially human life. Therefore kabbalistic discourse is highly sexual. But because Kabbalah conflated the doctrine of creation and emanationist metaphysics, Kabbalah yielded negative and positive attitudes toward the natural world.

According to the emanationist model, the physical universe in general and the human body in particular is the cause for the distancing of the Kabbalist from God. To achieve the desired communion with God, one must practice the ritual life of Kabbalah with its proper intentions so as to transcend the limitation of human corporeality. From this perspective, Kabbalah neither adores nature nor considers nature to be a vehicle of spiritual energy. The corporeal world is understood as an obstacle to the attainment of spiritual ends (clinging to God), and nature must be spiritualized through ascetic disciplines. This approach to nature is rather negative. Yet the emanationist schema could also be interpreted positively when nature is seen as a medium in which God's infinite light is mediated and veiled, enabling finite creatures to communicate with God through nature. In this approach, the physical world in general and the human body in particular are viewed as necessary and positive vehicles for interaction with the divine. When the rays of the divine light are refracted in the prism,

the rich beauty of the divine overflow produces awe and reverence in the observer, as well as humility and desire to serve God.

Although all Kabbalists spoke about emanation, they not only maintained the belief that God created the world, but also understood creation to be a linguistic act. The creationist model also generates two distinct attitudes toward the physical world. If the world is a linguistic construct, the Kabbalist who deciphers the code of elements, the Hebrew letters, knows the grammar of nature's language. But this hermeneutical focus leads the Kabbalists to ignore the sensual world, because they are instead concerned with language and not with corporeal things. This is most evident in Lurianic Kabbalah, where the mysteries of God's inner life were made exoteric. Accordingly, the Lurianic Kabbalist experiences not nature but the pulse of divine energy, which vitalizes the physical world. Conversely, the creationist model can generate an activist attitude toward nature. If the observable world is a linguistic construct whose rules and grammar are accessible to the Kabbalist, he can also attempt to manipulate nature by using linguistic formulas. This activism associated Kabbalah with magic and flourished in the sixteenth century, when scientists began to seek control of nature's occult (i.e. hidden) properties. Kabbalists thus used the divine Name to manipulate and control nature, prognosticate future natural events, or even create an entity that does human bidding, namely a Golem.[268] In the first variant, creative ability is limited to the realm of language as manipulated by the imagination of the Kabbalist; in the second variant, the product of kabbalistic creativity is itself an event in the natural world. Kabbalah should not be faulted for its ambiguities, because it attempted to fathom the depth of creativity itself.

268 On the history of this tradition in Kabbalah, see Moshe Idel, *Golem: Jewish Magical and Mystical Traditions on the Artificial Anthropoid* (Albany: SUNY Press, 1990).

PART III: CONCEPTIONS OF NATURE IN MODERN JUDAISM

Toward Modernity: Kabbalah, Science, and Magic in the Early Modern Period

Kabbalah dominated Jewish intellectual life during the early modern period. In the sixteenth century, especially in Renaissance Italy, the kabbalistic symbolic interpretation of nature was translated into the Jewish increased interest in natural history. As Brian W. Ogilvie has shown, in the Late Renaissance, a distinct scholarly discipline known as natural history developed out of medical humanism and was practiced by self-identified groups of naturalists either in the princely courts or universities.[269] These communities were closely connected through correspondence and travel and imagined themselves as a distinct community within the early modern Republic of Letters. Renaissance naturalists drew on ancient and medieval natural philosophy, pharmaceutical knowledge, and agriculture, but they also invented a unitary tradition out of distinct ancient and medieval strands in order to justify and legitimate the activities of their imagined community. The rediscovery of ancient scientific texts and the breakthroughs in geography, astronomy, chemistry, physics, human anatomy, and engineering brought about a scientific renaissance of which some Jewish scholars were very aware but to which Jews have made only limited contributions. Jews were not crucial to the discoveries of the Scientific Revolution of the seventeenth century, but neither were they oblivious to them.

Jewish access to new scientific discoveries took place in princely courts, universities, and emerging scientific societies. The first setting, the princely court, exhibits continuity with the Middle Ages, since Jews were employed as physicians, mathematicians, astronomers, and astrologers in the courts of medieval monarchs, emperors, and even popes. However, since Jews were excluded

269 Brian W. Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: Chicago University Press, 2006).

from medieval universities, the medieval study of medicine (and science more generally) lacked institutional basis; medieval Jews studied medicine and science in private by writing commentaries on authoritative texts. By contrast, in the early modern period, Jews were allowed to enter the faculties of medicine of some European universities, especially the Universities of Padua, Leiden, Krakow, and Frankfurt on the Oder.[270] In their university medical training, Jews got access to the liberal arts in Latin and to classical, medical texts, and they necessarily became exposed to advances in new scientific disciplines such as botany, anatomy, chemistry, clinical medicine, physics, and astronomy. University training profoundly transformed Jewish-Christian relations and Jewish education in Western and Central Europe. In the eighteenth century, the class of educated Jews would champion the ideology of the Enlightenment and give rise to the movement of Jewish Enlightenment (Haskalah).

The exposure of Jews to Renaissance science was also stimulated by the infusion of a new kind of Jews: the ex-conversos. The conversos were Jews who converted to Christianity in Iberia in 1391-1497 and who lived as Catholics, entering all areas of life from which Jews had been previously excluded. While many of the New Christians were profoundly committed Christians and some established religious orders or became celebrated theologians and clergymen, some of the New Christians practiced Judaism in secret, although their Judaic practice varied greatly from official rabbinic Judaism. The New Christians were involved in various trade networks that benefited from the geographic expansion of Europe in the early modern period, and they were exposed not only to the traditional scientific disciplines of physics and astronomy, but also the newly discovered disciplines of geography, botany, and zoology. When these university-trained conversos returned to Judaism, they

270 On the scientific training of Jews in the early modern period and its impact on Jewish culture and education, see David B. Ruderman, *Jewish Thought and Scientific Discoveries in Early Modern Europe* (New Haven: Yale University Press, 1995); David B. Ruderman, *Early Modern Judaism: A New Cultural History* (Princeton: Princeton University Press, 2011).

would introduce their new co-religionists to scientific knowledge and new approaches to medicine.

A case in point is Amatus Lusitanus (d. 1568). Born into a converso family in Spain (1512), he studied medicine at the University of Salamanca (graduating in 1530) but left Spain in 1533 when hostility toward converso physicians in Portugal increased.[271] He moved to Antwerp, where he established his medical reputation by treating prominent citizens, including the family members of the Jewish diplomat and financier of converso descent, Don Joseph Nasi. Amatus wrote his first book on medical botany, *Index Dioscrides,* and became a famous scientist. In 1540, the Duke of Ferrara, Ercole II d'Este, who supported and encouraged scientific research, appointed him lecturer of medicine at the University of Cannao, where he dissected corpses. In 1547, he left Ferrara and moved to Ancona, where he openly returned to Judaism, although the papal and inquisitorial pressure on the conversos continued unabated. In 1549, he published his first *Centuria*, a collection of one hundred medical case histories, including their treatments and results. These studies illustrated a new empirical and even experimentalist attitude toward the natural world, which differed from the medieval bookish and theoretical approach. Notwithstanding his fame, Amatus was a victim of persecution by the Inquisition, which led him to depart Italy and settle in Salonica, where he eventually died in 1568.

In the Ottoman Empire, there were Jews who were prominent physicians, with expertise in different branches of medicine, who served sultans, viziers, and various courtiers.[272] Often freed from paying burdensome taxes, the Jewish physicians were a distinctive social elite within the Jewish community, exerting significant

271 On Amatus Lusitanus and the role of ex-coversos on Jewish culture, see Noah J. Efron, *Judaism and Science: A Historical Introduction* (Westport: Greenwood Publishing Group, 2007).

272 On Jews as physicians in the Ottoman Empire, see Lucien Gubbay, "The Rise, Decline and Attempted Regeneration of the Jews of the Ottoman Empire," *European Judaism: A Journal for the New Europe* 33, no. 1 (2000): 59-69.

influence on internal Jewish affairs. In the Habsburg Empire during the sixteenth century, we encounter not only Jewish physicians but also Jewish astronomers and geographers who are interested in the new astronomy advanced by Copernicus, Kepler, and Tycho Brahe. In the court of Emperor Rudolph II (1552-1612) in Prague, Jewish scientists, most famously David Gans, interacted with Christian scientists, especially in regard to astronomy. David Gans (d. 1613), a German Jew who studied at the University of Krakow, collaborated with Johannes Kepler and Tycho Brahe.[273] Gans translated the Alphonsine Tables, the most important legacy of medieval astronomy, from Hebrew to German, and although he did not accept the new heliocentric theory of Copernicus, Gans illustrated a new Jewish openness toward the scientific study of nature. Gans was convinced that shared scientific interest could mediate between Christians and Jews, because the new sciences were theologically neutral. Gans also composed an original Hebrew compendium of geographical and astronomical information, but his scientific works had no impact on the Jewish community of his day, since his books remained unpublished and largely ignored. This is yet another example of the problematic status of the natural sciences in traditional Jewish society.

By contrast, another Jewish scholar who frequented the Rudolphine court—Rabbi Judah Loew ben Bezalel of Prague, known as the Maharal (d. 1609)—articulated a theology of nature that accommodated the new scientific discoveries of the early modern period. Rabbi Loew was an outstanding Talmudic scholar who held a rabbinic position as Chief Rabbi of Moravia (1553-1573), and as such directed the Jewish community's affairs. He left Moravia for Prague due to anti-Jewish persecution and established a rabbinic academy in Prague, where he became known for his broad approach to Talmudic studies but above all for his expertise in Kabbalah. In early modern Europe, non-Jewish scholars were deeply interested

273 On David Gans's scientific activities, see Noah J. Efron, "Irenism and Natural Philosophy in Rudolfine Prague: The Case of David Gans," *Science in Context* 10, no. 4 (1997): 627-649.

in Kabbalah because it was viewed as part of the occult sciences, the sciences that tell us about hidden properties of things.[274] Kabbalah was closely related to the study of alchemy, astrology, and magic, all of which were very much part of early modern science. The possession of esoteric (i.e., occult) knowledge of the properties of things was deemed essential to the decoding of nature's secrets and even facilitating the creation of new entities. Kabbalah was regarded as the grammar of nature, and the Kabbalist, the Magus of words, could control nature and even bring new entities to life. In the early modern period, magic, science, and Kabbalah were closely intertwined among Jews and non-Jews alike, who linked Kabbalah, alchemy, and magic.[275] It was because of his command of Kabbalah and his interest in the natural sciences that the legend about the making of a Golem was attributed to Rabbi Loew.

For Rabbi Loew, there was no conflict between his engagement in Kabbalah and encouragement of Jewish study of the natural sciences, because these endeavors belonged to two distinct levels of reality: science belongs to the "natural" realm (accessible to us through the senses), whereas Kabbalah pertains to the "supernatural" realm (accessible only through revelation and faith). For Rabbi Loew, the corporeal world should be studied scientifically, but scientific information is irrelevant to the supernatural realm, which reflects divine election and human choice rather than the necessity and determinism of natural laws. Rabbi Loew then regarded Israel, the Chosen People, as a supernatural entity whose existence is fundamentally different from that of all other people, although Israel shares with them the corporeal world of nature. Israel then is indeed "unnatural" and "separate" from all other

274 P.G. Maxwell-Stuart, *The Occult in Early-Modern Europe: A Documentary History*, (London: St. Martin's Press, 1999); Brian P. Copenhaver, *Magic in Western Culture: From Antiquity to the Enlightenment* (Cambridge: Cambridge University Press, 2015).

275 David B. Ruderman, *Kabbalah, Magic and Science: The Cultural Universe of a Sixteenth-Century Jewish Physician* (Harvard University Press, 1988).

nations.[276] Unlike medieval Jewish philosophers who regarded the study of nature as a religious obligation, Rabbi Loew insisted that the Torah is "beyond nature," so that those who observe the Torah's commandments are able to cling to God and free their souls from the control of deterministic nature. Jewish existence stands beyond and in contrast with natural law and the political order based on it.[277] By radically separating Israel (i.e., its election, providential care, redemption, and eschatological end) from the realm of nature, Rabbi Loew's theological dualism facilitates Jewish interest in the study of nature while asserting Jewish spiritual superiority over all other nations, legal systems, and political arrangements that belong to the realm of nature. By erecting carefully drawn boundaries between the domains of scientific activity and religious faith, Rabbi Loew offered a strategy whereby Judaism and science could co-exist in hierarchical relations that placed Judaism above nature and science.

In the early modern period, there were conflicting attitudes toward the scientific study of nature: on the one hand, knowledge of science increased among Jews with the help of the printing press and the publication of scientific books in Hebrew and Yiddish. European Jews could now have access to scientific knowledge, whether they were literate in it or not. But on the other hand, many European Jews continued to view nature as a linguistic construct whose mysteries are known only to those who practice Kabbalah. In Central and Eastern Europe, a peculiar fusion of Kabbalah, mysticism, and magic was very popular among Jews, who believed that practitioners of Kabbalah could heal and perform miracles, namely, effect changes in the natural world. Kabbalists could transform nature not only because they possess the grammar of reality, but also because of their use of mystical intentions (*kavanot*), consisting of mental focus, knowledge of the divine

276 See David Sorotzkin, *Orthodoxy and Modern Disciplination: The Production of the Jewish Tradition in Europe in Modern Times* (in Hebrew) (Tel Aviv: Ha-Kibbutz Hameuchad, 2011), 69-73; 135-200.

277 Sorotzkin, *Orthodoxy and Modern Disciplination*, 155.

Name, and mastery of the esoteric meanings of kabbalistic prayers. In the early modern period, the boundary between speculative Kabbalah (*kabbalah iyyunit*) and practical Kabbalah (*kabbalah ma'asit*) collapsed; that did not bring Jews to welcome modern science but rather retarded Jewish involvement in modern science. Instead of modern science, masses of European Jews had access to manuals and books of recipes, "how to" books replete with instructions that enabled practitioners to extend their minds over matter and build a new continuity between the intentional, mental world of the practitioner and the external, physical world. Shaping the material world now became the technical knowledge of Jewish healers, known as Masters of the Name (*ba`aley shem tov*), and these people were crucial to the rise of Hasidism, a Jewish renewal movement in the eighteenth century.

Hasidism emerged in Eastern Europe in response to various historical processes: the failure of the messianic movement of Sabbatai Zevi, the growing alienation between the Jewish rabbinic establishment in urban centers and the Jews in the countryside, the close proximity and daily contacts between Jews and non-Jews in the rural hinterland, and the search for new religious modes of religious expressions beyond the intellectualism of Talmudic culture. Founded by Rabbi Israel Baal Shem Tov (known as the Besht) (d. 1760),[278] eighteenth-century Hasidism situated itself from the very beginning in natural contexts. Not only were

278 For a new biography, see Immanuel Etkes, *The Besht: Magician, Mystic and Leader* (Hanover: University Press of New England 2005). According to Etkes, the main source of information about the Besht, *The Praises of the Baal Shem*, can be treated as a historical source, but the Besht was neither a founder of Hasidism nor a leader of a Hasidic movement but a celebrated and prestigious *ba'al shem*, a healer who engaged in practical Kabbalah and in that capacity was exposed to and dealt with the earthly conditions of the Jews in his day. Similarly, Moshe Idel, *Hasidism: Between Ecstasy and Magic* (Albany: SUNY Press, 1995) presents the Besht as a prophet and talismanic magician, since Hasidism (which was deeply indebted to the Kabbalah of Abraham Abulafia) had a deep interest in magic, namely, in human control of nature.

the hagiographic narratives about the Besht situated in natural contexts (e.g., forests), in which he was reported to meditate on and commune with nature, Hasidic theology placed "worship through corporeality" (*avodah be-gashmiyut*) as its religious ideal.[279] In continuity with Kabbalah, Hasidism understood nature to be experienced through the mediation of language, but Hasidism taught that to live a holy life within the parameters of Halakhic Judaism, the Hasid must remove the veils of corporeality by practicing mystical intentions, culminating in ecstasy. The Hasidic ideal of "worship through corporeality" had paradoxical results: it sanctified the secular world of nature as much as it secularized the divine world.

Since Hasidic masters did not speak in one voice, Hasidic attitudes toward the natural world range from magic to pantheism to a-cosmism. In continuity with Lurianic Kabbalah, Hasidism regarded all natural phenomena as ensouled: divine sparks (*nitzotzot*) enliven all corporeal entities, not just human beings. The divine sparks seek release from their material entrapment. Through ritual activity, the Hasidic master attempted to draw closer to the divine energy, the liberation of which will result not only in the sanctification of nature but also in the redemption of reality and its return to its original, non-corporeal state.[280] The worship of God through the spiritualization of corporeal reality became a major Hasidic value, complementing the general de-emphasis on formal Torah study in Hasidism. Hasidic tales were situated in natural rather than urban settings, encouraging Hasidic worshippers to find the divine sparks in all created beings. In the eighteenth and nineteenth centuries, the Hasidic ideal of "worship through corporeality" focused Hasidism's attention on the physical

279 Tsippi Kaufmann, *In All Yours Ways Know Him: The Concept of God and Avodah be-Gashmmiyut in the Early Sates of Hasidism* (in Hebrew) (Ramat Gan: Bar Ilan University Press, 2009).

280 This aspect of Hasidic activity makes the Hasidic master phenomenology similar to a shaman. See Moshe Idel, *Hasidism: Between Ecstasy and Magic* (Albany: SUNY Press, 1995).

world, but it did not lead to scientific interest in nature and did not create a concern for the well-being of the physical environment or a desire to protect it from human exploitation. Rather, to reach their desired spiritual goals, Hasidic meditative practices attempted to dissolve the corporeal dimension of existing reality so as to spiritualize the one who meditates on nature. The spiritualizing tendencies of Hasidism thus deepened Jewish bookishness, which stood in tension with the emerging worldview of mechanistic, materialistic, modern science.

By the turn of the nineteenth century, Hasidic masters were quite aware of modern science and the emergence of the Jewish Enlightenment movement, which was most critical of traditional Judaism and in particular regarded Hasidism as a superstition that holds Judaism back and prevents its modernization.[281] Between the Jewish advocates of Enlightenment (*maskilim*) and the Hasidim there was a bitter feud, and nature itself became emblematic of that dispute. The most original treatment of these issues could be found in the tales of Rabbi Nahman of Bratslav (d. 1810). In a famous tale, "The Seven Beggars," Rabbi Nahman juxtaposed "nature" with the "world" and articulated a complex and dialectical view of nature.[282] On the one hand, "nature" (and natural law) is viewed as exilic because it represents false security, logic, and a vision of the world severed from the constant influx of divine effluence. It is presented as the binary opposite of miracle."[283] Nature is inert, passive, and static, governed by the unchanging natural laws that human reason claims to know. Rabbi Nahman rejected this claim as false and misleading: human reason promoted by the "philosophers" (namely, the Jewish *maskilim* of his day) fails to grasp the real,

281 The bitter struggles between the Hasidim and their opponents (known as Mitnagedim) revolved in part on the claim of human ability to impact nature. See Immanuel Etkes, "Magic and Miracle-Workers in the Haskalah Literature," in *New Perspectives on the Haskalah*, ed. Shmuel Feiner and David Sorkin (Oxford: Littman Library of Jewish Civilization, 2001), 113-127.

282 See Shaul Magid, "Nature, Exile and Disability in R. Nahman of Bratslav's 'The Seven Beggars,'" in *Judaism and Ecology*, 333-338.

283 Magid, "Nature, Exile and Disability," 335.

living energy that pulsates through the world due to ever-renewing divine creation. The realm of "nature" is governed by necessity, whereas the "world" breathes of freedom and creativity. The realm of necessity belongs to the imperfection of nature, a realm occupied by the non-Jews, whereas the perfect world belongs to Israel. Nature is a category of exile; it stands against the world of redemption.

These ideas echo the teachings of Rabbi Loew of Prague, for whom Israel belongs to the realm of free will and authentic, creative energy, captured by the ritual act of prayer, which stands in contrast to the world of fixed natural laws. Rabbi Nahman explains that the two worlds are diametrically opposed: what appears deformed on the level of nature is in fact perfection, and what appears perfect is in fact deformed. In the teachings of the Hasidic master, natural philosophy is a form of exile, an alienation from the divine source. The creative energies of the divine world could be captured only by the teller of tales, the artist who can use kabbalistic symbols in a creative way. He is no longer the Kabbalist who manipulates the combination of letters, but this imagination enables him to operate with large symbolic units in a narrative style, inspired by the literary conventions of European folk tales. Rabbi Nahman's alienation from nature and escape into the world of myth (conjured in his tales) could have been related to his messianic self-understanding. The creative capacity of the mystic messiah lies in his own psyche, the roots of which trace back to the origins of creation. Rabbi Nahman was truly concerned about redemption, and the path to it led through the mystery of his own soul and its ancient roots. The prescribed *tikkunim* (remedies) he prescribed for his own soul were to bring about the "final *tikkun*" of nature, of Israel, and of God. This creative, artistic approach to nature resonates with the kabbalistic view that language is a blessing and the creative manipulation of language is a divine act of *poiesis*.

By the nineteenth century, Jewish life would be fundamentally transformed by modernity, which challenged traditional Judaism politically, socially, religiously, and philosophically. As much as the modern nation-state could not tolerate the continued communal

existence of the Jews and their judicial separatism, Jews also actively fought for emancipation from centuries of discrimination, exclusion, and marginalization. The ideal of human rights articulated by the French Revolution and its philosophical underpinning in the Enlightenment provided the basis for granting Jews civil rights as individuals. The process of emancipation was long, with many reversals, but by the 1870s, Jews in Western and Central Europe were accepted as citizens in their country of residence, although they were by no means viewed as social equals.

As citizens, Jews now flocked to the universities, whose doors were previously closed to them; many were attracted to the natural sciences, especially the new disciplines of chemistry, microbiology, and medical biology.[284] Ironically, the habits of traditional Talmud study prepared Jews to engage in the sciences, and in some scientific fields, Jews were disproportionately represented and reached outstanding achievements; other fields were shaped entirely or mainly by Jewish scientists. For many Jews who wished to acculturate, modern science became a substitute for religion, although, ironically enough, it was the lifestyle of traditional Judaism, with its insistence on meticulous observance of laws and commitment to the pursuit of truth, that generated the personality type suitable for the rigors of scientific inquiry. Since academic excellence did not guarantee academic appointments or social acceptance, conversion to Christianity was rather common: one path toward full integration that many Jews coveted. For those who remained loyal to the ancestral tradition, the meaning of Jewish identity became hotly contested, resulting in diverse ways of being Jewish. Some insisted on the radical reinterpretation and modernization of Judaism from within (Reform); others insisted on the timeless nature of Judaism, although they accepted the validity of modern culture and consented to superficial changes in Jewish practices (Positive-Historical School and Neo-Orthodoxy);

284 See Ulrich Charpa and Ute Deichmann, *Jews and Sciences in German Contexts* (Tubingen: Mohr Siebeck, 2007), 5-36, esp. 23-30.

and still others rejected the winds of change and erected an ever-higher fence around the Torah to defend Judaism from modernity and modernization (Ultra-Orthodoxy). The most radical Jewish response to modernity was Zionism, the Jewish secular, nationalist movement that advocated the return of the Jews to their ancestral home in the Land of Israel in order to normalize the Jews and overcome the ills of exile. Regardless of their solution to the problem of Jewish existence, all variants of modern Judaism were responses to the challenges of modernity.

Conceptions of nature function prominently in modern debates about Jewish identity. I will focus on two forms of modern Jewish identity—Modern Orthodoxy and Zionism—to illustrate this point.

Modern Orthodoxy: Torah and Secular Knowledge

Samson Raphael Hirsch

Modern Orthodoxy (or Neo-Orthodoxy) emerged in the nineteenth century as a response to the agitation of those Jews who wished to reform Judaism from within. The most comprehensive defense of traditional Judaism was offered by Rabbi Samson Raphael Hirsch (d. 1888), who endorsed the process of emancipation and fought hard to obtain legal rights for Jews, but who also rejected the Reform movement's attempt to modernize the beliefs and practices of Judaism. Hirsch represents a new type of rabbinic figure: thoroughly anchored in traditional Judaism, while benefiting from university education. Hirsch studied history, philosophy, and philology at the University of Bonn and followed Moses Mendelssohn in advocating the integration of traditional Judaism with contemporary secular culture (*Torah im Derekh Eretz*).[285] Deeply aware of the profound perplexity that plagued Jews in nineteenth-century Europe because of the emancipation, Hirsch, the Chief Rabbi of Moravia who in

285 For an overview of this movement, consult Mordechai Breuer, *Modernity within Tradition: The Social History of Orthodox Jewry in Imperial Germany*, trans. Elizabeth Petuchowsky (New York: Columbia University Press, 1992).

1851 became the leader of the separatist Orthodox community in Frankfurt-am-Main, devoted his life to teaching and preaching. He summarized the foundational myth of Judaism, explicated the philosophical principles of Jewish law, classified Jewish law with explication of the rationale, and wrote a commentary on the Bible, all in order to make Judaism accessible and intellectually compelling to university-educated Jews.[286] Hirsch was the first modern Jewish theologian to derive the principle of respect toward nature from the doctrine of creation; he can be considered the first modern Jewish ecological thinker.

Unlike his medieval predecessors, Hirsch makes no attempt to prove that God created the world. For him, the Torah asserts the fact that God created the world: "All was created by the Word of God, determined by His will, formed by his finger. To God, the Universal Force, belong all the forces which are at work in nature and the universe and all the laws which regulate life."[287] In his Commentary on the Pentateuch, Hirsch teases out the meaning of the doctrine of creation by reflecting on the opening words of the biblical narrative, "in the beginning God created…":

> Everything, matter and form of all that exists sprang forth from the free and almighty will of the Creator… For it is His free and almighty will that created matter, that endowed it with these powers, and that established the laws for these powers according to which they shaped forms. And just as God rules freely over His world, His macrocosm, so could He also endow Man, into whom He blew a spark of His free essence, with this spark of freedom over his small world, his microcosm. So could He also endow him with freedom over his body and its

286 For an excellent summary of Hirsch's life, works, and thought, see Noah H. Rosenbloom, *Tradition in an Age of Reform: The Religious Philosophy of Samson Raphael Hirsch* (Philadelphia: Jewish Publication Society of America 1976).

287 Samson Raphael Hirsch, *The Nineteen Letters on Judaism* (Jerusalem, New York: Feldheim Publishers, 1969), 31.

> forces and place Man as the free image of God in the macrocosm ruled over by His Omnipotence."[288]

Precisely because there is only one Creator who brought the entire universe into existence, Hirsch considers the "opposite conception, that of primordial matter which concedes to God the role of mere plastic sculptor" as a "metaphysical lie." It not only "robs Man's cosmogenic conception of its truth, it is the much more dangerous denial of freedom in God and in Man, a denial that undermined all morality."[289]

Hirsch's understanding of divine freedom echoes Hegel, for whom the will and mind do not represent two disjointed categories but are two different manifestations of the same essence: "The will is a special way to thinking, namely, it is thought translating itself into reality and becoming practice."[290] Hirsch adopts Hegel's analysis of the interplay between mind, will, and right to this analysis of God's Law, the Torah. For Hirsch, the Torah emanates directly from God, who is Absolute Mind. The Law is the "Will of God," which was embodied in the Torah and communicated to humanity through revelation. God expressed His Will in the Torah/Law, which is the embodiment of right. To act rightly, humans must correlate their subjective will with the absolute "Will of God," which in turn will actualize their potentialities in conformity with the divine Will; thus the subjective will becomes explicit, externalized, objectified, and good. The correlation of the subjective will with the Absolute Will of God and its gradual objectification in the external world by Hegel are inextricably bound up with the concept of freedom. Following Hegel (and Kant), Hirsch regarded freedom as the essential element of the will as well as its very substance. With God-given unlimited freedom, humans have the ability to actualize their will in the domain of right. Through the free exercise of the will, humans extricate themselves from the sensual and objective

288 Jacob Breuer, ed., *Fundamentals of Judaism: Selection from the Works of Rabbi Samson Raphael Hirsch* (New York: Feldheim, 1969), 10.

289 Breuer, *Fundamentals*, 9.

290 Noah H. Rosenbloom, *Tradition in an Age of Reform*, 287.

confines of nature and identify with the Will of God as embodied in the Law of the Torah.

In the order of creation, human beings possess a unique status. Alone among all creatures, humans were created in the "image of God," which for Hirsch means that they alone were endowed with free will. Therefore only humans were "created for justice."[291] As Hirsch puts it: "For God, by giving you a will, detached you from His compulsive law—so that you may of your own free will do justice to God and every creature."[292] By virtue of free will, human beings can deliberately liberate themselves from the deterministic laws that govern the universe and regulate the involuntary behavior of the non-human species.[293]

Following Hegel, Hirsch links the notion of justice and right to the concept of ownership of property. Since God has endowed humans with personality and freedom, He has also given humans the right to property. There is a distinct connection between human freedom and ownership of property: a slave who is deprived of his freedom is not entitled to property. The right of the Israelites to own property began only after their redemption from the Egyptian bondage. Hirsch extends this principle to the human right for ownership over creation: "Human concourse shall be ruled not by the visible or by force, but by the invisible, by ideas and right, the action of the human spirit authorized by God."[294] However, the God-given *right* to ownership comes with a *duty* to treat God's created order in accordance to God's Will. Hirsch explains that in the created order, the human being is

> neither as a god nor a slave. Instead he shall stand as a *brother among his brother creatures*. But he shall occupy the rank of the first born, because of the peculiar nature and scope of his own service. He is to be the administrator

291 Hirsch, *Horeb: A Philosophy of Jewish Laws and Observances,* trans. Isidor Grunfeld (London: Soncino Press, 1981), 324.

292 Hirsch, *Horeb*, 324.

293 Hirsch, *Nineteen Letters*, 33.

294 Hirsch, *Horeb*, 335.

> of the whole Divine estate, the earthly world; to provide and care for all therein in accordance with the will of God.[295]

This is Hirsch's Jewish formulation of the *ethics of stewardship,* which teaches humanity "that the earth is not yours, but you were given to the earth, to respect it as divine soil and to deem each one of its creatures a creature of God, your fellow being."[296] The human is part of nature (i.e., a brother to all creatures), but like the first born, the human also has special privileges and obligations. In Hirsch's thought, the status of the human as "firstborn child" in the created world is analogous to the status of Israel among the nations: privilege that entails obligations.

For Hirsch, as for Hegel, human mastery over nature is about the fulfillment of human rational, God-given, free will. The mastery of natural things flows from the very nature of humans; indeed, humans have an obligation to exercise mastery over living things. Thus Hirsch reads the word "*kivshuah*" ("subdue it") as follows: "*Kivshuha* is property; the mastering, appropriating and transforming the earth and its product for human purposes ... This makes the acquisition of property itself into a moral duty" (Commentary on Genesis 1:28). Taken alone, this anthropocentric position may be most irritating to contemporary environmentalists, but for Hirsch, the human right to master nature is *not* a license to exploit or manipulate nature. Rather, human right of mastery over nature depends on the extent to which the human will corresponds to God's Will. The Torah itself, God's revealed Will, discloses how nature is to be treated with justice and respect.

Hirsch classified Jewish law into six categories and places the nature-oriented commandments in the class of the *Hukkim*, namely, "laws of righteousness toward those beings which are subordinate to man: toward earth, plant, animal, toward one's own body,

295 Hirsch, *Nineteen Letters*, 42.
296 Hirsch, *Nineteen Letters*, 37.

mind, spirit, and word."[297] In Jewish jurisprudence, the *Hukkim* (in contradistinction to *Mishpatim*) were taken to be laws whose reason cannot be fathomed by humans. Hirsch explains that the laws concerning justice toward nature seem arbitrary or irrational only because of limited human understanding. In fact, the *Hukkim* were legislated by God primarily for the protection of nature from human avarice and exploitation. Because in nature humans do not encounter sentient, conscious beings, humans can easily abuse natural things and destroy the world that God has given them for cultivation. For this reason, Hirsch placed the command "Do Not Destroy" at the opening of the Hukkim section. Humankind has a right to nature but it also has an obligation to use nature only as specified by God, the Creator and true owner of the natural world. Heedless destruction of nature reflects human arrogance and rebellion against God. Instead, the Torah's laws about nature assure that humanity behaves wisely and judiciously to protect the integrity of the natural world and its perpetuation.

The created world exhibits not only inherent purpose but also orderliness, intelligence, and interdependence. Nothing in nature is superfluous: everything has its place, function, and destiny, all working in harmony. Hirsch views the natural world as "one glorious chain of love, of giving and receiving, uniting all creatures, nothing is by or for itself, but all things exhibit in continual reciprocal activity—the one for the all; the all for the one."[298] This premodern view of nature was common in medieval Jewish philosophy as much as it was defended by Kant, who held that "in considering living beings must necessarily accept the principle that no organ, no faculty, no impulse, indeed nothing whatsoever is either superfluous or disproportionate to its use, but that everything is exactly adapted to its purpose in life." Given the remarkably wise design of the universe, humans have an obligation to protect the natural world. Indeed, the *Hukkim* make clear that human beings

297 For analysis of Hirsch's understanding of *Hukkim*, see Rosenbloom, *Tradition in an Age of Reform*, 315-326.

298 Hirsch, *Nineteen Letters*, 29.

must not alter the order created by God. The Torah prohibits copulation of diverse animals, grafting of diverse trees, yoking together of diverse animals, wearing of wool and flax, and mixing of milk and meat. These laws are rooted in the act of creation, when God separated His creatures "each according to its kind." Through the Torah, the Creator of the world functions as the "Regulator of the world"; the human who was appointed as the "administrator" of God's estate executes the rules that ensure protection of nature. In Hirsch's analysis of the *Hukkim*, nature serves as a model for observance of divine command and places its own demands or commandments on humans.[299]

The biblical narrative of creation culminates in God's rest on the seventh day, the Sabbath. Hirsch explains that the Sabbath "was introduced into the creation....; [it] was made the crown and coping stone, the completion and condition of the six preceding days."[300] For Hirsch (as for all traditional Jews), "the whole material welfare of man on earth has also been linked with the Sabbath." What appears to us as a fixed, natural world is but the "Sabbath robe" with which God wrapped the universe at the cessation of the act of creation. Hirsch explains the obligations to abstain from work on the Sabbath not just as *imitatio Dei*, but as the result of the very role assigned to humans in the process of creation. As noted above, humans were given the right to have dominion over the world and they express it by fashioning and transforming the natural world during the six days of the week. By refraining from purposeful creativity on the Sabbath, humans acknowledge God's sovereignty and mastery of the world.[301] On each Sabbath day, the world, so to speak, is restored to God, and thus man proclaims both to himself

299 For further discussion of Hirsch's view, consult Shalom Rosenberg, "Concepts of Torah and Nature in Jewish Thought," in Tirosh-Samuelson, ed. *Judaism and Ecology*, 189-226, esp. 214-218.

300 Hirsch, *Judaism Eternal: Selected Essays from the Writings of Rabbi Samson Raphael Hirsch,* ed. Isidore Grunfeld (London: Soncino Press, 1959), vol. 2 14.

301 Hirsch, *Horeb*, 142.

and to his surroundings that he enjoys only a borrowed authority.[302] The weekly observance of the Sabbath is thus a symbolic reminder of divine ownership, and the same logic is expressed in the laws of the Sabbatical Year, which constitute man's "acknowledgement of God as the owner and master of the land."[303] The ideas of Samson Raphael Hirsch have continued to inform the views of Modern Orthodox thinkers in the twentieth century, and his view of nature is quite common among Orthodox Jews, although they do not necessarily think about their environmental implications.

Creation versus Nature: Isaac Breuer's Fusion of Kant and Kabbalah

Hirsch's grandson, Isaac Breuer (d. 1946), is an example of how Modern Orthodox views evolved both philosophically and politically. Philosophically, Hirsch's grandson was influenced by Kant more than Hegel, and politically, he showed that Modern Orthodoxy is coherent with Zionism. Breuer's father, Shlomo Zalman Breuer, was the rabbi of the Orthodox congregation in Frankfurt-am-Main, and in his Yeshivah, Breuer received a traditional Jewish education in the 1890s. Unlike his father, grandfather, and a maternal uncle, however, Isaac Breuer did not become a rabbi but went to university and became a lawyer. Beginning in 1902, he attended several German universities (Giessen, Strasbourg, Marburg, and Berlin) and after immersing himself in philosophy, art history, and German philology, he earned a doctorate in law in 1913. During his university training, Breuer delved into Kantian philosophy, acquainted himself with leading Neo-Kantian philosophers (including Hermann Cohen, toward whom Breuer, unlike Rosenzweig, did not develop any special affinity), and became a member of a Kantian Society. Breuer admiringly asserted that "every genuine Jew who studied Kant's *Critique of Pure Reason* would say Amen from the

302 Hirsch, *Horeb,* 141.

303 Hirsch, Commentary on Leviticus, 25:2; Rosenblum, *Tradition in an Age of Reform*, 246.

bottom of his heart"[304] and testified that he "read Kant as a Jew."[305] In Kant, Breuer found the key for the reinterpretation of Judaism against its modern critics, from within and from without, although Judaism addresses the shortcomings of Kantian philosophy. Like Rosenzweig, Breuer wanted to take Judaism outside the bounds of reason alone by delimiting the bounds of reason. His main goal was to destroy the conception of Judaism as a religion of reason, articulated most forcefully by Hermann Cohen and endorsed by Reform Judaism. For Breuer, Judaism is religion that transcends reason.

Breuer was deeply committed to Hirsch's program of "Torah with secular culture," but he was also aware that by the beginning of the twentieth century the program had become quite problematic: The masses in Europe cultivated secular knowledge at the expense of Torah and assimilated out; conversely, the Ultra-Orthodox Jews denounced secular knowledge and insulated themselves within the Jewish legal tradition, to the detriment of Jewish life. While they retreated from the world, the secular Zionists successfully received international support for their project to return the Jews to the ancestral land and were more able to carry out this ancient messianic vision. Breuer was concerned that if Zionism accomplished its goal of establishing a secular Jewish state, traditional Judaism would suffer greatly. The Zionists correctly understood the historical situation but they were wrong to interpret Judaism in secular terms.[306] In 1912, Breuer was among the founders of Agudat Israel as an Orthodox response to Zionism and believed that its program could secure a Jewish religious renaissance. Breuer eventually came to appreciate the accomplishments of Zionism as a manifestation of

304 For overview of Isaac Breuer's life and thought, see Alan Mittleman, *Between Kant and Kabbalah: An Introduction to Isaac Breuer's Philosophy of Judaism* (Albany: SUNY Press: 1994); Rivkah Horowitz, "Introduction to *Tziyuney Derekh*," in Isaac Breuer, *Tziyuney Derekh* (in Hebrew) (Jerusalem: Mosad Ha-Rav Kook, 2007), 21-56.

305 The citations are from Isaac Breuer, *Mein Weg* (Jerusalem/Zürich:Morascho Verlag, 1988 [1946]), 81 in Mittleman, *Between Kant and Kabbalah*, 31.

306 See Eliezer Schweid, *A History of Modern Jewish Thought*, 152-54.

divine providence. After the rise of the Nazis to power, he settled in Palestine (1936), where he became a leader of the Socialist party, Poalei Agudat Yisrael, while practicing law. Breuer combined Socialism's concerns for justice with Orthodox Judaism, and it was the Bible that underscored his religious socialism.

Breuer used his extensive philosophical training to offer a "new orientation" to German Orthodoxy. He composed several works in German during the 1920s and 1930s, and after his settlement in Palestine, he published in Hebrew and in English.[307] Much of Breuer's work was ideologically polemical but also philosophically informed. What makes his interpretation of creation interesting was the fusion of Kant as modified by Schopenhauer with the teachings of Kabbalah.[308]

Kant's skepticism was Breuer's point of departure. Like many German-Jewish thinkers of the nineteenth century, Breuer endorsed Kant's separation between appearance and reality, between the world of phenomena and the way things are, "the thing-in-itself" (*Ding an sich*). Sense perception does not enable us to know things as they truly are, because our perceptions are shaped by subjective ideas of space and time. If space and time are contributed by the knowing mind, spatial and temporal objects will be altered in the very act of being apprehended. It follows that the world known through the senses—the world investigated by the physical sciences and familiar in everyday experience—is only a phenomenal world, the world of things as they appear to us. Breuer mapped the Kantian distinction between the phenomenal and noumenal world on his dichotomy of the "world as nature," as opposed to the "world as creation." In 1916, he composed an essay on the concept of miracles

307 For a full list of Breuer's work concept, see Jacob B. Levinger ed., *Isaac Breuer: Concepts of Judaism* (Jerusalem: Israel Universities Press, 1974), 339-343; Alan Mittleman, *Between Kant and Kabbalah*, 217-218.

308 On the sources of Kabbalah for Breuer: Breuer was introduced to Kabbalah by Rabbi Dr. Pinchas Kohn (1867-1941), who was active in Agudat Israel, and his main source for the knowledge of Kabbalah was Rabbi Isaiah Horowitz, *Sheney Luhot ha-Berit* (Two Tablets of the Covenant), a sixteenth-century kabbalistic compendium that blended Zoharic and Lurianic Kabbalah.

in Judaism (*Der Begriff des Wunders im Judentum*), and in 1926, a longer essay entitled *Die Welt als Schöpfung und Natur* (The World as Creation and Nature).

Breuer argued that Judaism is not a religion based on miracles, since natural law itself is an expression of divine Will. God's lordship of the world is evident not in events that disrupt the regularity of nature but rather in the very orderliness and stability of nature. Breuer dismissed the current tendency to explain biblical miracles scientifically: miracles cannot be squeezed into the procrustean bed of human rationality. Since human perception is based on a priori categories (e.g., causality), we are unable to recognize an event as a miracle. To recognize a miracle, the witness needs to possess a special kind of perception, an "intuitive" perception that is given to us as a divine revelation. This idea can be traced to Yehuda Halevi, the medieval poet-theologian, who exerted deep influence on Breuer as well as on Franz Rosenzweig. In 1934, Breuer composed the *New Kuzari,* in which he dramatized philosophical questions of his generation.

What is true about miracles is also true about creation: it cannot be comprehended by the usual means of perception at our disposal. We cannot discuss the "what" and "how" of creation as much as a blind person cannot discuss colors. Only revelation sheds light on miracles and creation, but the experience of revelation cannot be reduced to a chain of causes, nor can it be interpreted by reference to ordinary human cognition. Revelation teaches us the *fact* of creation, while retaining creation as a *mystery*, as "God's secret." Creation as an event is unknowable (*unerkennbar*), since knowledge pertains only to the order of phenomena, and phenomena are the stuff of nature, not creation.

Revealed Scripture teaches that creation culminated in God's rest on the Sabbath. Using Hirsch's metaphor, Breuer asserts that when creation ceased, God clothed the word in its "Sabbath robe." The world as comprehended by our senses is not the "world as creation" but rather "the world as nature." But the two are related: God's activity as Creator continues to be concealed within the law

observed as nature. Here is where Breuer makes use of Kabbalah, especially the Lurianic doctrine of *tzimtzum* ("contraction" or "withdrawal"). The spheres of nature and creation "are related to one another as God's freedom is to his self-limitation."[309] In Kantian terms, creation and nature "stand to one another in the relation of the intelligible to the empirical: creation is the interior (*an sich*) aspect of nature." The activity of God on the first six days is a "creation secret." Our knowledge of the world begins only on the seventh day, on the Sabbath of the Creator, when God rested and fixed the laws of nature.

> The 'repose' of the Creator is the law of nature. Nature is a veil, but not an illusory one, because the 'repose' of the Creator is an authentic reality. 'On the seventh day, He changed creation into nature and became invisible.' Nature is thus as true as is the 'repose' of the Creator. The law of nature is the law of the creation changed into nature, the law of the creation out of which the Creator has vanished. The law of nature is the law of the seventh day, of the birthday of nature. [310]

If creation cannot be derived from human reason, precisely as the noumenal world cannot be known by reason alone but only from revelation, how does one affirm creation? The answer lies in the freedom of the will. Breuer's analysis of the will and its relationship to perception and cognition is based on Schopenhauer. Breuer shows that willing—and not perceiving and cognizing—has priority, so that the approach to the revealed Torah is through willing and not through reason. The subtle analysis of the relationship of will to perception and to cognition is meant to prove that one must will the Torah as the law of creation. To be free and arrive at its perfection, the human soul (*neshmah*) must will the Torah. It is only in this choice that one finds true freedom: "The decision is

309 Alan Mittleman, *Between Kant and Kabbalah: An Introduction to Isaac Breuer's Philosophy of Judaism* (Albany: SUNY Press, 1990). 78.

310 Mittleman, *Between Kant and Kabbalah*, 78.

beyond comprehension. It does not belong to the comprehensible world of the understanding. There are not further reasons for this decision. Whoever wills freedom becomes free." [311]

It is doubtful that non-observant Jews could find Breuer's religious philosophy compelling, but those who live a traditional Jewish life could find it intellectually edifying. What makes his religious philosophy so distinctive is the fact that Breuer endorsed the Zionist enterprise, settled in Palestine, and theorized the religious significance of the Land of Israel. He demanded that Orthodoxy place the settlement of the Land of Israel at the center of its agenda. In the Land of Israel, Jews could create a just society, but justice is not limited to conduct toward other human beings and includes conduct toward nature. In *Nahaliel* (published posthumously in 1951), Breuer articulated a holistic understanding of the environment that links social justice, economics, and environmental concerns. In his interpretation of the laws of the Sabbatical Year, he presented the Land of Israel as an entity that has independent reality. The Sabbatical Year teaches that "not only the Jew has a Sabbath. The land of the Jews also has its own Sabbath!" The Land belongs to God and is only given to humans as a loan for six years; in the seventh year, the land returns to God. His interpretation of the Sabbatical Year expresses his socialist orientation, since the laws of the Sabbatical Year annul private property in regard to all vegetation; everyone can benefit from the produce of the land that belongs to no one. Breuer saw biblical laws of the Sabbatical Year as a protest against private property, the hallmark of capitalism. The Sabbatical Year annuls not only private property but also social class differences and even the equality between the rights of humans and the rights of domestic animals. The purpose of this legislation is to destroy human egoism and human intellectual hubris; before God, humans and animals are all equal as servants. These ideas manifest deep ecological sensibility that accord with contemporary teachings about sustainability, but

311 Mittleman, 71.

their impact on the Orthodox world during the second half of the twentieth century was very limited. Most recently, however, the Jewish environmental movement in Israel has recovered Breuer's religious environmentalism, fusing it with a contemporary emphasis on sustainability and critique of global capitalism.[312]

Zionism: The Jewish Return to "Nature"

The most radical development in Jewish history at the beginning of the twentieth century was not the engagement of Jews with science and technology but the emergence of Zionism, the nationalist movement that advocated the return of Jews to the Land of Israel and the rebuilding of the Jewish national home. While Zionist ideologues relied on the Bible in its justification for the political return of the People of Israel to its homeland, Zionist ideology preached the Jewish return to nature without the mediation of the biblical text. By the same token, while the return to the Land of Israel was viewed as condition for the regeneration of the Jewish People from the ills of exile (*galut*), it has little to do with reflections about the origins of the universe or with the biblical narrative of creation. In fact, the inspiration for the Zionist understanding of nature as a source of creativity came from non-Jewish sources: Rousseau's Romanticism, the élan vital philosophy of Henri Bergson, German Lebensphilosophie, the anarchist teachings of Tolstoy, or the evolutionary biology of Darwin.

Zionism transformed Judaism by recognizing the physical universe itself, particularly the Land of Israel, as a source of spiritual significance for the Jewish People, whose history Zionism interpreted in secular categories. However, Zionist discourse was not necessarily "nature-friendly." The Land of Israel was to be "conquered" through physical labor (*kibbush ha-adamah*),

312 The main contributor to the dissemination of Breuer's environmental thought in Israel is Shmuel Chayne, an environmental activist and educator. See Shmuel Chayne, "Environment, Society and Economics in the Philosophy of Rabbi Samson Raphael Hirsch and Dr. Isaac Breuer," PhD. Diss. (Ramat Gan: Bar Ilan University, 2010).

agricultural expertise based on modern science, and sheer determination to "make the desert bloom," which in the long run stressed the natural resources of the Land of Israel. The Zionist Hebraic humanism transformed the meaning of the Bible, treating it either as a historical text about the remote national past, or more recently, as a myth that has little to do with what in fact happened in the remote past. For secular Zionists, the Bible was not a revealed text about the meaning of creation and no longer a source for commandments about the natural world. Zionism entails a transvaluation of Jewish values: although rooted in the texts and ideas of traditional Judaism, Zionism rejected their negative impact on the People of Israel through two millennia of exilic existence. The Jewish problem could be solved only when the People of Israel returns to the Land of Israel, thus replanting the uprooted Jews in their natural landscape. Not all variants of Zionism, however, were secularist or atheistic. Some thinkers and political parties saw the return to Zion in religious terms, as the beginning of the messianic age, and used the organic language of the Bible to convey the idea of spiritual renewal. While disparate Zionist ideas cannot be reconciled philosophically and religiously, they were all inspired by the same impetus: the return of Jews to the Land of Israel signified renewal rooted in the healing power of nature.

The healing power of the Land of Israel was stated by Moses Leib Lilienblum (d. 1910), the founder of the "Love of Zion" movement, who held that nations are like races endowed with physical and mental characteristics that are transmitted through inheritance. Nations persist because they have a biological desire to persist. The Jews are a "natural nation" that persists despite anti-Semitism, but they will be able to thrive only if they return to their natural homeland, the Land of Israel. Only there can the Jews produce the culture that will be natural for the Jewish People. These ideas, which manifest the influence of Darwinism prevalent in Russian literature of the late nineteenth century, were further developed by the Zionist thinker known by his penname, Ahad ha-Am (Asher Ginzberg) (d. 1927). For Ahad ha-Am, Judaism is rooted

in the Jewish People, and the collective identity of the people is dictated by biological, natural laws. As a living organism, the Jewish People desires to exist, but in the modern period, the Jewish People experiences the disease of assimilation in addition to the suffering of persecutions, social discrimination, and physical threats to Jewish life. The only way to cure the disease is to return to the Land of Israel, in which modern Jews will recreate their national culture through the revival of the use of the Hebrew language, the creation of Hebrew literature, and the study of the historical past. He envisioned the Land of Israel as a cultural center in which a new Jewish national culture will emerge.[313]

A more religious version of Cultural Zionism was articulated by Martin Buber (d. 1965), who reinterpreted traditional Jewish values in order to address the dilemmas of modern Jewish life, especially for acculturated European Jews.[314] I already mentioned him in the previous lecture, but it is important to me that you understand that Buber was a Zionist, that he was rooted in the Jewish tradition, although he was not an observant Jew. If the rabbinic tradition understood the Covenant to be law-centered, Buber insisted that the covenantal relationship culminating in revelation means a direct, non-propositional encounter with the divine Presence. According to Buber, humans relate to the world either directly and unconditionally ("I-Thou") or indirectly, conditionally, and functionally ("I-It"). The "I-Thou" modality means a direct

313 For an intellectual biography of Ahad ha-Am, see Steven Zipperstein, *Elusive Prophet: Ahad ha-Am and the Origins of Zionism* (London: Peter Halban Publishers, 1993). The best discussion of Ahad ha-Am's philosophy is to be found in Eliezer Schweid; most of which is available in Hebrew. For example, *Judaism and Secular Culture: Chapters in Jewish Thought in the Twentieth Century* (in Hebrew) (Tel Aviv: Kibbutz ha-Meuchad, 2001); Eliezer Schweid, *New Ways in Jewish Religious and National Thought* (in Hebrew) (Jerusalem: Akademon, 1991). Schweid's studies of Ahad Ha-Am, A. D. Gordon, Mordecai Kaplan, and Yehezkel Kaufman shed light on their conceptualization of nature, although these studies have much broader scope.

314 The literature on Buber's philosophy is extensive. A good exposition is Paul Mendes-Flohr, *From Mysticism to Dialogue: Martin Buber's Transformation of German Social Thought* (Detroit: Wayne State University, 1989).

encounter that encompasses all of one's personality and treats the other as an end rather than as a means. The "I-It" relationship has a purpose outside the encounter itself, and involves only a fragment of the other, not the entire person. Buber's ideas became ecologically relevant and very influential, because he extended the "I-Thou" relationship to an encounter with nature. He spoke about his encounter with a horse when he was a boy and extended the possibility of having such a relation with a tree. In treating nature as a "Thou" rather than an "It," Buber personified natural phenomena and recognized not only humans' need to commune with natural objects, but also the inherent rights of nature. Nature is a waiting Thou, waiting to be addressed by the wholeness of our own being. Buber's dialogical philosophy has influenced contemporary environmental thinking among Jews and non-Jews[315], although historians of Hasidism, such as Gershom Scholem, have challenged Buber's attempt to derive his dialogical philosophy from Hasidic sources. [316]

The deepest reflections on nature were articulated by Aaron David Gordon (d. 1922), the spiritual leader of Labor Zionism, who was deeply influenced by Tolstoy.[317] He was keenly aware of the crisis of modernity and the causal connection between technology and human alienation from nature. Settling in Palestine in 1904, Gordon joined the agricultural settlements in order to create a new kind of Jewish life and Jewish person. He viewed humans as

315 See Brian J. Walsh, Marianne B. Karsh, and Nik Ansell, "Trees, Forestry and the Responsiveness of Creation," in Roger Gottlieb, ed., *This Sacred Earth: Religion, nature, Environment* (New York: Routledge, 1996), 423-35.

316 On Scholem's critique of Buber, see Maurice Friedman, "Interpreting Hasidism: The Buber-Scholem Controversy," *The Leo Baeck Institute Year Book* 33, no. 1 (1988): 449-467; Edmee Kingsmill, "Martin Buber from the Perspective of Gershom Scholem," *European Judaism: A Journal for the New Europe* 40, no. 2 (2007): 90-101.

317 The following discussion is based on Schweid, *Judaism and Secular Culture* (in Hebrew),157-181. Also helpful is his "A. D. Gordon: A Homeland That is a Land of Destiny," in his *The Land of Israel: National Home or Land of Destiny,* trans. Deborah Greniman (Rutherford, Madison, Teaneck: Fairleigh Dickinson University Press, 1985), 157-170.

creatures of nature but warned that humans are in constant danger of losing contact with nature. For Gordon, the regeneration of humanity and the regeneration of the Jewish People could come only through the return to nature and the development of a new understanding of labor as the source of genuine joy and creativity. Through physical, productive labor, humanity would become a partner of God in the process of creation. Rejecting the traditional Jewish focus on Torah study, Gordon viewed labor as a redemptive act, provided that the means humans employ are in accord with the divine order of things, that is, with nature.

Gordon distinguished between "consciousness" and "experience." Whereas the former separates humanity from nature, the latter links humanity to nature. Secular culture, with its science and technology and its utilitarian approach to social life, are secular products of human consciousness, whereas religion is the result of primordial experience that unites humanity with the infinite cosmos. Secularism is thus the result of selfish utilitarianism that causes wars and conflicts between peoples and classes, creates a barrier between humanity and its natural environment, and causes the alienation of the individual from society. The ultimate expression of secularism is heresy, because it sees the human in isolation from God, and thus as isolated from and within the infinite universe. In the case of Jews, this heresy is expressed most acutely in assimilation, the erasure of Jewish identity under the pressure of surrounding civilization. Assimilation is a typical product of exilic life; the highest manifestation of alienation from the Land, from nature, and from one's authentic identity. The only way for Jews to overcome the pressure of a utilitarian, selfish, and alienated environment is to return to the Land of Israel and there not only acquire the external characteristics of a nation but revive authentic Jewish life by reconnecting with nature. The new relationship with nature will not be based on dominion and exploitation but on reunification with the natural world through labor. Labor would culminate in the religious act of *devekut*, the union of the worker with God.

Very similar to A. D. Gordon intellectually, but most committed to traditional observance, was Abraham Isaac Kook (d. 1935), the first Ashkenazi Chief Rabbi of the Jewish community in Palestine. His thought was rooted in the symbolic world view of Kabbalah, but he was surprisingly open to the secular Zionists and was able to understand their predicament.[318] For Rabbi Kook, the world of nature is an expression of divinity; nature is the most concrete, material expression of divine reality, but there is more to reality than the natural world. Kook believed that the Zionist insistence of the return to nature will only lead to revival of religious life, even though the Zionist pioneers were themselves secularists. The secular Zionists help heal the collective body of the Jews, their physical existence, but that will only serve as a foundation for spiritual healing. This will mean recognizing that God alone is real and that God is the source from which all particulars come forth. Through the life of nature, the renewed nation could return to its divine source, God.

Zionism, especially the Cultural Zionism of Ahad ha-Am, was influential among American Jews as well, inspiring Mordecai Kaplan (d. 1984), the founder of Reconstructionist Judaism in America. Born into an Orthodox family, Kaplan came to America as a young boy, and his life and thought reflected the struggle of Eastern European Jewry to integrate into American culture without losing Jewish identity. In college, Kaplan came under the sway of the sociologist of religion, Emile Durkheim, and developed his own sociological analysis of Judaism that was particularly averse to the

318 Although Rav Kook was not a systematic thinker, all aspects of his thoughts are internally linked and all are grounded in his own interpretation of Kabbalah. For discussion of various aspects of Kook's religious thought, consult the studies in Lawrence J. Kaplan and David Shatz, eds., *Rabbi Abraham Isaac Kook and Jewish Spirituality* (New York: New York University Press, 1995). For a sustained exposition of his philosophy, consult Yosef Ben Shlomo, *Poetry of Being: Lectures on the Philosophy of Rabbi Kook* (Tel Aviv: MOD Books, 1990). Contrary to most modern Jewish philosophers who followed the Neo-Kantianism of Hermann Cohen, Kook perpetuated the Platonic worldview of Kabbalah.

supernaturalist outlook of traditional Judaism. Kaplan posited a naturalist reading of Judaism that was "people focused but not God denying."[319] Kaplan saw morality, as expressed in the teaching of biblical prophets and the rabbis, as a commanding voice that transcends nature. It is the moral stance that enables the human to stand apart from nature and calls on the human to be more than just an animal. Defining Judaism as "organic unity" that manifests a civilization (i.e., a people's culture), Kaplan believed that in the Land of Israel, the Jews could create a majority society that will constitute a new kind of Jewish life. Like Ahad ha-Am, he also held that the Diaspora will not disappear, and encouraged Jews to recreate their communal structure as holistic Jewish communities in order to facilitate Jewish creativity. Kaplan's main contribution to American Judaism, however, was organizational rather than theological. It was Kaplan who created the Jewish Centers as a holistic focus of all Jewish cultural activities that would replace the synagogue. Under the influence of process philosophy, Kaplan spoke about creativity as the continuous emergence of aspects of life not prepared for or determined by the past. For Kaplan, creativity constitutes the most divine phase of reality, as each is possible and is still in the process of being created, and humanity has the power to realize these possibilities.

Conclusion

This lecture has shown that the concept of nature is central to Jewish self-understanding, but that there is no one Jewish conceptualization of nature. Rather, Jewish reflections on nature have changed over time due to changing historical circumstances as well as the interaction of Judaism with other religious traditions and philosophical schools. Most importantly, diverse conceptions of nature reflect different understandings of "science" and an internal Jewish debate about the meaning of "science" and the

319 Eugene B. Borowitz, *Choices in Modern Jewish Thought: A Partisan Guide*, 2nd ed. (West Orange NJ: Behrman House, 1995 [1983]), 100.

place of scientific knowledge within traditional Jewish society. In rabbinic Judaism, attitudes toward nature were predicated on the belief that the God who created the world is also the God who revealed his will in the form of Torah to the People of Israel. For rabbinic Jews, revealed Scriptures govern how Israel should interact with the natural world, so that Scripture is the basis of Jewish environmental ethics. In this outlook, the physical world is viewed as divine property and Israel as temporary tenants who must care for God's created world and prevent destruction of its resources or cruelty toward God's created beings. In particular, Scripture specifies in great detail how Israel should care for the Land of Israel, the Holy Land that God gave to the People of Israel as collateral of His Eternal Covenant. The most unique aspect of this ecological legislation is the causal link between moral integrity and the well-being of the Land: when Israel does God's Will, the Land prospers, but when Israel sins, the Land suffers until God must remove the People of Israel from the Land. This removal was understood as exile, an existential condition that marked the broken relationship between God and Israel.

The exile of the Jews from the Land of Israel brought about major economic transformation as Jews shifted from farming and agriculture to commerce and finance. Over the centuries, these changes yielded a certain alienation of Jews from the environment and a growing indifference toward the natural world. The text-centered culture of rabbinic Judaism, which placed Torah study as the zenith of Jewish religious life, further accentuated the distance between Jews and their physical environment, since Jewish religious life was text-centered rather than nature-centered. For observant Jews in the premodern world, nature was not inherently holy but could be made holy, or sanctified, by means of observance of divine commands that pointed to the Creator as the source of meaning and value. The two main interpretations of Judaism in the medieval and early modern period—Jewish philosophy and Kabbalah—further enhanced the bookishness of Jewish culture, although they approached nature from different perspectives. The philosophers

viewed nature primarily as an intelligible structure whose laws are accessible to human rationality, and Kabbalists viewed nature as a linguistic construct that could be decoded symbolically. While premodern philosophers and Kabbalists articulated complex theories to explain the origin of the world and God's relationship to it, they were largely uninterested in the observation of nature or in experiencing the natural world as physical phenomena.

The modern period brought profound changes in Jewish attitudes toward the natural world. As Jews became citizens in their country of residence, many forsook traditional Jewish life and sought integration in Western culture in part through the study of the natural sciences. For these modern Jews, the observation and study of nature had little to do with the sacred texts of Judaism, its beliefs, and prescriptions. For Jews who sought to accommodate modernity and traditional Judaism, the doctrine of creation and biblical and/or rabbinic legislation of the natural world gave rise to deep respect toward nature and critique of practices that undermine God's ownership of the created world. Some of those ideas are in accord with the values of conservation, preservation, and sustainability.

The most radical transformation of modern Jewish attitudes toward nature was articulated by Zionism, which rejected Jewish exilic existence and advocated the resettlement of the Jewish People in the Land of Israel, the ancestral home. Since the late nineteenth century, the Jewish return to the Land of Israel was conceived as the return of Jews to nature, but the complex situation in the modern State of Israel illustrates the paradoxes of Zionism. First, the struggle of the State of Israel to survive in a hostile environment dictated that preservation of nature will not be at the top of the national agenda. In fact, the rapid population growth of the Jewish State after 1950, industrialization, and the perpetual state of war with Arab neighbors dictated overuse of preciously scarce natural resources, especially water. Further, the influx of Jews from the Arab world, which had not been exposed to Western modernization, reintroduced traditional Jewish life and values to the young state,

including certain indifference to the physical environment. The social agenda of these immigrants as well as of refugees from Europe after the Holocaust has had little to do with protection of the land and its limited natural resources.

In the State of Israel, a very complex relationship between Judaism and the environment has emerged. On the one hand, intimate familiarity with the landscape, its flora and fauna, and concern for the preservation of the physical environment are popular among secular Israelis. Yet these activities are not legitimated by appeal to the religious sources of Judaism. Even when the Bible is employed to identify plants and animals in the Land of Israel, it is not treated as a revealed text but as a historical document about the remote national past. For secular Israelis, attention to environmental issues has more to do with Western orientation and links to environmental movements in Europe and North America than with the religious texts of Judaism. On the other hand, Jews who are anchored in the Jewish tradition tend to link their love of the Land of Israel to creating a religious-nationalist vision. When religious-nationalist parties in Israel promote outdoor activities for their constituents, they do not ground such activities in environmental values and sensibilities. Fortunately, in recent years, deliberate attempts to bridge the gap between traditional Judaism and environmentalism have been underway by various non-profit organizations which offer environmental education and advocacy and sponsor legislation to tackle Israel's environmental challenges.[320]

In North America and other Western countries where Jews are only a faith community, a Jewish environmental movement has emerged since the 1970s. It originated as an apologetic response to the accusation that the Judeo-Christian tradition was the cause of the environmental crisis, and it gave rise to ecological thinking across all branches of modern Judaism—Reform, Conservative,

320 On environmentalism in Israel, see Alon Tal, "Israel and Environmentalism," in *Encyclopedia of Religion and Nature*, ed. Bron R. Taylor (London: Continuum, 2005), vol. 1, 886-90.

Reconstructionist, Modern Orthodox, and Humanistic Judaism. For the past four decades, a small group of environmental Jewish activists has raised Jewish awareness about ecological problems such as pollution of natural resources, deforestation, erosion of topsoil, disappearance of species, climatic changes, and other ecological disasters due to rapid industrialization, human greed, and consumerism. How contemporary Jews respond to the ecological crisis and how they justify environmental activism, and how Jewish religious activism relates to science, will be discussed in the third and final lecture. Here let me say that today Jewish environmentalism does not justify itself by appealing to the doctrine of creation, because educated Jews accept the theory of evolution as the dominant scientific paradigm and regard the biblical narrative of creation at best as a religious myth that is existentially meaningful but that has no explanatory power. It is no coincidence that systematic attempts to reconcile the doctrine of creation with contemporary science come from Modern Orthodox scientists, but they are not concerned about environmental issues. While the doctrine of creation does not necessarily inspire the commitment of Jews to environmentalism, the biblical ethics of care and responsibility to God's creation remains a distinctive contribution of Judaism to environmental activism. Ironically, the Bible, the text blamed for the current environmental crisis, still offers humanity deep ecological wisdom that can ground sound environmental policies. Lecture 3 explores how the Jewish environmental discourse illustrates a unique interplay of science, faith, and activism and ponders to what extent the literary sources of Judaism can serve Jewish environmentalism.

Lecture 3: Environmentalism, Faith, and Science

Introduction

These lectures focus on Jewish conceptions of and attitudes toward the natural world as a case study of the relationship between religion and environment. It is my conviction that speaking about "religion" in the abstract is quite misleading, because there are numerous and distinct religious traditions and each should be understood on its own terms, situated in the proper historical, sociocultural, and political context. Judaism is a complex civilization that encompasses nationality, culture, religion, philosophy, mysticism, and many more features; Judaism came to be regarded as a "religion" only in the modern period, when Jews fought for emancipation and integration into European society and culture.[321] Lecture 2 has shown that conceptions of nature in Judaism have changed over time through cultural exchanges between Judaism and surrounding civilizations, especially Hellenism, Islam, and Christianity, and through conversation with various philosophical schools, including Platonism, Aristotelianism, Neoplatonism, Scholasticism, Kantianism, Hegelianism, and Existentialism. By contextualizing Judaism and highlighting change over time, these lectures accentuate the particularity of Judaism within the academic discourse of religion and ecology or religion and environment.

As noted in the Introduction, the field of religion and ecology emerged in the late 1960s in response to Lynn White Jr.'s accusation

321 See Leora Batnitzky, *How Judaism Became a Religion: An Introduction to Modern Jewish Thought* (Princeton and Oxford: Princeton University Press, 2011).

that the Judeo-Christian tradition is responsible for the ecological crisis because it gave humanity the mandate to "have dominion" over the Earth and its inhabitants. To rebut these claims, Jewish and Christian theologians subjected the biblical text to close reading, making clear that the Bible also expresses a different posture, one that commands humanity to care for and protect the Earth and its inhabitants. For its first twenty-five years, the field focused on ecological hermeneutics and eco-theology, but since the mid-1990s, the discourse of religion and ecology has shifted from focusing on the Bible and the Judeo-Christian tradition to encompassing the comparative study of world religions, highlighting their shared concerns, themes, and interpretative practices in regard to the environment. The discourse on religion and ecology makes a moral argument: because the environmental crisis is anthropogenic (namely, brought about by human activities), we all have a moral obligation to solve the problem we have created. Science and technology will not be sufficient, because science rarely motivates people to act. Only religion, which encompasses worldviews, legal norms, ethical values, moral virtues, and social attitudes, can motivate people to act. If we want to change the way humanity treats the natural world so as to protect the planet from destruction, we must concern ourselves with the religious dimension of human life.

The field of religion and ecology has generated several strategies to address the ecological crisis. One is to acknowledge and expose the degree to which world religions, especially in the West, have contributed to the environmental crisis by creating a separation between humanity and the natural world and alienating humanity from nature. This internal critique, which is especially strong in Christianity,[322] has led to the second strategy: a close examination of

322 The literature on Christianity and religion is too vast to be cited here. Key texts include Dieter T. Hessel and Rosemary Radford Ruether, eds., *Christianity and Ecology: Seeking the Well-Being of Earth and Humans* (Cambridge: Harvard University Press, 2000); Ernst Conradie, *Christianity and Earthkeeping: In Search of an Inspiring Vision* (Stellenbosch, SUN Press, 2011); Larry L. Rasmussen, *Earth Honoring Faith: Religious Ethics in*

the tradition in an attempt to recover texts, paradigms, metaphors, symbols, and rituals that could be the basis of an ecological reading of the tradition. The recovery project has often led to a third strategy: reforming and reconstructing the tradition to give rise to new attitudes, norms, and values that could be ecologically meaningful. The ecological reinterpretation of the tradition seeks to guide religious believers to react to the ecological crisis in new ways that could heal the Earth from the wounds inflicted on it by human behavior and to facilitate more sustainable ways of life. These strategies are closely intertwined, making the field of religion and ecology quite unique because it combines science, faith, and activism. Participants in the discourse are aware of the science of ecology, even though they are not scientists themselves; they speak from a particular faith perspective and are very attuned to the theological heritage of the religious tradition, but their reflections about religion and nature do not remain merely theoretical; instead, they have a public purpose—to change the ways people treat the natural world.

Jewish environmentalism illustrates the fusion of environmental activism, faith, and science characteristic of the discourse on religion and ecology. Lecture 3 begins with an overview of Jewish environmental activism and its impact on Jewish institutional life. The lecture then discusses the main themes that run through contemporary Jewish eco-theology and explains how it builds on previous Jewish theologies of nature, especially Kabbalah and Hasidism. Next, it considers the question of to what extent science, or more specifically the science of ecology, is taken into consideration in Jewish environmentalism. In the conclusion, the lecture presents Jewish environmentalism as a new way of being Jewish in the post-secular age and argues that to understand how religion and environment intersect with the dialogue of religion and science, we need to appreciate the dynamics of post-secularism.

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a New Key (Oxford: Oxford University Press, 2013).

Jewish Environmental Activism

The first two lectures have shown that Judaism has much to say about humanity's relations with the natural world. However, the academic discourse on Judaism and the environment emerged only in the 1970s, in response to Lynn White's charges. His claim that the Judeo-Christian tradition, and in particular the Bible, is directly responsible for the environmental crisis has led Jewish theologians and religious leaders to dispute this claim, arguing that the Bible does not give license to dominate the natural world but rather regulates human interaction with the natural world. Indeed, the biblical command to the first earthling to "till and protect" the Garden of Eden (Gen. 2:15) poses the paradigm for the desired relationship between humanity and the natural world: humans must care for the natural world of which they are part. Elaborating the biblical approach, rabbinic Judaism articulated an ethics of responsibility toward the natural world that God has created. Lecture 1 discusses Jewish ethics of responsibility in detail and argues that is meaningful for traditional Jews, for non-observant Jews, and for secular Jews whose relationship to Judaism is not defined in religious categories. The Jewish ethics of responsibility, especially in its philosophical formulation of Buber, Jonas, and Levinas, has also been very appealing to non-Jews who care about the future of the environment.

Human responsibility for the Earth was universally recognized on April 22, 1970, upon the first Earth Day celebration. Jews could not ignore or remain oblivious to environmental challenges and concerns, and since that day all strands of modern Judaism—Orthodoxy, Reform, Conservative, Reconstructionist, and the Jewish Renewal Movement—have engaged in rethinking Judaism in light of environmentalism. At first, Jewish theologians and religious leaders were somewhat apologetic, but they soon shifted the tone to a more constructive and creative engagement with the sources of the Judaic tradition. Published in Jewish journals whose primary readership was Jewish, the essays in the 1970s and

1980s (a) explained how belief in God as Creator leads to protecting the natural world that properly belongs to God, (b) explicated biblical and rabbinic norms and values about the environment, (c) articulated the ethics of responsibility toward the Earth and its inhabitants, and (d) highlighted the degree to which Judaism is not a glorification of nature but a moral critique of nature.[323]

As Jewish theologians began to think through Jewish attitudes toward the environment, the discourse of religion and ecology developed as a distinct specialization within religious studies. Committed to inter-religious, comparative analysis of world religions, the discourse of religion and ecology stimulated the discourse on Judaism and the environment as Jewish scholars were invited to contribute essays to special volumes on religion and ecology and to identify what is distinctive about the Jewish approach to environmentalism. By the mid-1990s, it was firmly established that Judaism should not be seen as a contributing cause of the environmental crisis, but a religious response to it. Like Christian environmentalism, the first phase of Jewish environmentalism was predominantly theological and exegetical and its goal was to prove that Judaism should not be blamed for the crisis; in fact it was the misreading of the biblical text by Christianity that has born the responsibility for the problem.

Theology alone does not make a social movement. Jewish environmentalism emerged as a distinctive movement within contemporary Judaism only when environmental activists who were Jews by birth sought to ground their environmental sensibility in the Jewish tradition. From the mid-1980s and the 1990s, Jewish environmentalism emerged as a distinctive discourse in Jewish life, both in the Diaspora and in Israel. Launched as a grassroots movement of Jewish environmental activists, Jewish environmentalism gradually attracted the interest of Judaic scholars and became more rooted in the sources of

323 Martin D. Yaffe, ed., *Jewish Environmental Ethics: A Reader* (Lanham: Lexington Books, 2001) reprinted many important early essays.

Judaism. At the forefront of the Jewish environmental movement was Ellen Bernstein,[324] the founder of Shomrei Adamah ("Guardians of the Earth"), an organization that eventually grew to ten local chapters with membership of several thousands.[325] Shomrei Adamah produced a quarterly news journal, provided speakers for events, ran educational wilderness trips, and captured the imagination of many Jewish scholars, leaders, rabbis, and young adults, for whom it developed a range of educational materials. Jewish environmentalism was launched as a distinct voice within American Judaism, and its point of departure was the biblical creation narrative.[326]

In the environmental discourse, passionate concern for the well-being of the environment dictated the approach to the primary sources, which were selected to support environmental activism. The preponderance of activism and advocacy in Jewish environmentalism explains why the academic discipline of Jewish studies has been rather slow to respond to the growing Jewish interest in environmentalism for the following reasons: First, the academic study of Judaism is decidedly textual, whereas environmentalism cares about material and social reality outside the texts. Second, the academic study of Judaism is committed to disinterested and objective analysis of the past, whereas Jewish environmentalism is about the present; and third, whereas academic study of Judaism is interested in theory for its own sake, Jewish environmentalism is

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324 Ellen Bernstein, ed., *Ecology & the Jewish Spirit: Where Nature & the Sacred Meet* (Woodstock: Jewish Light Publishing, 2000) is an anthology of the first generation of Jewish ecological writings. Bernstein is referred to as "the birth mother" of the Jewish environmental movement, and her vision and energy have been instrumental for the emergence of a biblically based Jewish ecology. See Ellen Bernstein, *The Splendor of Creation: A Biblical Ecology* (Cleveland: Pilgrim Press, 2005).

325 Shomrei Adamah began the work of mining the Jewish tradition for its ecological wisdom. See Mark Swetlitz, ed., "Judaism and Ecology, 1970–1986: A Sourcebook of Readings" (Mimeograph, Wyncote: Shomrei Adamah, 1990).

326 Ellen Bernstein's biblical ecology is deeply influenced by the work of the Christian environmentalist Norman Wirzba. See Norman Wirzba, *The Paradise of God: Renewing Religion in an Ecological Age* (Oxford: Oxford University Press, 2003).

primarily interested in praxis for the sake of addressing acute and compelling social problems. For these reasons, it is understandable why the Association for Jewish Studies (AJS) took a while to pay attention to Jewish environmentalism. The first session on Jewish environmentalism was in 2003 and the second session five years later, in 2008, but both sessions were very poorly attended, indicating that environmentalism had failed to attract the interest of Jewish academics. A decade later, as environmentalism has continued to gain strength within the Jewish community, the topic is not yet recognized as a distinctive area of study within the AJS, although young Judaic scholars have begun to pay more attention to conceptions and portrayals of nature in the sources of Judaism. Nonetheless, the gap between Jewish academics and Jewish environmental activists is still noticeable.

The growth of the discourse on Judaism and the environment is due not to the interest of Jewish scholars in the topic but to the creativity and vigor of the discourse of religion and ecology within religious studies. Since the field studies all world religions, Jewish scholars have been invited to contribute to anthologies, reference books, encyclopedias, and special issues of academic journals, representing the Jewish voice in inter-religious or interfaith conversations. By the end of second decade of the 2000s, studies about Judaism and the environment have consisted of anthologies, single-authored books, essays in reference books and encyclopedias, and essays in peer-reviewed journals.[327] It is fair to say that scholars of Jewish studies no longer ignore environmentalism and they recognize that the categories of nature, space, or place deserve more attention in interpreting the Jewish experience,[328] but within the discipline of Jewish studies, environmentalism remains rather marginal.

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327 See the annotated bibliography of Hava Tirosh-Samuelson, "Judaism and the Environment," *Oxford Bibliographies Online,* DOI: 10.1093/OBO/9780199840731–0118, www.oxfordbibliographies.com.

328 A good example is Barbara E. Mann, ed., *Space and Place in Jewish Studies* (New Brunswick, London: Rutgers University Press, 2012).

In the Jewish community outside of the academy, environmentalism has made a noticeable impact. Jewish environmental activism has brought about the "greening" of Jewish institutions (e.g., synagogues, schools, communal organizations, Jewish community centers, and youth movements). Today, a variety of organizations, programs, and initiatives promote sustainable practices (e.g., energy efficiency, elimination of plastics, recycling, and waste reduction programs), reduce consumption and promote new eating habits, plant community gardens, link sustainable agriculture to urban Jewish life and education, include environmental issues in the education of youngsters and adults, organize nature walks and outdoor activities, celebrate Jewish holidays (especially Sukkot, Shavuot, and Tu Bishvat) with attention to environmental/ agricultural themes, promote justice in food production with attention to sustainable agriculture and compassionate treatment of farm animals, and encourage Jews to live sustainably. These programs transcend congregational and denominational boundaries and are often carried out in interfaith settings, collaborating with organizations such as GreenFaith, Moral Action on Climate, the National Religion Coalition on Creation Care, and the Interfaith Ocean Ethics Campaign. Jewish environmental activists educate Jews about environmental matters, inspire Jews to lead environmentally correct lives, implement "green" communal practices, and rally Jews to support environmental legislation and interfaith activities.

The main activities of Jewish environmental organizations and initiatives consist of nature education, environmental awareness, advocacy on environmental legislation, and community building.[329] Here are a few notable examples. The programs of Teva Learning Alliance (previously called Teva Learning Center) exemplify how activities are structured to sensitize the participants to nature's rhythms, inspiring them to develop a meaningful relationship

329 I provide more detailed information about Jewish environmental organizations in my "Jewish Environmentalism: Bridging Scholarship, Faith, and Activism," in *Jewish Thought, Jewish Belief*, ed. Daniel Lasker (Beer Sheba: University of Ben Gurion Press, 2012) (English Section), 65–117.

to nature and their own Jewish practices.[330] Through traditional Jewish rituals (e.g., blessings, prayers, and reflections), participants become aware of nature as divine creation or learn about the vital connection between Judaism and environmental stewardship. In Elat Chayyim: Center for Jewish Spirituality (created in 2006 out of the merger of Elat Chayyim Jewish Retreat Center of Accord, NY and the Isabella Freedman Center), various programs promote environmentally concerned Judaism as a spiritual practice.[331] In these retreats, "finding God in Nature" is presented as a form of Jewish ecological spirituality that is rooted in the traditional Jewish liturgy, where "images of nature are an expression and embodiment of the divine." In ADAMAH: The Jewish Environmental Fellowship, a program for young Jewish adults which is run by the Jewish organization Hazon: The Jewish Lab for Sustainability, participants

> engage in hands-on curriculum that integrates organic agriculture and sustainable living skills, Jewish learning and living, leadership development, and community building. The program strengthens participants' Jewish identity and commitment to *Tikkun Olam* [literally, "repair of the world"] through immersion in an ecologically sustainable, spiritually vibrant, and inter-generationally connected Jewish community, while exposing countless others to a traditionally rooted yet entirely new way of Jewish living."[332]

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330 Teva Learning Alliance is non-profit organization that teaches about Judaism and the environment in Jewish day schools, summer camps, and Hebrew schools. Founded in 1994 under the title Teva Learning Center, this organization has merged with the Jewish environmental organization, Hazon, in 2014.

331 Elat Chayyim: Center for Jewish Spirituality is a retreat center that integrates Jewish learning, spirituality, and culture. Founded originally in 1992 in Accord, NY, "where spiritual seekers from the entire spectrum of Jewish practice participated in weekend and week-long retreats," Elat Chayyim programs "encouraged intellectual and spiritual exploration and offer an . . . array of Jewish spiritual study." Elat Chayyim is now part of Hazon.

332 See the website of the organization http://hazon.org/adamah/adamah-

Whereas these organizations offer Jewish environmental spirituality for diaspora Jews, the Green Zionist Alliance, founded in 2001 by Alon Tal, Eilon Schwartz, and Rabbi Michael Cohen, illustrates how Jewish environmentalism coheres with Zionism. In 2002, the Alliance became the first environmental organization to be part of the World Zionist Congress, and in that context has exercised political influence by electing environmental activists to the Board of the Jewish National Fund, which owns and manages 13 percent of the land in Israel. In recent years, the Green Zionist Alliance was reconstituted as Aytzim: Ecological Judaism, and the name Green Zionist Alliance was used only for its Israel-focused work. This grassroots, all-volunteer organization is active in the US, Canada, and Israel and illustrates how environmental education, advocacy, and activism link the Jewish religion with Zionism and how the Internet is used to advance environmentalism. In 2014, the organization acquired Jewcology.org, an online resource for information on Jewish environmentalism, which includes a job board and an interactive map of Jewish environmental initiatives. The projects and initiatives of Aytzim include also Shomrei Breishit: Rabbis and Cantors for the Earth, which is an environmental advocacy group that Aytzim runs in partnership with GreenFaith; Aytzim also runs an internship program and posts an English-language compilation of educational materials, research papers, academic papers, news articles, videos, and books about Israel's environmental needs. The organization is engaged in campaigns to stop hydraulic fracking of oil and shale in Israel and to ban all fossil-fuel extraction on land owned by the Jewish National Fund in Israel, develop seven-year environmental plans to reduce greenhouse-gas emissions in Israel, develop community gardens at immigrant-housing centers, and increase support for in-country carbon-mitigating projects.

Aytzim and Hazon are two Jewish environmental organizations that have largely eclipsed the work of the Coalition of Jewish and

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fellowship-2.

Environmental Life (COEJL), an umbrella for twenty-nine Jewish organizations that focus on educational, legislative, and interfaith programming, illustrating eco-Judaism in practice.[333] Founded in 1993 and based in Washington, DC, COEJL promoted policies and programs to help increase energy efficiency, promote energy independence and security, protect land and water resources, and build core Jewish knowledge on environmental issues, while serving as a Jewish voice in the broader interfaith community. COEJL came into existence as a result of external impetus: in spring 1992, at the invitation of Al Gore and Carl Sagan, the leadership of major US Jewish organizations, eminent rabbis, denominational presidents, and Jewish US Senators gathered in Washington, DC to discuss a Jewish response to the mounting environmental crisis. In 1993, COEJL was created and charged with catalyzing a distinctly Jewish programmatic and policy response to the environmental crisis. COEJL was initially envisioned as a time-limited project to "jump-start" environmental programs that would become permanently integrated into Jewish institutions. Uniquely in Jewish organized life, COEJL started as an inter-denominational initiative when the Jewish Council for Public Affairs, the Religious Action Center for Reform Judaism, and the Jewish Theological Seminary of America all joined forces in their attempt to enact a distinctively Jewish response to the environmental crisis. In the 1990s and the first decade of 2000s, COEJL promoted environmental education, scholarship, advocacy, and action in the American Jewish community through publications, public education companies, conferences, Jewish environmental leadership development, and a Legislative Advocacy Network. However, in recent years, the organization has become practically defunct, indicating the structural weakness and lack of funding that plague many Jewish environmental organizations.

An important aspect of contemporary eco-Judaism is attention to food, since food is the intersection point of humans and animals as well as the intersection between diverse social

333 Information about COEJL is available in http://coejl.org.

groups of producers and consumers. Hazon: The Jewish Lab for Sustainability (previously called Hazon: Jewish Inspiration, Sustainable Communities) is a case in point because it now hosts the Jewish Food Movement, which stresses the redemptive aspect of land cultivation and the just production, distribution, and consumption of food. The Jewish Food Movement supports organic farming and attempts to change the relationship between farm workers, processing/packing house workers, truckers, hospitality and hotel workers, and others involved in the food-production industry.[334] Hazon organizes the annual conferences of the Jewish Food Movement, which convenes many Jewish environmental activists and educators throughout the US. As an educational effort, the Jewish Food Movement is connected with other environmental initiatives, such as the Jewish Farm School, Eden Village (an eco-summer camp), Shomrei Adamah (a program in Jewish day schools that emphasizes energy flow, natural cycles, biodiversity, and interdependence), and Kayam (an educational camp), all of which are designed to bring Jews to integrate hands-on knowledge about food and farming with the Jewish tradition.[335]

The concept that has given coherence to Jewish environmentalism is "Eco-Kosher," mentioned in Lecture 1. Coined by Rabbi Zalman Schachter-Shalomi in the late 1960s, "Eco-Kosher" connects concerns about industrial agriculture, global warming, and fair treatment of workers with the Jewish dietary

334 See http://www.hazon.org/thought-leadership/jewish-food-movement.

335 These organizations represent three different organizational models and sources of funding. The Eden Village Camp in Putnam County, NY is supported by the UJA-Federation in New York and indicates the traditional organizational structure of American Jews. By contrast, the Jewish Farm School is supported by the privately owned Joshua Venture Group, manifesting the growing involvement of Jewish entrepreneurs in Jewish environmental activities. The Jewish Farm School is "an environmental education organization whose mission is to practice and promote sustainable agriculture and to support food systems rooted in justice and Jewish traditions" (http://www.jewishfarmshool.org). A third model for Jewish environmentalism is Kayam, an educational farm on the grounds of the Pearlstone Center and Camp Milldale campus in Maryland, affiliated with the Conservative movement.

laws about food production, preparation, and eating. "Eco-Kosher" means that Jews should only consume products that meet both Jewish dietary laws as well as Jewish ethical standards, and Eco-Kosher consumers should encourage food producers to care for the environment, animals, and their workers. Since the 1970s, Arthur Waskow has translated the phrase into a full-fledged program of environmental justice in regard to economic and racial inequity, unjust labor practices, and the causal connection between the exploitation of the Earth's resources and unjust political policies, especially in Israel.[336] Other rabbis have fused Eco-Kosher with kabbalistic principles as well as with non-Jewish traditions such as the ancient Chinese art of Feng Shui, an ecologically based art of spatial arrangement that incorporates human-made objects with natural surroundings.[337] The concept of Eco-Kosher has also inspired Jewish entrepreneurs to market Eco-Kosher meat products, and the Conservative Movement to issue the Magen Tzedek Initiative, a certification program that assures consumers and retailers that "kosher food products have been produced in keeping with exemplary Jewish ethics in regard to labor, animal welfare, environmental impact, consumer issues and corporate integrity."[338]

Combining sustainable agriculture, fair labor practices, and ethical treatment of animals, "Eco-Kosher" generates a

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336 For exposition of the range of Eco-Kosher see Arthur Waskow, "And the Earth is Filled with the Breath of Life," in his *Torah of the Earth, vol. 2: Exploring 4000 years of Ecology in Jewish Thought* (Woodstock: Jewish Lights Publishing, 2000), 261–286; reprinted in Richard C. Foltz, ed., *Worldviews, Religion, and The Environment* (Belmont: Wadsworth/Thomson Learning, 2003), pp. 306–217. For a summary of Waskow's contribution to Jewish environmentalism and a short bibliography, consult Sarah MacFarland Taylor, "Waskow, Rabbi Arthur (1933-)," in *Encyclopedia of Religion and Nature*, vol. 2, 1713–14.

337 See Gershon Winkler, *The Place Where You Are Standing is Holy: A Jewish Theology on Human Relationship* (Hoboken: Jason Aronson, 1998); Gershon Winkler, *Magic of the Ordinary: Recovering the Shamanic in Judaism* (Berkeley: North Atlantic Books, 2003).

338 See http://ww.magentzedek.org.

comprehensive lifestyle whose goal is to bring about *Tikkun Olam*. In rabbinic texts (e.g., Mishnah, Gittin 4:2), *letaken olam* means to act in accordance to Jewish law so as to usher in the Kingdom of God. This utopian notion was given an abstract, cosmic, metaphysical meaning in medieval Kabbalah, especially the sixteenth-century version of Lurianic Kabbalah. According to Lurianic Kabbalah, as we explained in Lecture 2, rituals performed with kabbalistic intention can ameliorate the human world or even the physical cosmos and the divine world (the world of the ten Sefirot), which experiences brokenness and disharmony (symbolized by the separation of the masculine and feminine aspects of the Godhead) due to human sinfulness. In the second half of the twentieth century, *Tikkun Olam* became the slogan of Jewish social activism, including environmentalism, although few Jews who invoke the term understand its original kabbalistic meaning. The analysis of the kabbalistic conception of nature provided in Lecture 2 does not inform the popular use of the term *Tikkun Olam*. In Jewish environmental organizations, the goal of *Tikkun Olam* is usually linked to two other ethical values: *responsibility* and *interconnectedness*.[339] The former highlights human responsibility toward the Earth and its inhabitants, discussed in Lecture 1, and the latter insists on the relationality of all living beings, explicated in Lecture 2. The values of responsibility and interconnectedness are derived from biblical and rabbinic sources and are invoked in a wide variety of educational programs.

Although this list of Jewish environmental organizations is not exhaustive, it indicates that today Jews of various levels of observance can blend their Jewish identity and commitment with their concern for environmentalism and sustainability. Environmentalism and Judaism are definitely compatible. This is also true for Jews who live in the State of Israel, although there the story is a bit more complex. The State of Israel is a product of the Zionist movement, which

339 Richard H. Schwartz, "Tikkun Olam—A Jewish Imperative," in *Encyclopedia of Religion and Nature*, vol. 2, 1638–39; Gil Rosenthal, "Tikkun ha-Olam: The Metamorphosis of a Concept," *Journal of Religion* 85 (2005): 214–220.

preached the return of the Jews to the ancestral home as part of the return to nature. Zionism sought to create a new type of Jew as well as a new, Hebraic, modern culture rooted in ancient Israel's remote agricultural past, bypassing rabbinic Judaism.[340] Zionism endowed the physical environment of the Land of Israel, its topography, and flora and fauna with spiritual (albeit secular) significance, inculcating intimate knowledge of the Land through nature hikes, field trips, and camping. Paradoxically, the resulting outdoor culture has enabled secular Israelis to understand the natural imagery and metaphors of the Bible, the document that legitimized the Zionist national project, thus accentuating the religious significance of Zionism. More problematically, the success of the Zionist project exacted a toll on the fragile environment of the Land of Israel: a steep rise in population, rapid urbanization, the ongoing Israeli-Arab conflict, and the initial mistakes in natural resource management have generated a long list of environmental problems (e.g., air pollution, soil erosion, overuse of water, etc.), requiring legislative solutions.[341] Today, the State of Israel addresses these environmental challenges through a mixture of policies, legislation, and alternative technologies, and environmentalism thrives in Israel through green political parties, numerous environmental NGOs, and creative educational and training programs. Many of these environmental initiatives and organizations deal with concrete environmental problems without reference to Judaism, but some organizations draw direct inspiration from Jewish religious sources in their theoretical justification and educational programs.[342] The degree to which Israeli environmentalism should

340 A good analysis of Zionist ethos is offered in Eric Zakim, *To Build and Be Built: Landscape, Literature, and the Construction of Zionist Identity* (Philadelphia: University of Pennsylvania Press, 2006).

341 See Daniel E. Orenstein, Alon Tal, and Char Miller. eds., *Between Ruin and Restoration: An Environmental History of Israel* (Pittsburgh: University of Pittsburgh Press, 2013).

342 Non-profit environmental organizations the Heschel Center for Environmental Education and Leadership, Le-Ovdah u-Leshomrah, and Shatil are examples of Israeli organizations that are informed by the values of traditional Judaism.

be grounded in traditional Jewish sources is hotly debated in Israel, and the movement is quite different from its American counterpart.

Jewish Eco-Spirituality

In addition to environmental activism, eco-Judaism also consists of theological efforts to reconstruct Judaism in light of the environmental crisis, articulating new theologies and new rituals. The call for a new Jewish eco-theology is most pronounced in one strain of contemporary Judaism: the Jewish Renewal Movement.[343] It was founded in the late 1960s as part of the countercultural movement, when young rabbis, academics, and political activists established *Havurot* ("fellowships") for prayer and study to critique and revitalize American Judaism, which was seen as unspiritual and over-institutionalized. The Jewish Renewal Movement emphasizes meditation, dance, chanting, and mysticism, and it deliberately borrows from other faith traditions such as Buddhism, Sufism, and Native-American religions. In particular, the Jewish Renewal Movement takes its inspiration from Kabbalah and Hasidism, and this form of eco-spirituality is promoted under the title of Neo-Hasidism.[344] The eco-theologians Abraham Joshua Heschel, Zalman Schachter-Shalomi, Arthur Green, and David Seidenberg illustrate Jewish Neo-Hasidic eco-theology.

The inspiration to rethink the place of nature in Judaism came from Abraham Joshua Heschel (d. 1972), a theologian who inspired many Jews in the late 1960s to return to tradition and who was deeply involved in the Civil Rights Movement. Heschel

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See Tirosh-Samuelson, "Jewish Environmentalism: Scholarship, Faith, and Activism."

343 For the study of the Havurot, see Riv-Ellen Prell, *Prayer & Community: The Havurah in American Judaism* (Detroit: Wayne State University Press, 1989). On the Jewish Renewal Movement, see Dan Cohn-Sherbok, *Judaism Today* (London: Continuum, 2010).

344 See *Arthur Green: Hasidism for Tomorrow*, ed. Hava Tirosh-Samuelson and Aaron W. Hughes (Leiden: Brill, 2015); Arthur Green and Ariel Evan Mayse, eds., *A New Hasidism: Roots* (Philadelphia: Jewish Publication Society, 2019).

was a Polish Jew and Martin Buber's colleague and successor as the leader of adult education in Germany in 1938, after Buber left Germany for Palestine. Born into a Hasidic family, Heschel was quite unusual in that he also received modern university training. After Nazi Germany conquered Poland, Heschel was forced to return to Poland but was able to flee first to England and then to America.[345] He was employed first by Hebrew Union College in Cincinnati (the flagship of Reform Judaism) but then joined the Jewish Theological Seminary in America, where he became the voice of Conservative Judaism. In the 1960s, Heschel inspired scores of alienated American Jews to find their way back to the sources of Judaism in order to heal the atrocities of modernity, culminating in the Holocaust. Heschel's ecologically sensitive Depth Theology spoke of God's glory as pervading nature, leading humans to radical amazement and wonder; viewed humans as members of the cosmic community; and emphasized humility as the desired posture toward the natural world. Recognizing human kinship with the visible world, Heschel celebrated God's presence within the world but also insisted that the divine essence is not one with nature: God is simultaneously transcendent and immanent. Heschel did not provide a systematic eco-theology, but it is possible to translate some of his ideas into eco-theology. The leaders of Jewish environmentalism (e.g., Arthur Waskow, Arthur Green, and Eilon Schwartz) were all either students of Heschel or influenced by Heschel.

While Heschel was active in the US, his ideas were transported to Israel by American Jewish environmentalists who settled in Israel in the early 1970s. It is no coincidence that one of the most important environmental advocacy organizations in Tel Aviv,

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345 For a detailed biography of Heschel, consult Edward K. Kaplan and Samuel H. Dresner, *Prophetic Witness* (New Haven and London: Yale University Press, 1998); Edward K. Kaplan, *Abraham Joshua Heschel in America 1940–1972* (New Haven: Yale University Press, 2007). On his unique style and cultural impulse, consult Edward K. Kaplan, *Holiness in Words: Abraham Joseph Heschel's Poetics of Piety* (Albany: SUNY Press, 1996).

Israel is named The Heschel Center for Environmental Learning and Leadership in Tel Aviv.[346] Although the Center operates as a secular institution, its inspiration is religious and it illustrates how Jewish environmentalism bridges religious and secular discourses. This fusion illustrates what can be called a "post-secular" quality of Jewish environmentalism, which we will discuss at the conclusion of this lecture. Here let me just note that Heschel's Depth Theology inspired many Jews in the late 1960s and 1970s to find their way back to the Jewish tradition and that it gave rise to the Jewish Renewal Movement, which promotes kabbalistic eco-theology.

The founder of the Jewish Renewal Movement was Zalman Schachter-Shalomi, another product of Hasidic Judaism who left Hasidism to create a New Age Judaism that is particularly attentive to the ecological crisis. Schachter-Shalomi was the first to call for a "paradigm shift" within Judaism, signifying a shift from transcendence to immanence, from monotheism to pantheism, from dualistic to non-dualistic thinking, from patriarchy to egalitarianism.[347] He called this shift "Gaian Consciousness" and argued that Judaism has a distinctive (albeit not exclusive) role to play in the healing of the cosmos: the key ecological precept of Judaism—"Do Not Destroy"—enables Jews to act in ways that prevent what he called the crime of "planetcide." Recasting Judaism as pantheistic monism that reframes all the major themes

346 For information about this organization and its activities in Israel, go to their website: www.heschelcenter.org. The site includes many links to environmental organizations in the world; COEJL is but one of them, making it clear that the Israeli environmentalist movement is part of a larger Green politics.

347 See Ellen Singer, ed., *Paradigm Shift: From the Jewish Renewal Teachings of Reb Zalman Schachter-Shalomi* (Northridge, Jerusalem: Jason Aronson, 1993). Schachter-Shalomi was a spiritual teacher whose ideas were published by his disciples, not unlike the founder of Hasidism, Rabbi Israel Baal Shem Tov. See Zalman Schachter-Shalomi and Daniel Siegel, *Integral Halachah: Transcending and Including* (Victoria: Trafford Publishing, 2007); Zalman Schachter-Shalomi and Natanel Miles-Yepez, *God Hidden, Whereabouts Unknown: An Essay on the 'Contraction' of God in Different Jewish Paradigms* (Boulder: Albion Andalus, 2013).

of traditional Judaism and gives rise to new rituals, this New-Age thinker saw his project as "trying to help the Earth rebuild her organicity and establish healthy governing principles."[348]

Schachter-Shalomi was not a systematic thinker, and his ideas were written down by his disciples, many of whom were personally ordained by him. One of Schachter-Shalomi's closest friends and colleagues, Rabbi Arthur Green, has gone further to articulate a systematic, Jewish ecological spirituality, which he promotes as "Neo-Hasidism." Arthur Green is a scholar of Kabbalah who was the leader of Reconstructionist Judaism until he went to Brandeis University, and from there to the non-denominational Hebrew College, where he is the head of the rabbinical program. Green argues that Judaism must undergo profound reconstruction in order to face the ecological challenges of our time.[349] Following Schachter-Shalomi, he contends that the traditional doctrine of creation can no longer serve Jews in an age of science. With deep interest in the doctrine of evolution, Green offered a reinterpretation of the biblical doctrine of creation that adopted the ontological schema of Kabbalah. For Green, the kabbalistic doctrine of Sefirot explains how "the bio-history of the universe" became "the only sacred drama that really matters"—"the ongoing account of how Y-H-W-H, source of life, reached forth not the world of form, became manifest in the infinite variety of species, and finally became articulate in the consciousness and language of humanity."[350] Offering a progressive interpretation of evolution as the emergence of ever-more complex forms of life culminating in human beings, Green presents a holistic view of reality in which all existents are in some way an expression

348 Shaul Magid, "Jewish Renewal: American Spirituality and Post-Monotheistic Theology," *Tikkun* (May/June 2006): 62–66, quote on 65. For an elaborate discussion of these themes see Shaul Magid, *American Post-Judaism: Identity and Renewal in a Postethnic Society* (Bloomington: Indiana University Press, 2013).

349 Green's project is explicated in the interview with me in *Arthur Green: Hasidism for Tomorrow*, 191–256.

350 Arthur Green, *Seek My Face, Speak My Name* (Northvale: Aronson, 1992), 54.

of God and are to some extent intrinsically related to each other.[351]

Contrary to those who hold that in Judaism nature per se is not sacred, Green wishes to obliterate the ontological gap between the Creator and the created. Instead, he adopts the monistic and immanentist ontology of Kabbalah (which I mentioned in Lecture 2) and blurs the distinction between creation and revelation. The physical world (or nature) and the Torah are both God's self-disclosure and both are linguistic structures that require decoding, an act that humans can accomplish because they are created in the image of God. From the privileged position of the human, Green derives an ethics of responsibility toward all creatures that acknowledges the differences between diverse creatures while insisting on the need to defend the legitimate place in the world of even the weakest and most threatened. For Green, a Jewish ecological ethics must be a *torat hayim*, namely, a set of laws and instruction that truly enhances life. Green presents this kabbalistic and Hasidic "mystical pantheism" as a holistic view of reality in which all existents are in some way an expression of God and are to some extent intrinsically related to one another.[352] Although Green's lyrical depiction of evolution is closer to medieval Neoplatonism than to Darwinism, Green offers contemporary Jews "a Kabbalah for the environmental age."

The most systematic fusion of Kabbalah, Hasidism, and environmentalism is presented in the work of Rabbi David Seidenberg, a student of Arthur Green who is also an environmental activist. In his recent book, *Kabbalah and Ecology*, Seidenberg seeks to advance the Jewish environmental discourse by arguing that by "applying the principles of Kabbalah to constructive

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351 See Arthur Green, "Great Chain of Being: Kabbalah for an Environmental Age," in his *EHYEH: A Kabbalah for Tomorrow* (Woodstock: Jewish Lights Publishing, 2003), 108–119; a version of this essay is published as "Kabbalah for the Environmental Age," in Tirosh-Samuelson, ed., *Judaism and Ecology*, 3–16.

352 Green, *EHYEH*, 118–119; Arthur Green, *Radical Judaism: Rethinking God and Tradition* (New Haven: Yale University Press, 2010).

theology, we can train ourselves to see the image of God in all of these dimensions, in a species, in an ecosystem, in the water cycles, in the entirety of this planet, and so on."[353] Much more than Green or Schachter-Shalomi, Seidenberg is deeply informed of the academic discourse of religion and ecology as well as Jewish environmentalism.[354] He has contributed to it by writing academic essays about Jewish environmentalism in America and by offering his ecological interpretation of Kabbalah through essays posted on his very active website, "Neo-Hasid.com." Seidenberg's main argument is that the notion of creation in the divine image is the key to Jewish eco-theology, but that Judaism does not consider only humans to be created in the image of God. He brings numerous Midrashic, kabbalistic and Hasidic sources in support of this argument so as to document that in Judaism there is no dichotomy between humanity and nature and that we need to see the human as part of the non-human world, or more accurately, the "more-than-human world."[355] Since Seidenberg interprets Judaism ecologically, he rejects any reading of Judaism that associates biocentrism with paganism or that is critical of feminist Earth-based spirituality because it is a form of Neo-Paganism.[356]

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353 David Seidenberg, *Kabbalah and Ecology: God's Image in the More than Human World* (Cambridge: Cambridge University Press, 2015), 312.

354 Seidenberg wrote several essays in the *Encyclopedia of Religion and Nature* edited by Bron Taylor: the essays on "Eco-Kabbalah," "Jewish Environmentalism in North America," and "Paganism and Judaism." See also David Seidenberg, "Introduction: Jewish Ecological Thought and the Challenge of Theology," in his *Kabbalah and Ecology*, 1–40.

355 This term was coined by the Jewish cultural ecologist David Abram, who is well-informed by Kabbalah and who has contributed to the fields of eco-psychology and eco-phenomenology. See David Abram, *The Spell of the Sensuous: Perception and Language in the More-than-Human World* (New York: Vintage Book, 1996); David Abram, *Becoming Animal: An Early Cosmology* (New York: Vintage Books, 2011).

356 This critique has been articulated most forcefully by Manfred Gerstenfeld, "Paganism—A Jewish Perspective," in *Encyclopedia of Religion and Nature*, vol. 2 1244–1247; see also Manfred Gerstenfeld, *Judaism, Environmentalism and the Environment: Mapping and Analysis* (Amsterdam: University of Amsterdam, 1999); Manfred Gerstenfeld, "Neo-Paganism in the Public

Although Seidenberg is an ordained Conservative rabbi, he promotes his Neo-Hasidic Judaism outside the framework of Conservative Judaism. Using the Internet as his main form for the dissemination of ideas, Seidenberg reflects a new generation of Jewish spiritual teachers, artists, storytellers, and healers who find in Kabbalah as well as other spiritual traditions (either Native American or Asian), resources for a syncretistic Jewish ecological spirituality. This ecological spirituality is given a feminist twist in the work of Rabbi Jill Hammer, the founder of Tel Shemesh, a web-based spiritual resource center that merges Kabbalah and Earth-based feminist spirituality.[357] The syncretism of Jewish ecological spirituality brought some critics to question the Jewishness of Jewish environmentalism and to view it as an unacceptable revival of paganism, but as I noted above, scholars such as Green and Seidenberg reject this association.

Kabbalistically inspired Jewish eco-spirituality is a distinctive voice within contemporary Jewish environmentalism, but it is not to say that all Jewish environmentalists think within these categories or that all Jewish environmental theology is necessarily kabbalistic or Neo-Hasidic.

Jeremy Benstein, Eilon Schwartz, Lawrence Troster, Lenn E. Goodman, and Bradley Shavit Artson are examples of Jewish eco-theologians who are aware of Kabbalah and Hasidism but who

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Square and Its relevance to Judaism," Jerusalem Letter/Viewpoints, NO. 392 (October 15, 1998), available on his website www.manfredgerstendeld.com (posted March 23, 2016). Other critics of environmentalism as paganism include Michael Wyschogrod and Steven Schwartzchild, who were cited in lecture 1.

357 Jill Hammer is director of spiritual education at the Academy for Jewish Religion and co-founder of the Kohenet Hebrew Priestess Institute, a program in spiritual leadership for Jewish women. See Jill Hammer, *Sister at Sinai: New Tales of Biblical Women* (Philadelphia: Jewish Publication Society, 2001); Jill Hammer and Taya Shere, *The Hebrew Priestess: Ancient and New Visions of Jewish Women's Spiritual Leadership* (New York: Ben Yehuda Press, 2015). The activities of Rabbi Hammer's feminist and kabbalistically informed environmentalism are available on the website http://www.telshemesh.org.

do not make them the exclusive interpretative scheme of Jewish eco-theology. These theologians and environmental activists are associated with Conservative Judaism; viewing Judaism historically, they do not privilege Kabbalah and Hasidism, even though they were inspired by Heschel. These Jewish thinkers and activists are also much more attentive to environmental science and the science of ecology: Jeremy Benstein's environmental activism is rooted in rabbinic texts and is inspired by cultural anthropology,[358] Eilon Schwartz's environmental work is indebted to his interpretation of Darwinian evolution,[359] Lawrence Troster is deeply inspired by Hans Jonas's philosophy of organism,[360] Lenn Goodman takes his inspiration from medieval Jewish and Muslim Neoplatonized Aristotelianism,[361] and Bradley Shavit Artson is trained in process

358 Jeremy Benstein is the co-founder and Deputy Director of the Heschel Center for Sustainability (previously called Heschel Center for Environmental Learning and Leadership); he holds a PhD in environmental anthropology from the Hebrew University in Jerusalem and teaches at the School of Environmental Studies at Tel Aviv University. Benstein has published academic papers as well as a book of Jewish environmental activism. Jeremy Benstein, *The Way into Judaism and the Environment* (Woodstock: Lights Publications, 2010).

359 See Eilon Schwartz, *Human Nature, Ecological Thought and Education after Darwin* (Albany: SUNY Press, 2009). Schwartz is currently the Director of Shaharit: The Thinktank of New Israeli Politics. Before founding this organization, he was the Co-Founder and Executive Director of Heschel Center for Environmental Learning and Leadership.

360 See Lawrence Troster, "Care Taker or Citizen: Hans Jonas, Aldo Leopold and the Development of Jewish Environmental Ethics," in *The Legacy of Hans Jonas: Judaism and the Phenomenon of Life*, ed. Hava Tirosh-Samuelson and Christian Wiese (Leiden: Brill, 2008), 373–396. Lawrence Troster (d. 2019) was a Conservative Rabbi who served as the spiritual leader of Kesher Israel Congregation in Chester County, PA, who has written extensively on environmentalism. Troster has been the Director of the Fellowship Program and Rabbinic Scholar-in-Residence for GreenFaith and also co-chaired the Interfaith Partnership for the Environment of UNEP (United Nations Environmental Program). Troster published many essays in *Conservative Judaism* on his website and blogs that promote Green Torah Wisdom.

361 Lenn E. Goodman, *Creation and Evolution* (London, New York: Routledge, 2010). Goodman is a scholar of medieval philosophy rather than an

philosophy and is interested in the dialogue of religion and science.[362] In other words, Kabbalah and Neo-Hasidism are not the only pathways to framing a contemporary Jewish eco-theology that is attentive to the environmental crisis. However, if one thinks in terms of eco-spirituality, then Kabbalah and Hasidism cannot be avoided.

Ecological spirituality is attractive to Jews of diverse levels of observance for various reasons. First, "spirituality" today is a code word for anti-intellectual forms of religion that are laced with popular psychology and express a longing for emotional attachment that traditional religious institutions no longer provide.[363] In the Jewish community, this longing was evident in the late 1960s, when the baby boomers rejected the stuffy style of the suburban synagogue and encouraged the reconstruction of Judaism through

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environmental activist; his reflections on Judaism and nature emerged out of his studies of medieval Muslim and Jewish philosophies. See *Lenn E. Goodman: Judaism, Humanity and Nature*, ed. Hava Tirosh-Samuelson and Aaron W. Hughes (Leiden: Brill, 2014), esp. 177–230.

362 Bradley Shavit Artson, *God of Becoming: The Dynamic Nature of Process Theology* (Woodstock: Jewish Lights Publishing, 2013); Bradley Shavit Artson, *Renewing the Process of Creation: A Jewish Integration of Science and Spirit* (Woodstock: Jewish Lights Publishing, 2016). Rabbi Artson holds the Abner and Roslyn Goldstein Dean's Chair of the Ziegler School of Rabbinic Studies at the American Jewish University in Los Angeles, where he is also the Vice President.

363 "Spirituality" is a very broad and vague concept that seeks to expand the scope of the non-material dimensions of human life but often in contrast to established forms of religious practice and theology. Commitment to environmentalism is often seen as "spiritual" but "not-religious," but this is quite misleading, since all spiritual traditions are informed by religions and all religious traditions are inspired by spiritual traditions. Roger S. Gottlieb defines spirituality as "an understanding of how life should be lived and an attempt to live that way." See Roger S. Gottlieb, *Spirituality: What It Is and Why It Matters* (Oxford: Oxford University Press, 2013), 5. See also Roger S. Gottlieb, *A Spirituality of Resistance: Finding a Peaceful Heart and Protecting the Earth* (Lanham: Rowman and Littlefield, 2003). Gottlieb is another example of a Left-leaning Jewish political activist and environmentalist who found his way to a more traditional Jewish life. He has been an important contributor to the discourse of religion and ecology as editor of the *Oxford Handbook on Religion and Ecology* (Oxford: Oxford University Press, 2006).

the more loosely organized fellowships (or *Havurot*) I mentioned above. The spiritual quest brought some Jews to join other spiritual traditions (especially Buddhism) and others to go back to Orthodox forms of Judaism, especially Hasidism (the Ba'aley Teshuvah movement).[364] And some Jews rejected Judaism and embraced secular environmentalism, until they eventually found their way back to Judaism and created Jewish environmentalism.[365] Jewish ecological spirituality today enables Jews to combine the quest for spirituality with environmentalism and to fuse it with other inspirations: (a) the struggle for social justice and the claim that social justice is inseparable from eco-justice; (b) the embrace of communitarianism and the critique of American individualism, consumerism, and excessive consumption patterns; and (c) the desire to emulate the pioneering ethos and creative passion of Zionism. Environmentalism in America is one way to bring Jews to be linked (albeit indirectly) to the Land of Israel.

The environmental activist-cum-theologian who illustrates how these strands cohere into a full-fledged program is Arthur Waskow, who was mentioned several times before in reference to Eco-Kosher and to the promotion of eco-justice. Waskow is a Jewish Left-leaning peace activist who has worked on issues of world disarmament and criticized the official approaches to nuclear deterrence and civil defense.[366] Through the 1960s, he was active in writing, speaking,

364 On the return of secular Jews to traditional Judaism in the US, see Dana Evan Kaplan, ed., *The Cambridge Companion to American Judaism* (Cambridge: Cambridge University Press, 2005); Dana Evan Kaplan, *Contemporary American Judaism: Transformation and Renewal* (Columbia: Columbia University Press, 2009). On this phenomenon in Israel, see Janet Aviad, *Return to Judaism: Religious Renewal in Israel* (Chicago: Chicago University Press, 1985).

365 Ellen Bernstein, the "mother" of Jewish environmentalism, is a typical example.

366 Waskow has taken a leading role in non-violent protest on behalf of civil rights, equality for women and gay people, freedom of Soviet Jewry, and "healing for the wounded earth." See "Life-history of Rabbi Arthur Waskow," on the website of the Shalom Center: A Prophetic Voice in Jewish Multireligious and American Life http://www.theshalomcenter.org. Waskow's main

and organizing non-violent action against racism and against the Vietnam War. In the late 1970s and early 1980s, he got involved in public policy aspects of community-based generation and use of renewable energy and energy conservation. In 1969, he found his way to traditional Judaism and eventually was privately ordained by Zalman Schachter-Shalomi and collaborated with the organization P'nai Or, which Schachter-Shalomi founded. Their collaboration generated ALEPH: The Alliance of Jewish Renewal, which served as the platform for Jewish environmentalism. Waskow popularized "Eco-Kosher" and was one of the early thinkers-activists who called Jews to return to nature and to engage in social justice at the same time. For Waskow, there is a causal connection between human mistreatment of the natural world and social mistreatment of the marginal and the weak in society.[367] Eco-justice and social justice are two sides of the same coin. Waskow's concern for ecology is part of a deep passion for justice, and his recommendations include the cultivation of self-control, moderation in material consumption, sustainable economic development, and communitarianism.[368]

Religion and Environment and the Dialogue of Religion and Science

The three lectures have made it clear that Judaism can and does support a vibrant environmental movement. But is Jewish environmentalism informed by environmental sciences, or more broadly, by environmental studies? What is the place of science in

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contribution to Jewish environmentalism is Arthur Waskow, ed., *Torah of the Earth*, 2 vols. (Woodstock: Jewish Light Publishing, 2000).

367 See Arthur Waskow, "What is Eco-Kosher," in Roger Gottlieb, ed., *This Sacred Earth*, 297–300. In numerous essays and blogs, Waskow has railed against the "carbon Pharaohs" of our day, namely, the transnational companies of the extracting industries.

368 See Arthur Waskow, "Jewish Environmental Ethics: Intertwining Adam and Adamah" in *The Oxford Handbook of Jewish Ethics and Morality*, ed. Elliot N. Dorff and Jonathan K. Crane (Oxford: Oxford University Press, 2012), 401–418; Arthur Waskow, *Down-to-Earth Judaism: Food, Money, Sex, and the Rest of Life* (New York: William Morrow 1995).

the Jewish environmental discourse? How does the contemporary discourse on Judaism and environment intersect with the discourse on Judaism and science? The answer to these questions is complex, and I will try to clarify the relevant issues by making three general observations.

Science vs. Moral Conviction in Environmentalism

My first observation is that environmental science (or the science of ecology in particular) does not provide the main impetus for Jewish environmentalism. Rather, the environmental commitment comes from a religious or an ethical source—what I have called "the ethical imperative"—namely, a deep sense of being compelled to act in a certain way. Where does this compulsion or conviction come from? As we noted in the Introduction, the call for a joint action of religion and science was issued in 1991, and the Union of Concerned Scientists issued its "Warning to Humanity" in 1992. Since then, scientists have repeatedly renewed the call for action as the dangers of climate change have become more ominous. Nonetheless, it appears that scientific information alone has failed to mobilize people to action on environmental matters. Put differently, being informed about the environmental science or more specifically about the environmental crisis is not a necessary condition to environmental activism. Conversely, one can be environmentally concerned and engaged in environmental activism even if one does not have the most detailed knowledge of environmental science or even if one cannot provide the data that documents the environmental crisis.

It is difficult to explain why some people become involved in environmentalism while others remain indifferent, because these choices are too personal and subjective, defying generalizations. However, it is my impression that science does not mobilize people to action, whereas religion does. Precisely because religion engages metaphors, symbols, and myths, religion appeals to human emotions, aspirations, and hopes that can result in action

on behalf of the environment. By contrast, science, which provides us with the correct information about the physical world, does not and cannot deal with questions of meaning, be they the purpose of life, the problem of evil, or the meaning of death. These issues are beyond the purview of science (at least as science has been defined in the modern period), because modern science has assumed that cognizing subjects (that is, human beings) must be excluded from consideration. Scientific narratives concern only questions of efficient causality, namely, the question of *how*, not teleology, namely, the question of *why*. By contrast, religious narratives offer human beings a way to live because they speak in teleological language that provides an answer to "why" questions. To quote Ian Barbour, religious language "serves diverse functions, many of which have no parallel in science."[369] Among these are fostering ethical attitudes and acts, evoking sentiments and feelings, and effecting "personal transformation and reorientation (salvation, fulfillment, liberation, or enlightenment). All of these aspects of religion require more total personal involvement than does scientific activity."[370]

The discourse of religion and science has attempted to bridge the gap between these endeavors, and several scientists have presented science as a compelling imaginative narrative that could mobilize people to action. The biologist Ursula Goodenough, the cosmologist Brian Swimme, and the ecologist Thomas Berry are important examples of scientists who tell the "story of the universe" as an imaginative narrative.[371] We definitely need people who can

369 Ian Barbour, *Religion in the Age of Science; The Gifford Lectures, 1989–1991* (San Francisco: Harper and Row, 1990), 88, cited in Max Oelschlaeger, *Caring for Creation: Ecumenical Approach to the Environmental Crisis* (New Haven: Yale University Press, 1994), 124.

370 Barbour, *Religion*, 124.

371 See Brian Swimme and Thomas Berry, *The Universe Story: From the Primordial Flaring Forth to the Ecozoic Era—A Celebration of the Unfolding of the Cosmos* (New York: Penguin, 1994); Ursula Goodenough, *The Sacred Depth of Nature* (Oxford: Oxford University Press, 2000); Brian Thomas Swimme and Mary Evelyn Tucker, *The Journey of the Universe* (New Haven:

tell the story of the universe in order to understand where human beings fit, but will these large narratives be able to motivate people to environmental action? I am not sure, but my sense is that people are moving to action not just through cosmological stories but rather through powerful metaphors. I join Max Oelschlaeger in viewing "creation care" or "caring for the Earth" as a very powerful metaphor that mobilizes people to act on behalf of the environment. Why is the language of care so powerful? The answer is that as mortal humans, we are profoundly vulnerable and always in need of care at each and every chapter of our lives. Whether we are newborns, children, adults, sick, or aging, we are always in need of being cared for. This is the reason why the ethics of care, as feminists noted several decades ago, is so powerful in framing the moral situation.[372] Ethics of care acknowledges our inherent relationality, our ability feel for others, and our ability to respond to the needs of others. Environmentalism asks of us that we extend the language of care to the "more-than-human world" and that we become attentive to the mutual relationship of dependence between us humans, the Earth, and all its inhabitants. Because the language of care evokes our emotions as well as our vulnerability, it can powerfully motivate people to action on behalf of the other. Creation care is thus a potent way to affect the language of self-transcendence, without which it is not possible to engage the Other, whether the other is the poor, the widow, and the orphan, or the

Yale University Press, 2011). These works are deliberate attempts to bridge the gap between the sciences and cultural studies, or the humanities.

372 Feminist ethics of care originated with the work of Carol Gilligan in 1981 as an internal critique of dominant moral theories of Deontology and Consequentialism. Ethics of care has been applied to the environment primarily but not exclusively by ecofeminists. See Robert J.H. King, "Caring about Nature: Feminist Ethics and the Environment," *Hypatia* 6, no. 1: 75–86; reprinted in *Ecological Feminist Philosophies*, ed. Karen J. Warren (Bloomington: Indiana University Press, 1996), 82–96; Virginia Held, *Ethics of Care: Personal, Political and Global* (Oxford: Oxford University Press, 2006); Chris J. Cuomo, *Feminism and Ecological Communities: An Ethics of Flourishing* (London, New York: Routledge, 1998); Marti Kheel, *Nature Ethics: An Ecofeminist Perspective* (Lanham: Rowman and Littlefield, 2008).

natural world toward which we have a moral obligation. The ethics of care and the ethics of responsibility are two sides of the same coin: we cannot care for someone to whom we do not feel responsible. In short, the first concluding observation, of why religious language more than scientific information can mobilize us to action on behalf of the environment, justifies my decision to open the three lectures with a focus on ethics.

Science and Eco-Theology: The Problem of Transcendence and Immanence

My second concluding observation about Jewish environmentalism is that there is no straightforward and predictable correlation between being scientifically informed and developing an ecologically inspired theology. Thus, Jewish eco-spirituality, which advocates "mystical pantheism" and uses kabbalistic symbolism, is not more scientifically informed than other forms of Jewish environmental discourse that defend the transcendence of the Creator. In fact, one can be even more critical and say that those who defend the traditional theology of creation and insist on divine transcendence tend to be more informed about environmental science and more adept in using scientific information about the environmental crisis to justify caring for the created world; by contrast, those who critique the doctrine of creation and insist on a version of "mystical pantheism" speak in symbolic language that is not amenable to scientific exposition. Kabbalah, we should not forget, reflects the medieval scientific worldview, which was a unique fusion of Aristotelian and Neoplatonic elements. It is true that kabbalistic organic symbolism is very suggestive for the environmental age because it speaks about organic holism, the interconnected web of life, and mutual dependence of all beings, but kabbalistic poetic language is not translatable into the scientific language of environmentalism. I am also not clear that such symbolic language enables a person to be a better environmentalist in terms of adopting this or that public policy. In other words, Neo-Hasidic

eco-spirituality is not more "environmentally correct" than other forms of Jewish environmentalism that do not relate to the physical world through the prism of Kabbalah and Hasidism.

A case in point is Manfred Gerstenfeld, a Modern Orthodox Jew who is most knowledgeable about environmental science, but who critiques Jewish eco-spirituality and feminist Earth-based spirituality as a form of paganism, which Judaism was called to eradicate. Is this accusation accurate? Who is more environmentally correct: the Neo-Hasid who emphasizes the immanence of God and insists on the presence of God in each and every being, or the Orthodox thinker who emphasizes divine transcendence and the radical otherness of God? I have sided with the latter (in contrast to contemporary Neo-Hasids). I maintain that kabbalistic symbolism or kabbalistic mentality does not necessarily facilitate environmental activism, nor does a kabbalistic orientation help us determine how to apply science to the many contested environmental issues, such as water, food, agriculture, energy, waste disposal, or climate change. Instead, I believe that thinking about nature within the kabbalistic or Hasidic framework leads one to view nature as text, and that the textualization of nature hampers environmental activism. If one wishes to protect the natural world from destruction, one cannot think of the physical world symbolically but must take the physicality of nature seriously, which in turn requires the separation of observer and observed, of objective and subjective perspectives. Kabbalistically inspired Neo-Hasidism, in my view, re-enchants nature but it is not necessarily conducive to solving the environmental problems we face; it may actually exacerbate the passivity and bookishness that have removed Jews from the natural world in centuries past.

Let me move away from this specific dispute to reflect more generally about the relationship between theology and science in Judaism. Historical perspective could help us understand how science has functioned in Jewish theology. In Lecture 2, I suggested that Jewish thinkers have been open to the scientific theories of their day and that they have interpreted Judaism in light of them.

In the rabbinic period, the dominant scientific theory about the created world was articulated in Plato's *Timaeus,* and the rabbis developed their theories about the world's creation in response to Platonic theory of the Demiurge. In the Middle Ages the dominant scientific paradigm was Aristotelian, so rabbinic Judaism was reinterpreted in light of that theoretical schema, especially by Moses Maimonides and his disciples. In the premodern world, the Jewish philosophers did not regard Judaism and science as antithetical but rather science was a deepened commitment to Judaism; to be a good Jew, one had to be a good scientist. Of course, not all Jews agreed with this view: in the thirteenth century, the Kabbalists led the campaign against Maimonides, arguing that Kabbalah is the true science and that it is epistemically and ontologically superior to Aristotelian science. In the early modern period, Kabbalah held sway, and "science" was increasingly demoted in value and associated with non-Jewish knowledge about the physical world, as opposed to kabbalistic knowledge reserved for Jews only. As Rabbi Loew of Prague exemplified, knowledge of Kabbalah did not hamper engagement with modern science, but the authority of "science" pertained only to the world of nature. Increasingly, the radical differentiation between "Torah" and "nature" or "Israel" and the "nations" will bring about secularization of nature and the deepening gulf between Judaism and science.

In the eighteenth century, interest in scientific inquiry would become the hallmark of the Jewish Enlightenment (*Haskalah*) that would advocate for changes in Jewish education and most importantly for the emancipation of the Jews from centuries of discrimination and legal disabilities. The French Revolution was the beginning of the emancipation process, which lasted for eighty years until Jews finally received civil rights in their country of residence in most of Western and Central Europe. Thus began the modern epoch for Jews, during which we find a new phenomenon: the separation between Judaism and science, and the association of science with secularity. After centuries of exclusion, Jews were now able to enter European universities and they overwhelmingly

focused on the natural sciences. Why? Because science offered them a perceived neutral space in which religion (that is, Christianity) did not matter and could not hamper success. It was William Whewell (1794–1866) who used the term "science" as a substitute for "natural philosophy" and who gave us the perception of the scientist as a "universal man" who used reason alone to figure out how the universe works. In the new vision, science was a technical pursuit of physicists, chemists, and biologists in the laboratory, where the Church has little relevance. In the new vision, "science" became a profession in a way that natural philosophy never was, and the scientist cultivated a different self-understanding. In the new vision, science was technical and independent of philosophy and theology; science had its own method and did not require moral training or exceptional integrity. Science was amenable to secularism and even carried the banner of progress and modernization. And most importantly, new institutions of science emerged with no reference to religion or creed. At least in principle, science appeared to be universal, modern, secular, and objective.

Many Jews were enthralled with modern science and saw in it an end to social exclusion and marginalization.[373] Science was part of the new public culture into which Jews wanted to integrate. It is no surprise, therefore, that Jews would become part of every aspect of science; they were at the forefront of physics, mathematics, chemistry, biology, medicine, and the various subfields. In the social sciences, Jews were exalted and created new fields such as psychology, anthropology, and sociology. For many of these Jewish scientists, modern science replaced commitment to traditional Judaism, and the engagement with science was understood to be a distinctly secular enterprise that made possible the modernization of Jews as well as the modernization of Judaism. Jews flocked to science because it was a realm that seemed devoid of Protestant etiquette. Jews also pursued law and the arts and other liberal

373 This phenomenon is analyzed in great detail by Noah J. Efron, *A Chosen Calling: Jews in Science in the Twentieth Century* (Baltimore: John Hopkins University Press, 2014).

professions, but these cultural pursuits were still exclusionary in a way that science was not. Science offered a new, alternative avenue to communal approbation and prestige, regardless of rabbinic lineage and history. Ironically, it was the traditional pursuits of Jewish learning honed by centuries of Talmudic reasoning and devotion to the pursuit of Truth that enabled Jews to be so good in the sciences. But be this as it may, in the modern period, the medieval fusion of science and Judaism was replaced with a growing gap between secular science and religious Judaism.

A greater irony is evident when we look at the science of ecology, because it emerged directly from Christian concerns. The Western ecological discourse was rooted in religious concerns.[374] When the term "ecology" was coined in 1866 by the German zoologist Ernst Haeckle, it was meant to replace an older concept of "economy of nature" and capture what Darwin called "the conditions of existence." Haeckle was a visionary with a comprehensive, monistic worldview in which nature and God were one, a worldview indebted to Alexander von Humboldt's view of the phenomena of nature as interconnected in cosmic unity. Haeckle coined the term "ecology" (*Ökologie*) with its Greek root in mind to denote the investigation into nature's management of her "household."[375] The foundational studies of the science of ecology in the 1880s and 1890s, however, did not conceive nature as a "household" but rather as a "community," a concept laden with religious meanings, since "community implies morality, and moral judgment implies religion."[376] First in Europe

374 Donald Worster, *Nature's Economy: A History of Ecological Ideas*, 2nd ed. (Cambridge: Cambridge University Press 1994).

375 See, Eugene Cittadino, "Ecology and American Social Thought," in *Religion and the New Ecology: Environmental Responsibly in a World in Flux*, ed. David M. Lodge and Christopher Hamlin (Notre Dame: University of Notre Dame Press, 2006), 74; Cf., Paul Warde, Libby Robin and Sverker Sörlin, *The Environment: A History of the Idea* (Baltimore, Johns Hopkins University Press, 2018), esp. 73-95.

376 Mark Stoll, "Creating Ecology: Protestants and Moral Community of Creation," in *Religion and the New Ecology: Environmental Responsibility in a World in Flux*, ed. David M. Lodge and Christopher Hamlin (South Bend:

and later in England and America, the science of ecology was rooted in Protestantism, especially its Calvinist Puritan strand. For Calvinists, nature played a special theological role as the foil for human corruption: since God was sovereign, preordaining damnation or salvation of each and every individual, Calvinists regarded nature as God's pure, ongoing creation, whose innocence was a foil to human corruption. Thus the Book of Nature was an appropriately pious subject for study.

The Protestant Reformation reconfigured the place of nature in Christian thought. When Christian theology was systematized during the third and fourth centuries, it incorporated Neoplatonic philosophy into a Judaic scriptural religion. Plotinus's Neoplatonism envisioned the universe as a Great Chain of Being, an organic, holistic hierarchy that emanated from the divine One. Medieval Christian mystics contemplated nature and interpreted the Book of Nature symbolically, pointing to God, and the contemplative practice was designed to enable the individual soul to return to its divine source.[377] By contrast, the Protestant Reformation, which championed the Bible as the exclusive path to God, proclaimed the Book of Nature as evidence for Protestantism's claims against the Catholic Church. Protestantism fostered spiritual individualism and encouraged believers to search for the spirit of God in nature. The study of nature was supposed to lead one to confirm the truths of Protestantism against the claims of the Catholic Church.[378]

The Protestant Reformation went hand in hand with the rise of modern science. In the eighteenth and nineteenth centuries, Protestant theology was inseparable from science: natural theology thrived, on the one hand, and natural science became a religious occupation, on the other. By the nineteenth century, even clerics

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University of Notre Dame Press, 2006), 54.

377 Marie-Dominique Chenu, *Nature, Man, and Society in the Twelfth Century: Essays on the New Theological Perspective in the Latin West* (Chicago: University of Chicago Press, 1968).

378 For fuller treatment see Mark Stoll, *Protestantism, Capitalism and Nature in America* (Albuquerque: University of New Mexico Press, 1997).

pursued scientific studies. Scientifically-minded Protestants (e.g., Alexander von Humboldt and Asa Gray) investigated the interconnections of the natural world as a spiritual exercise to gain knowledge of the Creator. But in the middle of the nineteenth century, the Christian doctrine of creation was seriously challenged by Darwin's theory of evolution, and the authorship, authority, reliability, and veracity of the Bible were questioned by the sciences of history and geology. As a result, educated Protestants turned to study the Book of Nature, the less problematic "Book" of God. Many moved out of orthodox churches and into Unitarianism, Transcendentalism, or Agnosticism, but the religious aspect remained: scientists became the "priests" of nature.[379]

The science of ecology emerged and took shape in Lutheran countries (e.g., Germany and Denmark) and was planted in America in Congregationalist and Presbyterian denominations. During the 1890s, those who contributed to the science of ecology were all members of churches that descended from the Puritan tradition, located mostly in the Upper Midwest. The dominant view was that the environment was an organism, but gradually the organic holism shaded its mystical overtones and became secular science: ecology was equivalent to physiology. In the 1920s and 1930s, the science of ecology derived its classic statement from the studies of Frederic Clements, who was influenced by the progressive reform movement; throughout the twentieth century, many utopian visionaries viewed ecology as the scientific underpinning of a new social order and the antidote to the excesses of modern civilization. These sentiments, combined with the awareness of the destructiveness of modern technology, would give rise in the 1960s to the environmental movement, many of whose early leaders (e.g., Rachel Carson, Edward Abbey, and Holmes Rolston III) were Presbyterians who defended vulnerable nature from the self-seeking, thoughtless, modern industrial society and who wanted to spread appreciation for nature's beauty and wonder. In the mid-1930s, however, the

379 Stoll, "Creating Ecology," 60.

term "ecosystem" replaced the term "ecology" in order to move away from the organic holism that generated objectionable political implications on the political Left (i.e., Communism) and on the political Right (Fascism). "Ecosystem" had mechanistic rather than organic implications, and after WWII, the study of ecosystems became increasingly mathematical when concepts and metaphors from cybernetics and information science gave it a new flavor and direction. The science of ecology moved away from its Protestant Christian moorings as non-Christian scientists contributed to it.

Thus the ecological discourse during the twentieth century was dominated by two distinctive paradigms: the "Old Ecology" stands for the "balance-in-nature paradigm," in contrast to the "New Ecology," which stands for "flux-in-nature-paradigm."[380] Eugene Odum's work, *The Fundamentals of Ecology*,[381] presented ecology as the overarching science that unites previously disparate studies: scientific natural history, population biology, community ecology, biochemistry, and bioenergetics into a single, unified science. In this model, well-developed ecosystems were viewed as holistic, stable, balanced, and self-maintaining systems in which changes through time occur by succession and must always pass through the same phases; humans were viewed as *external* to ecosystems and excluded from the roster of normal ecological factors. In the Old Ecology, undisturbed natural ecosystems would mature and remain in their steady states unless disturbed by some catastrophic external forces, though such external natural disturbances were rare events. The Old Ecology was the foundation of resource management (e.g., marine fisheries, wildlife, and endangered species), whose goal was to return nature to its inherent state of balance or stability. Concomitantly, the Old Ecology inspired

380 For the history of these two paradigms in the science of ecology, see Donald Worster, "The Ecology of Order and Chaos," in *Out of the Woods: Essays in Environmental History*, ed. Char Miller and Hal Rothman (Pittsburgh: University of Pittsburgh Press, 1997), 3–17.

381 Eugene P. Odum, *Fundamentals of Ecology*, 3rd ed. (Philadelphia: W. B. Saunders, 1971).

Christian Process theologians such as Charles Hartshorne and John Cobb, the followers of Whitehead's process philosophy (which was in turn suffused with Neoplatonic philosophy of nature), and feminist theologians and social critics such as Rosemary Reuther and Sallie McFague. Christian eco-theology in the twentieth century illustrated the features of Old Ecology.

With the maturation of evolutionary science and other developments in the life sciences, the "nature as balance" paradigm was replaced by "non-equilibrium ecology," as some ecologists began to argue that computer and mathematical analyses (analyses of gene frequencies over time, for instance) revealed a fundamental unpredictability in the natural world; ecological changes appeared to occur at random.[382] The extreme randomness of nature is consistent with Darwinism, and some have begun to understand the processes of nature as an illustration of chaos theory. In the New Ecology, ecosystems manifest no single, stable point of equilibrium but rather multiple potential domains of ecological attraction. Ecosystems are in constant flux; they are open to energy and water, to nutrients and pollution entering by means of a variety of vectors, and to invasive organisms. Ecosystems are subject to regularity factors that are often external, such as climate or migrating organisms. Ecosystem always develop, but not toward some intrinsic *telos*; change is certain, but there is no guarantee of a particular type of change, and disturbances are common and as integral to the process of change as much as human involvement.[383] The discovery of disorder and continual fluctuation as intrinsic to nature made resource management difficult to defend or implement.

Since the science of ecology is inseparable from the story of Christianity, how does Judaism relate to ecology in general and to the distinction between Old Ecology and New Ecology in particular?

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382 Lisa Sideris, *Environmental Ethics, Ecology Theology and Natural Selection* (New York: Columbia University Press, 2003), 33.

383 S. T. A. Picket and O. R. S. Ostfeld, "The Shifting Paradigm in Ecology, in *A New Century for Natural Resources Management* ed. R. L. Knight and S. F. Bates (Washington: Island Press, 1995), 115.

Is it significant that nature does not manifest harmony, balance, and unity but rather disorder, predation, conflict, and strife? How did modern Jewish theology respond to Darwin's theory of evolution? Did Jewish thinkers entertain the notion of organic holism, and if so, what was the metaphysical underpinning for it? Finally, how did Jewish thinkers of various denominations relate to the environmental movement of the 1960s? Has Judaism generated coherent ecological theology, philosophy, and ethics? And is Jewish ecological thought informed by the science of ecology? In a previous publication I addressed these questions and made the following arguments:[384] First, within the Jewish tradition (both premodern and modern), one can find examples of an "ecological" worldview, but the science of ecology has made relatively little impact on modern Jewish environmental thought, because of the growing cleavage between science and the Jewish faith in the modern period. Second, the response of Jews and Judaism to the science of ecology cannot be separated from particular historical conditions of the Jews in modern Europe: their struggle for integration in modern (Christian) society and, by contrast, the emergence of Jewish nationalism as a critique of European culture. Third, to the extent that Jews reflected about the science of ecology, they did so in the context of their response to the theory of evolution, which generated considerable internal debate, but the debate was not about the details of the science of ecology but about the meaning of Judaism in the modern world. Nonetheless, as I already explained in Lecture 2, some Jewish thinkers, especially those who advocated Zionism did see nature as the source of vitality. Their ideas resonate with the model of nature characteristic of the Old Ecology, even though the inspiration for these ideas was rooted in very different assumptions. Finally, although there is no one Jewish approach to ecology, the ethics of responsibility has dominated Jewish thinking about nature. The responsibility for the well-being of nature is

384 Hava Tirosh-Samuelson, "Judaism and the Science of Ecology," in *The Routledge Companion to Religion and Science*, ed. James W. Haag, Gregory R. Peterson, and Michael L. Spezio (London: Routledge: 2012), 345-355.

linked to passionate concern for justice, especially for the marginal and the vulnerable in human society.

Jews and Judaism in the Context of Religion and Science

The complex interaction of Judaism and modern science leads me to the third general observation of this lecture. Although Judaism has much to contribute to the discourse of religion and ecology (or religion and environment), it is hard to map that discourse onto the field of religion and science. The theologians and activists who are involved in Jewish environmentalism are not necessarily informed by the field of religion and science, nor do they care much about it. In this regard, I think that it is easier to carve space for Judaism in the discourse of religion and ecology than in the discourse of religion and science. This is the case because the discourse of religion and ecology is committed to comparative study of world religions, and it knows that any and all discussions of Western religions must begin with Judaism, since Christianity and Islam are rooted in it. This is why Jews have been invited to contribute to the field's anthologies and reference books at least from the mid-1980s, and why the Harvard conferences on Nature and World Religions included a conference and a volume on Judaism.[385] The commitment to world religions model allows for the inclusion of Judaism, acknowledging its historical specificity and theological distinctiveness.

This is not the case for the field of religion and science, where "Religion" and "Science" have been configured as two reified categories, like two political parties or two ideologies whose relationship can be analyzed through various "models," be it "conflict," "independence," "dialogue," or "integration," to use Barbour's famous typologies. While these heuristic devices have generated vast literature, in truth, when practitioners of the field talk about "Religion" they really have in mind "Christianity,"

385 The conference in 1997 was organized by Professor Moshe Sokol and Rabbi Steve Shaw, but I was asked to edit the volume. Hava Tirosh-Samuelson, ed., *Judaism and Ecology: Created World and Revealed Word* (Cambridge, MA: Harvard University Press, 2002).

and the dynamics they describe or seek to explain fit the story of Christianity more than Judaism (or Islam, for that matter). The story of Judaism is too complex to fit in because it is laced with other ethnic, cultural, social, and political factors—all the factors that shape history—which seem to be outside the scope of "Religion and Science." For this reason, I framed my three lectures from a historical perspective rather than attempting to fit the story into ready-made categories. Indeed, the story of Judaism (both premodern and modern) does not fit neatly into generalizations about "Religion" and "Science," but that does not mean that Jews should not be interested in or involved in the fields of religion and science or religion and ecology.

So let me conclude with a look to the future and suggest that Jews should become more informed about and active in these conversations. For both discourses, I would like to see more Jews getting involved in the relevant professional organizations, more academic writings on the topic, more public teaching on these issues, and more critical engagement with the dominant paradigms from the perspective of Judaism. What I have said to others I have also done myself: I have published essays in both fields, delivered lectures to Jewish and non-Jewish audiences about Judaism and science and Judaism and ecology, and I have helped found and manage the Judaism, Science, and Medicine Group, an international society that meets annually to promote deeper understanding of the interaction between Judaism and the sciences. The message is beginning to make a difference, but the path is still long and arduous. There are other Jewish organizations—for example, Sinai and Synapses—that are interested in this approach and are doing their share in promoting attention to science in organized Jewish life.[386] As for Jewish environmentalism, it is also fair to say that the

386 Sinai and Synapses: Scientifically Grounded. Spiritually Uplifting "provides tools and language for learning and living to those who see science as their ally as they pursue personal growth and the repair of our world." The organization was incubated at Clal — The National Jewish Center for Learning and Leadership, "which links Jewish wisdom with innovative scholarship

work of the past two decades has made a difference; Jews across the religious spectrum in the Diaspora and in Israel are more attentive to environmental matters and are willing to get involved because people are deeply aware that the environmental crisis is profound and dangerous and that life on the planet is now in jeopardy. As a born optimist, who usually sees the glass half full rather than half empty, I would like to believe that both discourses—religion and ecology and religion and science—offer the context for inter-religious conversation, collaboration, and cooperation.

Conclusion: Religion and Environment for the Post-Secular Age

All world religions have responded to the environmental crisis, making it clear that "religion" should not be seen as the cause of our environmental crisis but as a force that can inspire people to conduct themselves in more sustainable ways. Judaism responded to the environmental crisis by giving rise to a Jewish environmentalism that integrates the lessons of the environmental sciences with commitment to the Jewish religion, culture, and values. Precisely because Judaism is a comprehensive way of life rather than a set of beliefs or dogmas, Judaism cannot be fit into the binary dichotomy between "the religious" and "the secular." In traditional Judaism, the physical world of nature has religious meaning because it is viewed as divinely created, and religious rituals undertaken in the world sanctify nature and lead the observer closer to God. Jewish activist orientation toward the world is most evident in the concept of *Tikkun Olam*, a form of "redemptive activism" that depends on humans. Nature is thus a source of religious (or spiritual) meaning and the religious (spiritual) meaning is gained through activism in the world.

The case of Judaism disrupts a sharp distinction between "the secular" and "the religious," which has been taken for granted

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to deepen civic and spiritual participation in American Life." See https://sinaiandsynapses.org/our-mission-and-methods.

by the Secularization Thesis. According to that influential thesis, modernity means privatization of religion and its removal from the public sphere. The Secularization Thesis predicted that religion will disappear with the advance of modernity and modernization, but this prediction was proven wrong because rather than disappearing, all over the world religion resurfaced to become a major force of public life in the second half of the twentieth century.[387] The Shiite Revolution in Iran; the Moral Majority and Evangelical Protestantism in the US; the spread of Pentecostalism in Latin America and in Africa; the restoration of Confucianism and Daoism and the revival of Christianity in China; charismatic New Religious Movements in Europe, the US, and Asia; the mobilization of faith-based organizations to address social problems in the US; the Islamic revival of belief and practice in North Africa and South-East Asia; the rise of political Islam in the Middle East, Europe, and Asia; and the emergence of ethnic-religious nationalism in Eastern Europe all exemplify the centrality of religion and its enduring power.

The resilience of religion and its public significance has led sociologists and cultural interpreters to let go of the Secularization Thesis and speak instead about "post-secularism" as the appropriate category of the contemporary moment. According to Jürgen Habermas, the social theorist who has done the most to popularize the concept of the post-secular, religion is a social force within civil society, and a post-secular religion must meet three criteria: it must accept and tolerate the presence of various worldviews, it must acknowledge the rationality of reasoning as the primary form of democratic problem solving, and it must observe the propositions of the constitutional state as the foundation of a civil society.[388]

387 For detailed analysis of these terms in relationship to science and religion, see Hava Tirosh-Samuelson, "Religion, Science, and Technology in the Post-Secular Age: The Case of Trans/Posthumanism," *Philosophy, Theology and the Sciences* 4, no. 1 (2017): 7–45 and the secondary literature cited there.

388 See Jürgen Habermas, "Religion in the Public Sphere," *European Journal of Philosophy* 14, no. 1 (2006): 1–25.

Habermas maintains that a post-secular society is epistemically attuned to the continued existence of religious communities and it displays an affinity to post-metaphysical thinking, which admittedly refrains from passing ontological statements on the constitution of the whole of beings. Post-metaphysical thinkers and post-secular individuals are agnostic but willing to learn from religion, and the post-secular consciousness involves a loss of the hitherto firm secularist conviction that religion will eventually disappear in the continuing process of modernization; the post-secular is also a normative notion: it embodies the de-legitimization of early political-philosophical conviction (namely, the liberal, secular nation-state).

Habermas's analysis of religion's prominence today and his theorization of post-secular society have generated a vast literature among sociologists and social theorists,[389] but Habermas by no means exhausted how the post-secular is understood or what post-secular society and culture are about. Other dimensions of the contemporary moment, such as globalization, late capitalism, post-colonialism, consumerism, media and digital art, environmentalism, urbanism, and technoscience are no less relevant to the understanding of the post-secular society than the theoretical parameters Habermas articulated. Consequently, in contemporary academic discourse, the term "post-secularism" means different things in different disciplinary contexts. For example, in literature, the term denotes the untidy resurgence of magic, sacred, premodern, and non-Western constructions of reality. In philosophy, the term refers to the theologization of philosophy in the religious turn within Phenomenology (e.g., in Levinas, Derrida, and Jean Luc Marion), the emergence of a Christian brand of Deconstruction (e.g., John Caputo), the revival of political theology (e.g., Giorgio Agamben), and the Christian critique of the social sciences by public theologians who claim that religious values should shape public education

389 See Craig Calhoun, Eduardo Mandieta, and Jonathan VanAntwerpen, eds., *Habermas and Religion* (Cambridge: Polity, 2013).

(John Millbank, Catherine Pickstock, and Graham Ward). In urban studies, the term "post-secular" is employed by urban planners and civil engineers who grapple with the physical presence of religious institutions in public spaces, and in the arts, the term describes writings or artistic performances that have spiritual dimension or contexts.

What unites all of these discourses is the use of the term "post-secular" to depict processes of de-secularization. The precise meaning of "de-secularization" remains rather vague and open to various interpretations, but it indicates not the "disenchantment of the world" but rather the numerous attempts to "re-enchant the world." Indeed, it was the modern "disenchantment of nature" that some theologians consider the very cause of the environmental crisis.[390] Religious environmentalism exemplifies that search for re-enchantment of nature, signaling a search for meaning that does not take flight from the world but that recognizes the inherent moral value of the physical world and seeks to protect it from human destruction. Jewish environmentalism is one example of the contemporary attempt to re-enchant the physical world on the one hand and ground Jewish religious life in the appreciation of created nature on the other. "Earth-based Judaism" enables environmentally concerned Jews to worship God not through bookish Torah study and performance of prescribed commandments, but through environmental activism and reconnecting to the rhythms of nature.[391] Today, commitment to Judaism and commitment to the well-being of the environment

390 See Alistair E. McGrath, *The Re-enchantment of Nature: The Denial of Religion and the Ecological Crisis* (New York: Doubleday, 2002); Alistair E. McGrath, *The Re-Enchantment of Nature: Science, Religion and the Human Sense of Wonder* (London: Hodder & Stoughton, 2003).

391 The organization Wilderness Torah, led by Rabbi Zelig Golden, is a prime example of this trend. The organization "awakens and celebrates the earth-based traditions of Judaism to nourish the connections between self, community, earth, and Spirit." See also Mike Comins, *A Wild Faith: Jewish Ways into Wilderness, Wilderness Ways into Judaism* (Woodstock: Jewish Lights Publishing, 2007).

are not diametrically opposed; rather, across the spectrum of contemporary Judaism—Reform, Conservative, Reconstructionist, Orthodox, and Humanistic—environmentalism and Judaism are seen as compatible. For contemporary Jews, secularism is not a necessary path for social integration or acculturation, and environmentalism does not entail secularism. In the Diaspora and in the State of Israel, environmentalism has been transforming Jewish life, and the close examination of Jewish environmentalism can offer deeper understanding of our post-secular age.

I began the three lectures by discussing the Anthropocene, an age in which massive ecological crisis is taking place, evident in climate change; extreme weather events; desertification; loss of biodiversity; retreat of glaciers; rising sea levels; loss of fisheries and forests; acidification of oceans; pollution of air, water, and soil; and numerous other manifestations of environmental degradation. These lectures have argued that world religions matter most to our attempt to address the ecological crisis because the overwhelming majority of people in the world conceptualize reality in religious categories. Human beings understand themselves, their societies, and their daily lives through sacred narratives and symbolic rituals that point beyond themselves to an ultimate reality. Within religious worldviews, human beings organize their lives and find meaning, purpose, and hope as they face an unknown future. Religion provides the moral lens through which we evaluate every aspect of our lives and decide what is right and wrong, what is permitted and forbidden, and what is desirable and undesirable. Religion expresses human existential and emotional needs and frames what we care most about, namely, our ultimate concern. Because this concern frames our understanding of ultimate reality (to which we commonly refer as "God"), people are willing to sacrifice their lives for what they consider ultimate reality. For this reason, religion, more than any other aspect of human life, is the force that mobilizes people to action. Since the challenges for the survival of humankind today are planetary in scope, religion offers the most comprehensive perspective within which to frame our

global challenges and respond to them.

World religions have inspired activism concerning the environmental crisis through "protests, lobbying, letter/petition campaigns and election activities" that engage all levels of government regarding "fuel and energy sufficiency, promoting alternative energy sources, regulating CO2 emissions by industry, working for a carbon tax or a cap-and-trade program, curtailing deforestation and halting extractive industries in ecologically sensitive areas."[392] Religion is a force that mobilizes numerous individuals and organizations to act in ways that promote the value of sustainability, and religious attitudes are politically salient because religion takes place in the public sphere and frames public discourse and public activities. Religion is an active shaper of political contestation, so that religious persons, organizations, and campaigns can be founded on conflicting sides of the debate about environmental issues, especially climate change. Religious actors and faith-based organizations have changed the debate about climate change by bringing ethical values such as justice, fairness, equality, responsibility, and peace to the foreground of the public discussion. As a result, the ecological crisis is now discussed in terms of environmental justice, and religious considerations are brought to bear on disparate issues such as climate finance, disaster relief, agricultural technology, and illegal wildlife trafficking.

Faith-based organizations frame the ecological challenge in moral terms, but that does not make matters less contentious, because we live in a multicultural, multi-ethnic, multi-religious, and multi-racial society. Addressing our challenges will require us to cooperate and collaborate among all stakeholders, including communities of faith, philosophers, theologians, ethicists, social scientists, policy makers, and the list can go on and on; all of them will have to be involved in order to forge a shared language, a shared set of values, and a shared course of action that could make

392 Laurel Kearns, "The Role of Religions in Activism," *Oxford Handbook of Climate Change and Society*, 418.

a difference. In order to do so, we need to learn to listen to diverse voices, perspectives, concerns, fears, hopes, and aspirations of all people, especially those who are and will be most severely affected by the ecological crisis. Our future survival as a species depends on our ability to hone the interpretative skills of listening to what is being said, what is being glossed over by silences, and what is being distorted. By looking at Judaism, I illustrated what kind of listening is called for and what level of specificity is required to make sense of how one tradition wrestles with the environmental challenges.

The environmental crisis of the Anthropocene makes clear that we need to integrate scientific knowledge and religious commitment to protect all life from potential destruction. We do not need to choose between science and religion but rather we need to tell ourselves narratives that fuse scientific data and religious values. The narratives we need to articulate are those that see humanity as part of the web of life, recognizing that human flourishing depends on the ability of other forms of life to flourish, as well.

At the center of these rational and value-laden narratives should stand the value of care: the care for planet Earth, our shared home.[393] Environmental advocacy calls for sustainable practices, reduced consumption, new eating habits, linking sustainable agriculture and urban life, and use of science and technology to reduce human impact on the environment. All of these mitigating practices are part of an ethics of care that is endorsed by religious traditions (Christianity, Judaism, Islam, Buddhism, Hinduism, Jainism, Daoism, and indigenous traditions) as well as by secular environmentalists. Earth care is not merely feeling reverence and awe at the complexity of life, but being engaged in action that heals the wounds that we humans have inflicted on our Earth through carelessness, indifference, greed, and exploitation. Ethics of care is action-oriented, seeking to ameliorate what the race for perpetual "progress" and "innovation" has wrought. The Jewish tradition calls this ethics of care *Tikkun Olam*, a most useful construct for

393 This phrase deliberately echoes the language of *Laudato Si'*.

the Anthropocene.

To address the challenges of the Anthropocene, we need narratives of care: care about the physical well-being of the world, care about the spiritual well-being of humans, care about the future of our children and their descendants, care about all those who are different from us but who, like us, suffer from the harms of climate change, be it extreme droughts, destructive fires, or devastating floods. Caring for the Earth and its inhabitants is not narrow anthropocentrism, or specism, because it recognizes the interdependence and interconnectedness of humanity with the entire web of life and the physical conditions that give rise to life. But ethics of care does place the responsibility for the well-being of the world on human beings, and responsibility always entails recognition of limits. World religions have offered us the richest treasure of narratives of care, which we need to reinterpret in light of contemporary science, and Judaism, beginning with the Bible, offers the most influential narrative of Earth care. If we care for the Earth in our sacred narratives and in our deeds, we will ensure that our home will remain inhabitable for generations to come.

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Discussions

Each lecture was followed by a discussion. The first discussion (1) was an open microphone question and answer period following the first lecture on Friday evening. This discussion included people from the community who were not full conference participants. The organized and monitored discussion (2) of the material in the first lecture occurred on Saturday morning and was preceded by a breakfast in which discussions had already begun. The second lecture was delivered late in the morning on Saturday and the discussion (3) followed lunch and the students only session with the speaker. The final discussion (4) was an open microphome discussion, following the third lecture on Sunday morning. This included only full conference participants.

Participants are not identified by name. Unless stated otherwise, all responses are by Professor Hava Tirosh-Samuelson.

Discussion 1, Friday Evening

Topics considered in chronological order:

1. The Bible
2. Human as Animal Plus
3. Dominion over the Land
4. Rabbinic Judaism
5. Human Actor and God
6. Eco-feminism
7. Sustainability

1. The Bible

Question: When you use the word Bible, what canon are you including in that definition?

Response: Since I am Jewish, for me the Bible consists only of what Christians call the Old Testament. Jews not only do not consider the New Testament a canonic Jewish text, few Jews are familiar with the New Testament. There is a certain reticence and even discomfort about the New Testament although it was mostly written by Jews and it reflects a certain interpretation of Second-Temple Judaism. As a scholar of Judaism, of course, I would say that Jews should read the New Testament in order to understand the origins of Christianity. But given the complex and painful relationship between the two traditions, I fully understand why Jews feel discomfort and even a certain fear. In the relationship between Judaism and Christianity, the Bible was both the text that the two traditions shared in common, as well as the text that separated the two traditions and brought about polemics and suffering.

In the context of Jewish environmentalism, I refer only to the Old Testament, or as I prefer to call it, the Hebrew Bible. The differences between the Hebrew Bible and the New Testament in terms of the attitude toward the natural world have much to do with the changes during the Second Temple period, namely, the impact of Hellenism, the process of Hellenization, the emergence of eschatological thinking, among other transformations. The

attitudes toward the natural world and toward embodiment in the New Testament reflect all of these changes and more.

2. Human as Animal Plus

Question: Most religious traditions differ regarding what they expect their adherents to follow and what they expect everyone to follow. For example, Jews would not necessarily expect dietary restrictions to be followed by everyone. But there are certain things that most traditions would expect everyone to follow, just to be civil to each other. I am told, for example, that what you said about cruelty to animals is one of the few laws that in Judaism would be expected of everyone.

Response: That is correct. The prohibition on cruelty toward animals is among the seven Noahide laws,[394] which apply to all human beings. Another universally applied law is the prohibition to eat a limb taken from an animal that was still alive (Deut. 12:13). In other words, one may not tear a part of an animal and eat it. According to Judaism one is not even allowed to give the torn part to one's dog or to any other animal. The practice of tearing a portion of an animal while it was still alive was considered especially cruel so that the prohibition was designed to minimize cruelty.

The seven Noahide Laws indicate that Judaism presupposes universal morality obligatory to all humans and not only to Jews, precisely as you indicated. Universal morality, however, is rather minimalistic and basic, but Jews are obligated to follow many more commandments (a total of 613 according to the traditional account). Judaism is thus a particularistic tradition with universal message and the tension between the particular and the universal dimensions of Judaism functions as the axis around which the entire history of Judaism revolves. Some interpreters of Judaism highlight the abstract universal message of Judaism but without

394 The Noahide Laws are the Seven Laws of Noah. These are a set of imperatives which, according to the Talmud, were given by God as a binding set of laws for all of humanity

losing the particularity of the tradition, while others tend to focus more on the particularity of the tradition and ignore or minimize the universalizing message of Judaism. That dynamic creates a spectrum and where Jews position themselves on the spectrum is a matter of choice.

In terms of treatment of animals, I maintain that compassion towards animals is a very noble idea precisely for the reason that the rabbis already spelled out: treating animals with compassion helps cultivate the virtue of compassion in people.

As I will indicate tomorrow, when we speak about the natural world we must avoid romanticizing it. The natural world has predation, violence, killing, suffering, and the list can go on. In nature there is no compassion of one animal to another, but a struggle for survival. For that reason I do believe that human beings are not mere animals but animals with the capacity for morality and ethics that other animal species do not possess. We are an "animal plus." The "plus" in us means that we are not going to do to other animals what animals do to each other just in order to survive. Human life is not only about mere survival but about flourishing, and that requires a response to the question about what we ought to do as human beings. Our obligations to others, and ultimately to God, make our existence more than just a matter of physical survival, as is the case with animals.

3. Dominion over the Land

Question: Can you say more about the issue of the land? Specifically, when you were talking about the importance of the land and covenantal responsibility, I thought about the position taken by many Christian authors. When considering biblical and environmental ethics they focus more on the issue of dominion or stewardship, which relates to the land, but doesn't have the same connection to the land that you are considering. Can you speak further about the uniqueness of the Jewish experience of the land and how that might temper some of the emphasis on dominion that

we see in other places?

Response: So, the first question is how to interpret the biblical narrative of Genesis 1:26-28 that seems to command the human being to have dominion over the Earth. The relevant Hebrew words are '*reduha*' and '*kivshuha*' and there is a lot of debate about their meaning and scope.

> ***[NIV**: 26 Then God said, "Let us make mankind in our image, in our likeness, so that they **may rule over** the fish in the sea and the birds in the sky, over the livestock and all the wild animals, and over all the creatures that move along the ground."*
>
> *27 So God created mankind in his own image,*
>
> *in the image of God he created them;*
>
> *male and female he created them.*
>
> *28 God blessed them and said to them, "Be fruitful and increase in number; fill the earth and **subdue it**. **Rule** over the fish in the sea and the birds in the sky and over every living creature that moves on the ground."]*
>
> ***[KJV**: 26 And God said, Let us make man in our image, after our likeness: and let them **have dominion over** the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth.*
>
> *27 So God created man in his own image, in the image of God created he him; male and female created he them.*
>
> *28 And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth, and **subdue** it: and **have dominion over** the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth.]*

In the KJV these verbs were translated as "master" and "have dominion" but there is a big debate in the environmental literature, both Jewish and Christian, about the difference between mastery and dominion. Are they the same thing? Given my environmental proclivities, I say "No, they are not the same thing."

Mastery does not necessarily mean dominion. Dominion has a much more oppressive connotation, I would say. What is mastery? Well, I interpret it along the lines of ethics of care. And that is why I like the language of stewardship. But let us note that the word 'steward' is not in the Hebrew Bible but only in the Greek translation of the Bible. The Hebrew Bible envisions the role of the human as a gardener, one who takes care of the garden and a gardener is not identical with a steward because the word 'steward' has a managerial connotation.

In Genesis 2:15 we are told that God placed the Adam in the Garden of Eden "to till and protect it" (in Hebrew, *le-ovdah u-le-shomrah*). This task is not a managerial task but a caring and loving task. A gardener has to love the garden in order to care for it successfully. Therefore I interpret the stewardship language along the ethics of care more than along the ethics of managerialism.

By the way, when we move from Judaism and Christianity to Islam we find that in the Koran the metaphor of steward becomes a vice regent (*khalifa*). The term 'vice regent' has political connotations, reflecting the emergence of Islam as a polity. Personally, I find the domestic understanding of stewardship to be more appealing than the political understanding, but that is because I am not a Muslim.

This is as far as the biblical text is concerned. If your question concerning the Jewish attitude to the land pertains to the modern world, then you have Zionism in mind. I will discuss Zionism and the return to the Land of Israel tomorrow, but I can say a few words now.

Modern Zionism has a more complicated relationship to the Land of Israel because Zionism signified not only a return to the ancestral home but also a return to the origin of life, to the source

of Jewish life that promised to generate a new kind of Jew.

Since I was born in Israel, I am actually a product of the Zionist vision, ideology, and ethos. The "new Jew" that Zionism wished to create was going to be physically strong, courageous, fearless, resourceful and resilient, the very opposite of the traditional Jew who focused on study, commerce and trade. Zionism deliberately sought to forge a new kind of Jew, a non-rabbinic Jew, who would love the Land of Israel and whose livelihood would come from farming and agriculture. Zionist culture cultivated the love of the land through hiking and outdoor activities as well as through agriculture. Love of nature was inculcated through familiarity with the names of trees, plants, animals, and birds. We actually learned to love the land literally through our feet, namely by hiking it and being in tune with the rhythms of nature. The new Jew was supposed to be rooted in the land, its seasons, its flora and fauna, and attentiveness to nature is quite different from the traditional Jew who studied sacred texts and who saw nature as a symbol of divine activity. Zionism was a revolution in Jewish attitude toward the natural world, but the root of the Judaic understanding of nature lies in the Bible. The Bible was the justification of the Zionist project as much as it was the foundation of rabbinic Judaism which Zionist sought to transcend.

4. Rabbinic Judaism

Question: Is the rabbinic interpretation more of a period in history, or does the rabbinic interpretation continue today? And if so how does one keep up with it, if one is interested?

Response: The term 'rabbinic Judaism' is indeed ambiguous. It refers to the Judaism of the rabbis which developed at a particular time and place (from the first to the seventh centuries) as much as it refers to a particular worldview, sacred texts, hermeneutical procedures, and rituals. In the latter sense, rabbinic Judaism is still ongoing and will continue to exist in the future because of ongoing process of interpretation. And interpretation is precisely always

a process that does not reach a termination point. The rabbinic process of interpretation produced Jewish Law (in Hebrew, Halakhah) and that legal process is still ongoing as Judaism responds to contemporary challenges.

The main question in Judaism is: who has authority? Which interpretation has authoritative status? Legal authority can always be contested and must always be understood within a given historical and cultural context. In the Middle Ages Judaism generated two main legal sub-cultures: Sephardic Jewry and Ashkenazic Jewry.[395] Each of these sub-cultures had its own legal traditions, authoritative interpreters, and distinctive rituals so that when Ashkenazic and Sephardic Jews encountered each other, due to forced and voluntary migrations, there were considerable tensions between them as legal differences had to be sorted out.

In the modern period diversity is the norm, resulting not only in different strands of Judaism but also in great variations within a given strand. The authority of one rabbi can be challenged by the authority of another rabbi and it is up to the individual Jew to determine which rabbi is accepted authoritative. Rabbinic authority is always contested, and that diversity and plurality of interpretations, in my view, contribute to the greatness and creativity of modern Judaism. Rabbinic Judaism is a profoundly non-dogmatic religion, because the interpretative process is open ended; one can always reinterpret the text anew. That can be seen as either the strength or weakness of the tradition, but I see it as its strength. The open-endedness of the Jewish tradition makes it difficult to define heresy, and Judaism does not have a legal or political mechanism to impose a given definition of heresy.

395 Sephardic Jews literally means "Jews of Spain," but the term covers more broadly the Jews of the Spanish diaspora in North Africa, the Ottoman Empire, and the Middle East. Ashkenazi Jews refers to the Jews of the Holy Roman Empire, and the biblical name Ashkenaz was taken to be a reference to Germany. Ashkenazic Jewry consists of the Jews of medieval Europe who lived in France and Germany and later in Poland, Central Europe, and eventually Eastern Europe.

Tomorrow I will discuss Moses Maimonides (d. 1204) who was the first Jew to articulate the Thirteen Principles of Faith, or dogmas, that Jews must affirm. Maimonides' list of thirteen dogmas was an innovation because he identified the beliefs that Jews are legally obligated to maintain, whereas the rabbis had no such list. However, Maimonides list of thirteen dogmas was challenged and other rabbis offered different lists of obligatory dogmas. Rabbi Hasdai Crescas (d. 1410) listed six dogmas of Judaism whereas Rabbi Joseph Albo (d. 1444) identified four obligatory beliefs. The lack of agreement about the number of obligatory dogmas indicates that in Judaism dogmatism is problematic. Put it differently, Judaism is a non-dogmatic tradition because the gates of interpretation are never closed; the process of interpretation is always ongoing.

5. Human Actor and God

Question: This is more of a clarification than a question. Are you saying that God's instruction, or the covenant that he makes with us, keeps the earth healthy. Or are you saying that our actions keep the earth healthy?

Response: That's a very good question. Theologically speaking you are asking, "Who has agency in nature, God or humanity?" I would say both are involved. In the Judaic worldview the human has agency but the human is not an active agent in a vacuum. Rather, human action stands in relationship with God and with divine action.

This point is evident in the logic of blessing which traditional Jews utter numerous times a day in various circumstances. There are blessings over food, there are blessings over natural events, and there are blessings over various human activities. What is the logic of a blessing? A blessing is a verbal utterance in which a person says something in recognition of God's involvement in various processes or activities. The act of human blessing sanctifies natural activities, products, or events and that in turns activates a response from the divine. Saying a blessing over bread, fruits, rainbow, trees, or storm

and many other things recognizes divine agency and involvement in the natural world and thereby makes endows the natural event with additional meaning.

So, who is the agent, God or the human? I would answer that it is the interaction, or the relationship between the divine and the human that operates here. Judaism highlights the importance of relationship or relationality; that is the very meaning of the concept of covenant and it was applied to the Land of Israel. The fecundity of the Land of Israel depended on the relationship or the interaction between the People of Israel and the God of Israel. Put differently, the way Israel responded to God, namely, the quality of the relationship between Israel and God manifested itself in the fecundity of the Land.

This biblical way of thinking could be challenged by asking about natural conditions. Do natural conditions exist independently of God, or is God the cause of all natural conditions? The Judaic answer is that ultimately God is the cause of all natural conditions because God is the Creator of nature, but that is ultimately speaking. Created nature is not autonomous but neither is nature identical with God.

Tomorrow when we talk about Maimonides you'll see how he explained that God, the ultimate cause, works through intermediary causes which we consider part of "nature." The key point of the doctrine of creation is to recognize both God and the natural world: God does not exist alone, but as Creator of a physical world that is other than God. God created a world that includes all sorts of creatures, the most important of which is the human being. The existence of a world other than God indicates that God needs the created world no less than the created world needs God. In other words, the doctrine of creation is all about relationality. This is a good question that requires a more profound answer than I can give at this point.

6. Eco-feminism and Vandana Shiva

Question: You mentioned the connection between restoring our relationship with the poor and marginalized, and restoring our relationship with the environment. Recently there has been a big push toward intersectionality[396] in approaching a lot of these issues. I would be interested in your take on Vandana Shiva[397] and the eco-feminist movement. Do you have any thoughts on them?

Response: Yes, actually I've written on Judaism and ecofeminism and I will be glad to give you the precise reference. Perhaps you could tell people who Vandana Shiva is, since not everybody is familiar with her name.

Question: Vandana Shiva is an Indian woman who pushes for equality of agricultural practices. She takes action against large seed corporations and patenting of genetic technology because she believes that poor farmers are marginalized. Most women are marginalized by some of these practices.

Response: That is a nice summary of her environmental activism. But let me say more generally where I stand vis-à-vis ecofeminism. If you read my essay, you will see that I try to take a middle position.[398] Ecofeminism does not come in one form and there are several variants of ecofeminism as much as there are several variants of feminism.

To those of you who are not familiar with ecofeminism, the term was coined in 1973 by French feminists. Ecofeminism began as an internal critique of environmentalism. Ecofeminists stated that we cannot address any environmental issue without looking at the role of women. But how ecofeminists understand the role of women vis-

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396 The interconnected nature of social categorizations such as race, class, and gender as they apply to a given individual or group, regarded as creating overlapping and interdependent systems of discrimination or disadvantage.

397 Vandana Shiva is an Indian scholar, environmental activist and anti-globalization author.

398 Hava Tirosh-Sanuelson, "Religion, Ecology and Gender: A Jewish Perspective," *Feminist Theology* 13, no. 3 (2005): 373-397.

à-vis the natural world is open to interpretation and debate.

The more radical (or left leaning) variants of ecofeminism are those who define themselves as Earth-based spirituality or Goddess religions. Carol P. Christ[399] is an example of this type of ecofeminism. Philosophically she is most inspired by Process Philosophy and theologically she is post-Christian, although I am not sure that she would call herself post-Christian. She sees herself as a critic of the Judeo-Christian traditions and in her thealogy (sic!), as she calls her own way of thinking, female spirituality differs from male spirituality, precisely because it is nature-based or earth-based.

In my view Judaism cannot go that far because the doctrine of creation posits transcendence and highlights the ontological difference between the Creator and the created world. Earth-based ecofeminist spirituality has influenced some Jewish environmentalists who are seeking to articulate an "Earth-based Judaism." The organization Wilderness Torah is an example of that trend. But most Jewish environmentalists do not go as far and they are not influenced by ecofeminists who promote goddess religion.

Let me say a word about Jewish women and ecofeminism. Some ecofeminist scholars, for example Gloria Orenstein and Irene Diamond are Jews by birth but ecofeminism is not a Jewish movement.

An important contributor to ecofeminism is Starhawk who was born Jewish and whose birth name is Miriam Simos[400]. She is regarded by many as the priestess of earth-based spirituality, but her ecofeminist spirituality is not informed by Jewish concepts, terms, rituals, or ethos. In my view Starhawk's earth-based spirituality, like other forms of goddess religion, is a direct critique of Judaism and even an attempt to replace Judaism (or Christianity) with something else because the Judeo-Christian tradition appears to

399 Carol P. Christ (PhD Yale University) is a teacher and author. Her essay "Why Women Need the Goddess," argues that there was an ancient religion of a supreme goddess.

400 Starhawk (born Miriam Simos) is an American writer known as a theorist of feminist Neopaganism and ecofeminism.

be environmentally sinful. Jews by birth can be part of earth-based spirituality but their practice cannot be considered Jewish. It is more accurate to see it as neo-pagan and Neo-Paganism is thriving today in America as well as in Europe. There are today Jewish environmentalists who promote Earth-based Judaism but this is quite different from Earth-based spirituality of Starhawk.

Another strand of ecofeminism is influenced by Social Ecology, which was in fact created by a secular Jew, Murray Bookchin (d. 1976). We have feminist social ecology people like Karen Warren and Janet Beale. Janet Beale was the partner of Murray Bookchin, the father of Social Ecology. Murray Bookchin was Jewish, a communist, and an incredible character. Bookchin's background and political orientation is quite similar to Bernie Sanders. Many of the progressive ideas of Bernie Sanders were voiced by Murray Bookchin already in the 1960s and early 1970s. Social ecology and its interest in justice and equality is compatible with the ethos and values of Judaism. So one can be a traditional Jew and espouse a feminist Social Ecology. In this regard Judaism and ecofeminism are compatible.

However, Social Ecology is a secular outlook that makes no reference to religious concepts such as covenant, revelation, or creation. For this reason Social Ecology does not accommodate the religious outlook of Judaism, although one can give Social Ecology a more Judaic interpretation. Put differently, it is possible to interpret Judaism in light of Social Ecology and that is precisely what Arthur Waskow, an important Jewish environmentalist, has done. I will discuss him in my third lecture tomorrow.

7. Sustainability

Question: I too learned to love the land by hiking. And only lately have I begun to think of the generation of our students and the generation after them. So how do we impart the love of the land to future generations of students who are not used to hiking? I am sure you would have something to say about that, too.

Response: Thinking about future generations is the core of the notion of sustainability. Sustainability means that we have to judge our present practices through the lens of their impact on future generations. Anyone who has encountered the evidence of environmental degradation cannot but think about sustainability; certain practices are simply not sustainable because they undermine future capacities. I encountered this most potently in a trip to China when environmental degradation and pollution are rampant.

Now one does not have to go all the way to China to experience mass scale devastation of the natural environment. In Globe, Arizona, where there is a lot of copper mining one can see horrendous destruction of the land due to mining, and of course there are many other parts of the United States where industrialized mining and mineral extraction have caused massive environmental degradation.

Here we have a genuine conundrum. Can we do without mining? Not really. We need the precious metals we extract from the earth for many industries and human endeavors. So how are we going to reconcile the need for mining and the conflicting need to protect the environment at the same time? That is the conundrum of environmentalism and that is why the concept of sustainability is so pertinent.

The concept of sustainability entails that we modify what we do in the present in light of future generations. We need to ensure that future generations will have enough to live on and that the natural resources of the world (water, air, soil) will be available for use in the future.

Let's take water for example. In many parts of the world, especially in Africa and Asia, there is either severe water shortage or water is not potable; it is not safe to drink. Similarly the quality of air has greatly deteriorated due to pollution, and China is a prime example. Without water and air all forms of life are going to become extinct. There is also great decline in the quality of the soil in many parts of the world which makes the land infertile. The more attentive we become to environmental degradation that makes life

(including human life unsustainable) the more worried we should become. Many of our practices are unsustainable because they undermine the possibility of life in future generations. This earth of ours, this beautiful place, will not be able to sustain the people who are and who will be on it, and we should remember that their numbers are going up. So we now live at a time when the prospect that the Earth will become uninhabitable is not a science-fiction scenario but a concrete reality.

Overpopulation is a serious environmental challenge and we definitely need to think about it while recognizing that people will disagree about population control. But we are getting to the point in which we are not going to be able to sustain all the people on the earth. Obviously, the notion of sustainability requires us to think about other issues as well, such as quality of life and the level of our consumption. We are definitely consuming too much because we are too greedy and we live a very wasteful life style. Our list of environmental sins is very long indeed and we need to acknowledge them. The more we think about the environment in terms of our guilt and our inability to really do what is right we may become awakened to some kind of a moral response and take on more responsibility toward future generations.

So, yes, I am very concerned about what will happen in the future, and therefore I am very happy that students are attending these lectures, because it is going to be their job to figure it out for the next 50 or 100 years.

Discussion 2, Saturday Morning

Topics considered in chronological order:

1. Truth through Dialogue
2. Truth in Community
3. Truth and the Text
4. Good and the Holy
5. Agriculture and Grounding
6. Hospitality of God
7. Sabbatical Year
8. Technology, Geoengineering, and Transhumanism
9. Emmanuel Levinas and Absolute Other
10. Free will, Mystery, and Error
11. Levinas' Philosophical Focus
12. Ethics without God

Greeting from Hava: Since today is Saturday, let me open this session by saying *Shabbat shalom*. All of us in this conference are not working today, but instead we listen to each other, explore ideas together and learn from each other's contribution. It has been a real pleasure to be with you so far, and I have as much to learn from you as you from me. Some people in this conference know a lot about things I don't know much about, so I think this would be a wonderful occasion for all of us to learn together. With this in mind let's start with the first question.

1. Truth through Dialogue

Question: It became apparent to me at the end of last night's lecture, when Hava was describing Judaism as a dialogue, that this is very much Mennonite-ism. We actually try to pretend that we are a biblical people, and therefore rooted in the Bible. But the discussion constantly goes on as to what that really means. Is someone able to formulate anything along those lines?

Response: (Professor of Religion, Goshen College): I think I know what you are getting at. One of the contrasts that I see is that the dialogue in Judaism seems to have become the *modus operandi* for doing theology and of course ethics. Our *modus operandi* was rather formally confessional, or at least not creedal

Often in the way I experienced it in my home church growing up was similar. There often was an authoritative word that had to do with power structure. But the way it was actually lived out and adjudicated could be something different, depending on circumstances and so forth. So, I see parallels between Judaism and the Mennonite tradition. It could be that some of our Adventist friends would say the same thing.

There is something about being part of a community, a confessional community, that shapes the way you live, shapes the way you extend grace, and adjudicates rules and so forth. So I think we are going to find, or at least feel, a sense of continuity, or connection, parallel with the Jewish experience. I felt that for a long time. I have for a long time envied that tradition of an intergenerational conversation like you find in the rabbinic sources. And I think we are feeling the lack of something like that now in our own tradition, where we have a very hard time talking with each other, when we disagree on important points.

Response (Hava)**:** I am not sure that I have much to add to these comments except, by making a reference to my own experience of growing up in a kibbutz in Israel. The kibbutz was an intentional community with a strong ideological commitment. It was a utopian experience, probably one of the most successful utopian experiences in history, although assessing whether it was a success or a failure is rather complicated.

The kibbutz in which I grew up had regular assemblies of the members in which various issues were discussed and hotly debated. These assemblies could be very, very contentious and tempers did flare in them. So the challenge for any intentional community is how to have a conversation among people who hold different and

conflicting views without violence among the interlocutors. All people who live in intentional communities have to learn to listen with respect to the voices of the tradition and allow all those voices to come together in a kind of a symphonic structure. How to live with people whose views are fundamentally different than your own is a real challenge, because one cannot say, "it's either my voice or your voice, and we cannot both be right."

As an intellectual historian, I accept and respect the various voices of the past and listen to all of them, without deciding who is right and who is wrong. In our own individual lives, each of us has to decide for himself or herself how to go about daily life, how to raise a family, how to interact with others, how to face challenges, and how to prepare for the future. In any community and any society it is better leave a lot of room for pluralism, for multi-vocality, and for a variety of perspectives, although that is easier said than done. Allowing for diversity and plurality of views is hard to do because it requires us to accept difference and otherness, in a faith community, a tradition or a society.

2. Truth in Community

Question: There is an important tension that we all live with in the church community. There are mechanisms for talking with each other, but we are always searching for Truth with a capital T. Many of us as professionals, as academics, and as historians have been able to give that up. And we can deal with small "t" truths. If you are still part of a community of faith, however, that doesn't seem to be enough. It even seems offensive. We need to maintain a sense that there is a capital T Truth out there that we are all striving for. At what point do you have to give up the small "t" truth and seek Truth with a capital T?

Response: I don't give it up actually. I referred to it last night when I said that the capital T Truth belongs to God, not to humans. By definition, since the world and everything in it are created, everything is finite, imperfect, and incomplete. This is especially

true and is directly experienced on the human level. That means that error, uncertainty, and imperfection are always and necessarily part of the human experience. If we begin our pursuit of truth with that sense of incompleteness, then humility sets in. People go wrong because they forget about humility and instead they think, "I have the truth. Therefore it must be either you or me. And if you are not agreeing with me I am going to take care of it sooner rather than later." And that is when we become aggressive, intolerant, and violent. To be truly tolerant and be able to coexist with others, one has to give up on the illusion or the ambition of owning the Truth with a capital T, since it does not belong to us. In theological language, I derive epistemic humility from the doctrine of creation, which is so central to Judaism.

The belief in creation is inherently related to the belief in the coming of the messiah. As I understand Judaism, we all live in the pre-messianic era. That means that the kingdom of God is not yet here; it is yet to come.

Thus Jews necessarily live in the "not yet." Living in the "not yet" means that you live in an open ended time. It is always open to the future and you don't know what the future will bring. This in my view is the fundamental difference between Judaism and Christianity: since Christianity assumes that the Kingdom of God has come, whereas Jews are living in expectation for it.

What does it mean to live in the world that is already redeemed but, as we know, continues to be imperfect? How can we be in a redeemed world that is also an imperfect world? These are questions that Jews can pose to Christians. These questions are not pertinent to Jews because Judaism holds that the world has not yet been redeemed. Personally I too live with the sense that this world is inherently imperfect and this is only penultimate reality; by definition we do not live in the ultimate and we cannot experience the ultimate. Existentially and theologically living in the "not yet" makes a lot of sense to me and I consider it preferable to living in a world that you consider to be perfect or redeemed. But

my judgement arises from the fact that I see the world through the lens of Judaism.

3. Truth and the Text

Question: It is true that we as Seventh-day Adventists struggle with the same challenge of unity and diversity. The conflict is no longer just between our community and other communities, but within our community. I find what you said last evening about the role of texts in this process interesting. Even though we don't all agree on how to interpret the text, we all agree that the text is normative. Can you comment on how texts function in terms of preserving unity, and why they should have that function, because they seem to function that way in our community as well.

Response: Yes, Judaism is definitely a textual tradition. As those who are close readers of the texts know there is never only one possible reading. The richness of the text is the capacity of the text to contain, to sustain and to generate multiple readings and multiple meanings. One does not have to be a religious person to appreciate this point. This message is very relevant to secular Jews, especially those who live in Israel. There is a lot of animosity between secular Israelis and very observant Jews (especially the ultra-Orthodox among them) and I find that a very unfortunate state of affairs. Secular Jews no less than observant Jews are part of the Jewish textual tradition and the Bible is relevant to all Jews as the foundation of that tradition. Secular Jews must relate to the Jewish textual tradition since the Bible is the very textual justification for the Jewish presence in the Land of Israel. Now, like geology a textual tradition is very layered so all Jews, no matter how observant or non-observant they are, should understand the various layers of the Jewish textual tradition and stand in some relationship with it.

The power of the Judaic tradition lies in its numerous layers and in the process of interpretation (in Hebrew, Midrash). That's why I don't believe it will ever go out of existence. As a textual

tradition Judaism is inherently strong because it has the capacity to respond to changing conditions. This is one reason why the Jews are still around whereas other nations from the ancient world are not around. Why is that? Well, it is the power of the text to provide meaning and to frame every changing human existence.

If the Jews did not have Torah, and if they only had the Temple, and if we only were a sacrificial cult, Judaism would have ceased to exist when the Temple was destroyed. But after the destruction of the First Temple, the textual tradition began to emerge as canonic text and after the destruction of the Second Temple, the canonic tradition was finalized but the process of interpretation continued. In other words, in Judaism the ongoing textual interpretation provided continuity, coherence, and meaning for the Jews who remained loyal to it. The same dynamics can be seen after the Holocaust, in which the Nazis determined to annihilate the Jewish People but failed. As horrific as the Holocaust was, it did not destroy Judaism. Why not? The answer lies in the capacity of the Jews to respond to traumas through the process of interpreting their own sacred texts. So textuality is the secret of Jewish longevity, perpetuity, and diversity.

It is important to understand that the Jewish textual tradition is by no means parochial, since Judaism has always been in conversation with other civilizations, cultures, and traditions. So Jews in the past and in the present can read Muslim texts, Christian texts, and Hindu texts and try to make sense of them, even though these are not indigenous to their own tradition. But for a practicing Jew, non-Jewish texts do not have the same existential meaning as Judaic texts. When one lives in a textual tradition one relates first to those texts that are considered canonic and authoritative since these texts shape who we are as members of the textual tradition. For me that means starting with the Bible and becoming aware of the long and complex history of biblical interpretation. To live within a textual tradition means that certain texts belong to us, they are ours in an existentially meaningful way. But living in a textual tradition necessitates the process of interpretation. In Hebrew

that process is known as Midrash. It comes from the verb, *lidrosh* that means to seek out, or to seek out meaning. So, the midrashic perspective is what the Jewish mindset is all about. To be Jewish means to go out and seek the meaning of the textual tradition. The Midrashic posture means that one never stops with an answer, but rather keeps asking questions. The Jews are a questioning people, if I may say so. And as long as Jews pose questions the Midrashic process remains open ended, there is never a point in which one has all the answers, let alone all the true answers. Only God has all the true answers, but we, humans, have to stay only with the questions.

4. Good and the Holy

Question: Last night I think I heard a distinction between good and holy.

Response: Correct.

Question: I believe, you suggested that what makes something holy has to do with our cooperating with God. And in the discussion about land I heard that some land is made special by God and given to us. How does the concept of holiness drive what is going on in environmental ethics?

Response: Let me try to unpack your question a little, since in fact it consists of several questions, and explain how it relates to the issues of environmentalism. Let's start with the good versus the holy. In Hebrew word for 'holy' is *kadosh* and the Hebrew word for 'good' is *tov*.

The notion of holiness (in Hebrew, *kedushah*) is open to diverse interpretations. In this discussion we are most concerned about the holiness of the created Earth and the holiness of the Land of Israel and these issues could be approached historically and theologically. Historically one could study the development over time of Jewish attitudes toward the Land of Israel, theologically the issue is whether the created physical world is inherently holy or whether it becomes holy through human actions.

These are complicated issues that cannot be summarized here. However, I would like to note that in the biblical narratives of creation in the Book of Genesis do not invoke the term 'holy' and do not say that Earth is holy or that the physical world is holy. Rather, the biblical text states that after each day God looked at what was created as "saw that it was good." The biblical text does not say that God saw it was holy. In other words, the dry land (in Hebrew, *yabashah*) or the Earth (in Hebrew, *adamah*) were not declared to be "holy" after they were created by God, but they were deemed to be "good." I take that to mean that according to Genesis the created world is not inherently holy but that holiness is conferred on it through human activities.

If so, what is holiness? How does something physical become "holy"? I think holiness has to do with endowing a certain place with distinctiveness, with separateness. Holy is always connected to the separate. And holy is that which shouldn't be touched. Holy is that which should be left alone.

The adjective 'good' is something else; it is an internal quality The word 'good' is also ambiguous but I think that in the context of creation narratives, the word 'good' has to do with proper functioning, with integrity, perhaps even with beauty. When the narrative tells us that God saw that what he had created was good, it means that God was satisfied with the quality, functioning, and integrity of creation, very much like an artist who looks at his or her creative work and knows that it has reached completion. To recognize the goodness is different than to recognize holiness, because goodness does not entail separateness or otherness. As Rudolph Otto has explained long ago, the holy captures the notion of the numinous, which is about power, awesomeness, and mystery. Encounter with the numinous is frightening as much as it is simultaneously both attractive and overpowering. You don't do business with the holy on a daily basis. The holy cannot become ordinary and must be that which remains separate. If this is the case, it is obvious why it is better to recognize the created world as 'good' rather than as 'holy.'

The word is also a moral category that applies to human actions and intentions. The Bible (and rabbinic Judaism thereafter) recognized the complexity of being human since human beings are capable of doing good and bad acts, to have good and bad intentions. I find the Judaic approach to be very astute, emotionally, psychologically and existentially. We are indeed capable of doing horrible evils, as the 20th century has amply proven. And because human beings are capable of horrifically evil acts, they need something that will control them, something that would channel them, something that would make it possible for humans to live with each other despite the fact that humans are very destructive and even cruel animals. I am not a biologist but I venture to say that within the animal kingdom human beings are probably the cruelest of the animals because they torture their own kinds in numerous ways.

I was told once about a pack of wolves that killed 160 elk and the pack did it just for fun. I do not know if this story is factually true, but it seems to me that it is not analogous to what human beings do, because humans kill and torture members of their own species, whereas inter-species violence is something else. Human beings, of course, do not only kill and maim other humans; they are also able to make moral choices that other animals cannot make. The ability to make moral choices, to listen to commands that conflict with our instincts, is the source of morality by which human beings are different from all other animals. The task of morality, or the task of ethics, especially the ethics of responsibility that I spoke about last night, is to curb the human capacity to do evil. The moral law does not eliminate the capacity for evil, because we are created with that capacity, but the moral law enables us to be good rather then be holy.

Now let's take these distinctions and apply them to the land. The Land of Israel is regarded in Judaism as Holy Land (in Hebrew, *eretz ha-kodesh*). To my knowledge (though perhaps other historians of Judaism would have a different understanding), the emphasis on the holiness of the land developed only in the Second

Temple period and did not exist during the period of the First Temple (10th century BCE to 586 BCE) The holiness of the Land of Israel was especially accentuated during the Roman period and especially among Jews who resisted the Roman control of the land. After the fall of the Second Temple in 70 CE the rabbinic movement deepened the holiness of the Land of Israel because Jews lost control of it. Because the Land was now occupied and politically controlled by non-Jews, or more precisely by idolaters, the land was viewed as holy and not only as good.

How does all this relate to environmentalism? Here I offer a speculation that could be viewed as a kind of environmental hermeneutics. Anyone who is familiar with the environmental conditions of the Land of Israel is aware of the danger of desertification and the constant threat of draught. That means that farming in the Land of Israel is always challenging because of human reliance on rain and dew. The Land of Israel has one main lake, the Sea of Galilee, but in recent years that natural resource has been greatly depleted due to low precipitation and over utilization. Without getting into water management in Israel, let me say that the precarious environmental conditions require people who live in the Land of Israel to be attuned to nature and to see connection between human activities and the wellbeing, or goodness, of nature. This is true in the remote past as well as in the present. Framed in religious terms, this view means recognizing the causal connection between observing divine commands and the fecundity of the land, as I discussed in my first lecture. This idea can be interpreted less theologically and more ethically by saying that the moral quality of our society determines whether it would thrive or collapse. My point is that the precarious natural conditions of the Land of Israel demand attentiveness to natural conditions. Such attentiveness is probably harder to come by if one lives in a very lush environment.

5. Agriculture and Grounding

Question: In the Old Testament Moses gave Israel a number of laws concerning treatment of the land. At that time most of the people would become farmers and land owners. But in the middle ages Jews were prohibited in many places from owning land. How did they consider these laws? How were they to still remain faithful with respect to God's creation? This seems especially applicable today in developed nations in which a high percentage of people are not farmers.

Response: I want to be sure that I understood your question accurately. Yes, in the Middle Ages Jews basically were not land owners. In Christian Europe, especially in Spain, Jews were actually given what you can call land grants, which were like leasing arrangements. This was part of the colonization of Christian Spain over Muslim territories during the twelfth and thirteenth centuries. But even in Spain Jews were not farmers and did not live off the land. Instead, Jews made their living from trade, crafts, and finance and from the twelfth century onward Jews were forced to concentrate in moneylending. The disconnect between Jews and land cultivation might explain why in the Middle Ages the Land of Israel is viewed more than ever before as a Holy Land and a Promised Land. In the Jewish religious imagination the value of the Land of Israel went up in the Middle Ages, while the Jews did not live there and the two other religions, Christianity and Islam, were locked in a perpetual battle for control of the Land.

The centuries of exile developed in the Jewish psyche the dream and passionate desire to return to the ancestral land. For religious Jews this was justified by saying that only in the Land of Israel the land-based commandments of Judaism can be observed. Thus, return to the ancestral land entailed closeness to God. Yet, this religious dream would become a reality in the 20th century when Zionists translated it into action, negating the traditional Jewish reliance on divine activity and the expectation for the messiah.

Question (continued): I guess your moral basis in an agricultural

society is how human tenants of God's land take care of the land and give back to God. But then when you take agriculture away from what most people's occupation is, how do people then relate to it? How do they relate to the earth, how do they treat it?

Response: This is a good question that recognizes a real problem. Environmental sensibilities emerge in an agrarian society where livelihood depends on agriculture. The shift to commerce and trade brings about a certain distancing from the natural world. This happened for Jews first in the orbit of Islam and later in Christendom. After Islam came to power and conquered the Middle East, Jewish farming became difficult because of special land tax and poll tax imposed on non-Muslims. Farming and agriculture became untenable and as a result Jews moved into commerce, trade, finance and all sorts of other professions and crafts. This was described by the great Jewish historian of medieval Jewry in Islam, Solomon Dov Goitein, as the "bourgeois revolution," which removed Jews from land cultivation and created a certain distancing from the natural world.

From a Zionist perspective, this was not a good development because Jewish exilic existence generated all sorts of social ills. The Zionists who realized the dream of the return to the Land of Israel valued agriculture and farming as ways to revitalize Jewish life precisely because farming and agriculture will make Jews grounded, or rooted, in nature. This was very much the ideology of the kibbutz movement.

Having been born in a kibbutz I am very partial to farming. I think there are wonderful things that come with the possibility to farm and the life of farming. Although farming should not be romanticized, I do lament the fact that modern society denigrates and devalues farming in comparison to industry. Farming is dismissed because it is presumably "primitive" or "backward" whereas industry and commerce are hailed as marks of "progress," economic development and opportunities. But we all know that farming has many virtues and that all human societies depend on

farming and agriculture for their survival. Moreover, economic development and "progress" often brings with them numerous social ills (e.g., social stratification, exploitation, fragmentation, alienation, etc.)

How to integrate economic development and traditional farming remains a challenge. This issue is hotly debated in Islamic societies in Asia, Africa, and the Middle East, where Muslim environmentalists bring attention to the fact that the Islamic civilization has its own unique farming traditions that are much more respectful of the land than modern Western practices. Islamic environmental organizations show the relevance of traditional Islamic beliefs and attitudes as well as the wisdom of traditional practices of land cultivation. The same logic is evident among religious Jews who wish to revive ancient environmental practices such as the Sabbatical Year in direct critique of modern agriculture practices. Jewish and Muslim environmentalists hearken back to the past because they recognize the ecological or environmental wisdom of many traditional practices which were indeed more sustainable than industrialized agriculture.

Agriculture today is done on an industrial scale, which is antithetical to traditional farming methods and practices. Agriculture in the ancient world, recorded in the Bible, is very different from modern agriculture but the industrialization of agriculture comes with a heavy price.

The history of the Jews offers a particular tale of the harmful disconnect between people and land, but that tale is now evident in many societies all over the world. Today when societies are governed by transnational corporations, characteristic of Late Capitalism, and by technology, many communities are going to lose their connection to the land. On the whole I think we are alienating ourselves from the land, from being rooted in a place and the rhythms of nature and all this is to our detriment. Contemporary life is technologically saturated and that means that people, including children, live with no regard whatsoever to the natural cycles around us. We live with artificial light that enables

us to do business 24/7; we communicate digitally with people who live thousands of miles away, which enables us to work around the clock with no regard to time or place. Is living like that a good idea? I do not think so, but that is the nature of work today.

I think that as people who come from the Mennonite tradition or the Amish tradition you probably understand all this better than I do. You are probably much more connected to the land and to agriculture and to the natural cycle of things than most people in America. It seems to me that we have lost the connection with the rhythm of nature and that are we are paying for it in all sorts of ways. The environmental movement reminds us of the value of being connected to nature, of respecting nature, and of recognizing that nature is essential to human vitality. The environmental movement wishes to see us rooted in nature.

Whitney Bauman, who is a very important contributor to the religion and ecology discourse, titled his book about this field of study *Grounding Religion: A Field Guide to the Study of Religion and Ecology*. That is a very appropriate title because it reminds us that we need to be more grounded, more attuned to natural processes and more attentive to our local, physical environment. Our life has become driven by smart machines, computers and automated systems that move us away from our natural environment and lead us to believe that we are not dependent on it. I have written extensively and critically about technology, especially the ideology of transhumanism that worships and promotes rapid technological change. There is a connection between my anti-technology posture and my pro-environmental posture; they are actually two sides of the same coin.

6. Hospitality of God

Question: This discussion reminds me of a book I read some time ago called *Guests of God* by Monika Hellwig, who was a Georgetown theologian.[401] In this small volume she describes God as offering

401 Monika Hellwig, *Guests of God: Stewards of Divine Creation* (Mahwah, NJ:

hospitality, being the host, and people, as being the guests. She discusses the responsibilities and the benefits that come from that. I don't remember details right now, but it is a wonderful book, and it is set up for small group discussions, also.

Response: Thank you for the reference. I am not familiar with the book but I like the ideas you have summarized very much. I think that Derrida[402] actually has published sustained reflection on the notion of hospitality, in which humans are guests in a world that doesn't belong to them.

Since we are all created beings who live finite life, all of us are here temporarily; we are indeed no more than temporary guests.

Let's talk about the metaphor of the guest. You come as a guest to a house or a room that is not yours. You stay in it for a short duration and then you leave. How should you leave the room that was given to you to be used for a short duration? You have to leave it in the same way you got it. Well, if we apply the metaphor to human relations with planet Earth, that's not what's happening right now. We are leaving the Earth in a much worse condition than what we got. If we continue to behave in that way, human destruction of the natural world will only get worse in the future. In other words, we are on a very dangerous trajectory that threatens the future of human existence as well as the future of life on Earth.

Our environmental challenges are most serious and they were all brought about because of destructive human behavior. These challenges include not only loss of biodiversity, pollution of air, water, and soil, but also extreme weather events that will cause massive displacement of people. In the next 50 years we will have to cope with millions of environmental refugees who will be forced to leave their homes due to destruction by rising sea levels, hurricanes and tornadoes, or prolonged droughts. How is the world going to cope with environmental refugees? How will we take care of people

Paulist Press, 199).

402 Jacques Derrida (d. 2004) was a French philosopher. He was one of the major figures associated with post-structuralism and postmodern philosophy. In his later writings he addressed ethical and political themes.

who are forced to leave their homes because the land is no longer inhabitable? These prospects are very real and they pose religious demands on us. If we learn to see ourselves as guests and the land as our host, we would make sure that the land remains hospitable, that is to say, that the land remains inhabitable.

The notion of hospitality offers us positive models for human-nature relations. If we are but temporary guests in this world, this world is given to us as a gift that does not belong to us. As guests we need to return this gift to its rightful owner in as good condition as possible. I agree with you that if we adopt this ethos, the ethos of hospitality, we could change the way we relate to the world. The dominant ethos, however, is not one of hospitality but an ethos of greed, of exploitation, and of perpetual development. This mentality shapes our economics, our politics, and our culture and it stands in contrast to the deepest values of our religious traditions. We need to speak up against this destructive mentality and environmentalism redirects our attention to the deep values of our respective religious traditions. This is not to say that environmentalists are right about each and every issue. Of course not! Environmentalists have their own limitations, their own sins, their own destructive politics, and their own power struggles. Nonetheless, environmentalism is the right response to our contemporary problems, because it addresses our profound social ills and existential challenges.

7. Sabbatical Year

Question: I want to bring a little bit of hope. I know that industrial agriculture is surrounding us and that is depressing. But people are waking up to what we are doing to the soil and to nature. If we start with the sabbatical year how is it done? Is it possible to do this with today's conditions, to rotate so that every piece of land may take a sabbatical, but not in a unique sabbatical year?

Response: That is a terrific question, since the sabbatical year has become a major model for religious environmentalists in Israel. You are absolutely right: implementing it in practice is very

difficult. It may be doable on a small scale, as you suggest, but it is not practicable for an entire country, since it is impossible to stop agricultural activity for a whole year. That point was made by the ancient rabbis who profoundly changed the laws of the sabbatical year in order to accommodate the new economic conditions in the Greco-Roman world. Hillel the elder instituted the *Prozbul,* addressed a major problem of the Sabbatical year

The laws of the Sabbatical Year pertained not only to cession of land cultivation but also to debt forgiveness. The *Prozbul* was a legal document that moved debt to the courts so that after the Sabbatical Year was over, creditors could still demand that the debt will be paid. The rabbis already were fully aware that the laws of the Sabbatical Year pose major economic hurdles that must be regulated through reinterpretation of biblical law.

The case of the Sabbatical Year raises a general question: Can we and should we live in the 21st century according to biblical models? The Bible has deep insights about the best life for human beings, but we are not living at the time that the Biblical text emerged or was canonized. The historical context reflected in the Bible is fundamentally different from our own. Therefore we need to be very attentive to the process of biblical interpretation; literalism is simply untenable and historically unacceptable. In Israel today there are religious Jews who live by the laws of the Sabbatical year, but I don't believe that these laws could be imposed on the entire country if they are interpreted literally. Secular Israelis will oppose it and rightly so. However, the spiritual values of the Sabbatical Year can generate new practices that are conducive to regeneration and renewal, individually and collectively. This is an example how ancient laws can be retrieved and reinterpreted in light of environmental concerns and sensibilities.

The case of Israel illustrates some of the challenges to Jewish environmentalism. Since the society consists of Jews with very different levels of religious observance, and different levels of religiosity, it is very difficult to impose one law on all Jews. Furthermore, about 20% of Israeli citizens are not Jewish (most of

them are Muslim and a minority is Christian), so the modern State of Israel cannot simply declare one religious law as obligatory on all its citizens. The matter is rather complicated because in Israel there is no separation of religion and state and that creates many complicated problems that I cannot discuss here.

In short, the Sabbatical Year is regarded by Jewish environmentalists as a model to follow if we are to address the environmental challenges, but a lot of work is needed to make this model applicable.

8. Technology, Geoengineering, and Transhumanism

Question: You mentioned the human propensity for evil and for goodness, the contribution of technology, and that we are dealing with a human population that is increasingly affected by environmental catastrophe.

It seems that you consider technology with a high level of suspicion. Realistically I think that technology is going to play a role in some of the issues we have in front of us. The propensity that we have toward evil indicates that technology should be looked at as potentially dangerous, but our good nature could lead you to the opposite conclusion. Technology can be something of value.

I have been working on the issue of climate engineering, or geoengineering.[403] This activity exemplifies the dilemma quite well. We recognize the consequences of climate change and suddenly we believe are going to use technology to fix the mistakes we made. Most of us would look in horror at that and think it is the worst thing to do. But when you begin to consider the results of climate change, such as climate refugees, and acknowledge the fact that we might not have any other good solutions besides using our own ingenuity to help alleviate some of the worst disasters, then it looks as though geoengineering may be the least of the bad options facing us. Can you speak to the difference between the danger of technology and responsible technology?

403 Geoengineering is the deliberate large-scale intervention in the Earth's natural systems to counteract climate change.

Response: This is a terrific question and I agree with you that my attitude toward technology is rife with suspicion. Human beings are indeed technology-producing animals. Since we have the natural capacity to create technology, technology is not anti-nature per-se. It also means that we cannot avoid technology, so the human species has created technology from the very beginning of its existence. The question is, "How is contemporary technology different"? I have been writing critically about transhumanism, which is the ideology or theory that gives coherence to many aspects of contemporary technology.[404.]

I look at technology that is associated with transhumanism with trepidation and with suspicion. Why? Transhumanism is still a small movement, about 5000 people worldwide. Although it is not numerically significant, transhumanism is highly influential within many aspects of contemporary culture. Transhumanism stands for the idea that humanity is on the verge of a new phase in its evolutionary development. What people don't often realize is that transhumanism is just the transition to the next phase of human development. What's the next phase? The next phase is posthumanism and it signifies the total fusion of humans and machines. In the posthuman era, humans will not look at all like us and will not function like biological animals, because they will be fundamentally different. The posthuman being will be an intelligence that is embedded in some mechanical device, a super-intelligent machine that will be able to make autonomous decisions. Transhumanists envision this sort of future for humanity, and I find it to be an undesirable future.

Now why would it be a disaster? It would be a disaster because we, biological humans, will have no place in that futuristic world. In one scenario we will be the slaves of the machines that we have created. That to me is a very negative prospect for humanity and I don't want to live in such a world. However, whether I like it or

404 Transhumanism is a movement that seeks to fundamentally improve the human condition especially through developing and making widely available technologies to enhance physical, and psychological capacities.

not we are inching closer and closer to this vision, because the critique has been ineffective. Automated systems are increasingly controlling every aspect of our life, making humans redundant. In the transhumanist futuristic vision, the human species will eventually become obsolete, a prospect that should terrify us all.

We are living in a technology-saturated environment when we cannot function without computers and "smart" phones. The technology is constantly changing, as it seeks to "improve" itself and we are forced to update our systems on a regular basis. It is not only that we lose the capacity to keep up with the ever-changing technology, but that technology companies that now own our data have greater and greater control over us as we lose our privacy and our ability to make decisions for ourselves. The specter of being controlled by automated systems that someone else profits from should be terrifying to all of us. I am glad that the public discourse is beginning to grasp what is at stake with technology and that we are beginning to see some push back from the public (for example, in the call to break down large technology companies such as Facebook).

I have written several essays expressing my critique of transhumanism, and the title of one of my essays, "The Preciousness of Being Human," expresses the connection between my critique of technology and my interest in environmentalism. In my view, we need to be more mindful and respectful about human biological existence, with all the complexity, imperfection, messiness and even ugliness and sadness that such existence consists of. Transhumanists are appalled by these aspects of human existence and they are particularly upset with its finitude. The reality of death is what transhumanists abhor. Transhumanism is primarily a campaign against death, and I find that campaign to be utterly misguided and totally misdirected.

In other words, it is not that I critique technology per-se; rather, I critique a certain influential conception of technology that seeks to eliminate biology, by turning humans into machines. I consider the glorification of technology, especially the glorification of super-

intelligent machines, to be a new kind of idolatry primarily because transhumanists ascribe to these machines salvific qualities. Many transhumanists envision the human-machine interface to be salvation in practice, and I find that to be a misunderstanding of the meaning of being human as well as the meaning of salvation.

So can there be responsible technology? Yes there could, but it is up to us to create responsible technology. In order to do so, we will have to give up on the hubris that fuels irresponsible technology. So, I am not saying that we can live without technology. We can't. I came here by taking a plane, that's a technology. From the airport to Goshen College, I drove by car, that's a technology. So every aspect of our life and practically every moment of our day we do something that involves the use of technology. We can't live without technology, but I reject the glorification and the worship of technology as if technology alone will provide solutions to all our problems. For this reason I do not think that geoengineering alone (which is a technological solution) can address the problem of climate change. We do need to involve technology as we seek to address climate change, but we also need to find the right balance between technological and non-technological approaches to climate change. Climate change is not a technological problem per-se but a moral and social problem that consists of many aspects to which there is no technological solution. Therefore, when we consider how to address climate change, we need first to reflect on the meaning of being human and we need to appreciate the preciousness of being human. What I really resent is the fact that promoters of transhumanism actually dislike who we are as biological beings. They have a profound hatred for the fact that we are imperfect creatures. They want to make us perfect. That I believe would lead to disaster.

Technology is about power and empowerment. What is at stake here is no less than human power over death. Transhumanists crave transcendence and immortality by means of technology. The fact that many of transhumanists are middle-aged men who are either unmarried or without children is another interesting issue, since

they see in technology the prospect of perpetuating themselves not through biological reproduction, but through mechanical means, for example, the uploading of the human mind unto super-intelligent machines. Transhumanists entertain the notion that we can become immortal and experience eternal life by "existing" as internet files. Transhumanists promote cyber immortality. But am I immortal because you cannot erase "me" from the Internet? I don't think so.

So if you are an engineer you will have to be at the forefront in dealing with many of our problems in the next 50 to 100 years. And, yes, you need to develop technology that will be responsible. How are you going to be responsible? By responding to human needs, by respecting human biological existence, and by appreciating the preciousness of being human. The focus on responsibility brings us back to the question of values. Which values drive our engineering work? Since all forms of engineering, including geoengineering, cannot be separated from social problems, the training of engineering must be guided by moral values.

Unfortunately, the language of values has disappeared from engineering schools, because engineering schools have eliminated courses in the humanities from their curriculum. I consider this a very unfortunate development and insist on the inclusion of the humanities in the curriculum of engineering schools. In my view it is a mistake to offer STEM[405] education that no longer has anything to do with the humanities. We need to integrate STEM education with the humanities and require engineers to think through the social and ethical dimensions of their work. I am deeply concerned about the decline of the humanities, especially in large public universities.

The future of humanity, I would submit to you, depends on the recovery of the prestige and stature of the humanities. As far as I am concerned we need to integrate engineering, the natural sciences, the humanities and the social sciences into a new

405 STEM: Science, Technology, Engineering, and Mathematics

comprehensive education. That comprehensive program will generate comprehensive scholars similar to the kind of scholars envisioned in the Renaissance. I would like us to recover the ideal of the Renaissance person, a person who will be very well-rounded because he or she will be trained in all disciplines, including science, engineering, art, literature, and philosophy. This integrative vision of knowledge was the norm in the Renaissance and the early modern period, but we have lost it with the drive for the professionalization of higher education in the 19th century. The changes in higher education generated much of the scientific progress in the 19th and 20th centuries, but they also created harmful compartmentalization which we must overcome in the early 21st century. Unfortunately, the structure of the American university is such that integrative, interdisciplinary knowledge is difficult to attain; instead, people are forced to specialize and become "experts." In contrast, I am in favor of broad, comprehensive education that will inspire engineers to grapple with moral and ethical problems so that they could generate responsibility technology. In short, the answer to your question is that responsible engineering is possible and necessary but we need to transform the way we train and educate future engineers.

9. Emmanuel Levinas and Absolute Other

Question: Yesterday you mentioned the idea of an absolute other. What is our relationship to the absolute other? Is it one of equality, or is there a power imbalance regarding other humans?

Response: You refer to the last section of the presentation last night in which I discussed Emmanuel Levinas, but did not have time to go into the details

Well let me tell you how Levinas understood otherness. For Levinas, Otherness is difference that is irreducible and cannot be thematized. What then is the absolute Other? If you really think about God you realize that God is not like you and not like anything in the world that you can talk about. In my lecture this afternoon I'm going to speak about Maimonides who also insisted on the

absolute otherness of God. For Maimonides, the Otherness of God expresses divine transcendence. God is unlike anything else in the world. So, transcendence for Maimonides presupposes otherness. Levinas spoke about the transcendence of the human other; the Other is fundamentally different but it is the Other who places moral obligation on me.

Levinas's ethical vision is the claim that ethics is first philosophy, that is, metaphysics. We start not with what "is" but with what "ought" to be, but the "ought" is not derived from a general principle such as the Categorical Imperative, or from a utilitarian principle, but from the claims that the presence of the Other places on us. The uniqueness of the Other is expressed in the "face" of the Other, and the encounter with the face shapes the moral situation. The encounter is non-propositional and it cannot be thematized or generalized; yet, the encounter dictates the moral action. The irreducible human Other is infinite; it cannot be defined, described, or thematized; one can only respond to it. Levinas teaches us that the Other compels us to respond to this otherness. So, when you encounter the Other, you have no choice and you have no room for moral calculation. The response to the Other is a direct encounter, a dialogue. The fact that the Other compels us to respond, makes Levinas' metaphysical ethics rather difficult, but I think the difficulty is precisely what Levinas wished to highlight. For Levinas the Other imposes his/her otherness on you and forces you to act. You cannot remain indifferent to the Other.

Levinas's ideas have been very influential in the last 20 years or so, although not so much among analytic philosophers. Analytic philosophers don't really know much about Levinas. But if you are a Continental philosopher, if you are doing comparative literature, you would be familiar with the ideas of Levinas. Recently, Levinas' teachings have been adopted by environmentalists who have applied them to nature. Nature is this Other that compels us to respond because we are different from nature. Applying Levinas to nature means that natural entities are moral subjects and that nature itself places on us infinite moral obligations.

Levinas, as you may know, was imprisoned in a prisoner of war camp during World War II. Levinas wrote an influential essay about Bobby the dog[406] as "the last Kantian in Nazi Germany." It is a very, very troubling situation in which a dog, who lacks the brain needed to universalize maxims and drives, as Kantian morality teaches, is the only entity that still exemplifies Kantian morality. The real moral person in the POW camp was the dog who recognized the inmates as humans! What does that mean? There are many interpretations and commentaries on that insight, especially in regard to the question whether the dog is a moral subject even though it is nonhuman. Does the dog have a "face" in the Levinasian sense of the term? We need not get into the subtleties of these issues and only remember that Levinas teaches us that limitless, infinite responsibility of the Other becomes manifest in the instant the face of the Other is encountered. Moral responsibility for the Other is an irreducible condition of being; it is an inescapable preexisting condition that can only be triggered by the face of the Other. For Levinas "the I before another is infinitely responsible." If we follow the insights of Levinas, we need to reconfigure our relationship to others around us. We have to see how their presence puts a claim on us, and we need to respond to it.

Levinas has deeply influenced many ethicists, including feminists, who have challenged Levinas's use of the figure of the feminine in association with the Other. Whether one accepts Levinas or critiques him, Levinas's insight cannot be ignored: ethics has primacy over ontology. Philosophy is always about how we relate to other humans, not who we are as individuals who seek objective truth. A world in which ethics come first is a very different world, because responsibility takes precedence. That is why I ended my first lecture with reference to Levinas, and that's why I began

406 "The Name of a Dog, or Natural Rights", by Emmanuel Levinas, in *Difficult Freedom: Essays on Judaism* (Baltimore: John Hopkins University Press, 1997). Levinas was one of 70 prisoners in a work camp for Jewish POWs. The dog recognized the prisoners as men and greeted them with barking and jumping as they returned from labor. To the Nazis they were not men.

my Goshen Lectures with a focus on ethics, not on ontology. The primacy of ethics is a Judaic insight that can be traced to the biblical notion of covenant and the rabbinic interpretation thereof. It is fair to generalize and say that in Judaism ethics takes precedence over ontology, because reality itself is relational. That is the meaning of the doctrine of creation: the world is created by God and all created beings stand in relationship with God.

So I highly recommend Levinas to everyone here, and a good way to start is a short book by Colin Davis[407] in the Oxford series, "Short Introduction to Philosophy."[408] Levinas is very powerful philosopher but living in accordance with Levinasian ethics is not easy. Levinas's ethics is very demanding and uncompromising.

10. Free will, Mystery, and Error

Question: Is Judaism informing our view of the human will? Frequently we talk about free will from a scientific standpoint attempting to consider mechanisms of the chemistry of the body that might precede a particular decision we make, and that is a technical issue that interests me. But the one that interests me more is what is the best word to describe what we might aspire to be or think we are when we are human? What will do we want? Is it the free will, is it the determined will, is it a random will, is it a totally an autonomous will, or is it something more organic, something connected or related? We are in relationships. From the view of God's creation of humans, where are we with this. What should we say is the most human aspiration for our will?

Response: That's an excellent question. In the next lecture when I talk about Samson Rafael Hirsch, the founder of Modern Orthodoxy (also known as Neo-Orthodoxy) and his grandson Isaac Breuer. These thinkers reflected on the freedom of the will to which you refer.

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407 Colin Davis (born 1960) is professor of French at Royal Holloway, University of London.

408 Colin Davis, *Levinas: An Introduction* (University of Notre Dame Press, 1996).

Do humans have free will or is everything predetermined? In tractate Avot of the Mishnah the rabbis addressed this question but gave a very enigmatic and ambiguous answer: "Everything is foreseen but permission is given." So, you can dismiss this response as a wishy-washy statement that enabled the rabbis to have the cake and eat it too. But you could also appreciate why the rabbis were reluctant to choose one side of the dilemma, and instead they affirmed both. If I understand it correctly the rabbis recognized some measure of determinism while recognizing some measure of human freedom of choice.

In the case of humans, determinism means that human behavior is a necessary function of material conditions (chemical or biological processes) over which humans have no control. I for one am reluctant to endorse reductionist materialism, because I do not want to lose the very preciousness of being human. Human life is too complex to be explained exclusively in materialistic terms. But I cannot ignore the fact that humans are material beings whose conduct , feelings, thoughts, and dreams all have some material biological basis (be it chromosomes, genes, proteins, hormones, enzymes, amino acids, and neurotransmitters). In other words, I refuse to reduce human beings to their material functioning, but I cannot deny that being human has a material dimension because we are embodied. Again for me the right position is somewhere in the middle between material reductionism on the one hand and substance dualism on the other hand.

In regard to human freedom, my position is not so different from the vague and ambiguous statement of the rabbis. Yes, we are genetically based entities and as such we have to deal with the given. We do not choose nor can we change the biological processes that condition our life. But does that mean that we are devoid of freedom? Not really. We do have freedom especially the freedom of choice. The question is, what is the source of freedom? Is freedom coming from cognition, or is freedom coming from non-cognitive sources? We don't want to have a situation in which the human will be viewed as totally unfree. That is precisely what the

transhumanist vision of machine-human fusion holds in store for us. But as I already indicated, I reject this technological view of the human because we are not automatons! We can make decisions that cannot be foreseen by a preconceived algorithm. We are free to choose, we are free to err, we are free to feel, and we are free to imagine, and all of these freedoms fall under what the biblical text calls "the image of God" (in Hebrew *tzelem Elohim*).

When we exercise these freedoms we are like God in some way. And being like God means that human freedom is open ended; it is infinite, and it is a mystery that cannot be explained or explained away.

We are in the age of neuroscience, that is to say, we believe that the advances of neuroscience can give us answers how the human brain works, how we perceive and interpret reality, how we think and how we compute information. Clearly the neurosciences open up an entire range of knowledge about being human that we did not have until now. But can neuroscience give us the answer to everything? I would say "no." We can also ask whether we really want to live in a world in which we have an answer to each and every question. I have no problem living in a world in which there is a degree of the unknown, and I think it is important to recognize the value of the unknowable or mysterious aspect of reality. Human beings can never know all there is to know, and a certain degree of uncertainty is necessary. If we give up on that, if we think we can know it all, we take on a form of hubris which is not justified. So, why not say that "yes, certain things we will never know; certain things about the operation of the brain (and about reality outside the brain) we will never know or will never know entirely."

When we talk about the limits of human knowledge, we have to engage the question: What is the relationship between brain and mind? While we cannot speak about human minds without brains, we should not reduce mind just to brain. Understanding the relationship between mind and brain is very much what meditation is all about. Through meditation we can become aware of our minds but knowing our mind is different from understanding what

happens in the brain, and vice versa. However, I do not think that we will ever be able to explain mind or consciousness, no matter how advanced some people become in their meditative practice. In other words, human consciousness will remain a mystery, regardless of the outstanding advances of the neurosciences and cognitive sciences.

Let's return to the question concerning determinism versus freedom of choice. The ambiguous rabbinic statement I shared with you earlier makes a lot of sense to me because it recognizes human freedom to err. To be human means to err, to miscalculate, to misunderstand, or to misinterpret. I see all of these as expressions of human freedom rather than as failures to compute data. Human beings are not computers and the analogy between the human brain and the computer is rather deceptive. I definitely do not welcome a scenario in which humans will not be able to err, precisely because I do not see humans as machines. Not being able to err, I think, is a very dangerous prospect. So, I would like to keep error as a good thing, as a possibility, because that allows us to be open to correction, to apology, to regret, or to repentance, all which are not feasible for machines, no matter how "smart" they are deemed to be.

In my next lecture I will mention the Hebrew word, *tikkun*, which means "repair" or "remediation." The notion that human beings are able to act in the world so as to mend it, or repair it is a central idea in the Jewish mystical tradition and it has been applied to environmentalism. The notion that mending or repair of the world is possible, desirable and even necessary has enormous theological and ethical ramifications. It means that we live in a world full of possibilities and that we are called to act in it; the world that God has created is not perfect but it is perfectible through human action. But if we assume that we are already perfect, that we cannot err, or that everything is in principle knowable, then everything is indeed preordained and predetermined and that leaves us no freedom at all. I find that vision to be rather unappealing if not utterly frightening and that is one reason why I consider the claims of promoters of artificial intelligence to be so misguided. I think

their perspective and their promises are misleading because they claim to know all there is to know, especially about the brain and about artificial intelligence. A world governed by artificial intelligence will be devoid of mystery. I for one do not consider this a cheerful prospect.

11. Levinas' Philosophical Focus

Question: You discussed Levinas' philosophy being primarily about ethics, and not ontology. Does Levinas' philosophy focus entirely on ethics ignoring ontology, or does it derive ontology from ethics, or something else entirely?

Response: One of the books on Levinas is *Ethics as First Philosophy: The Significance of Emmanuel Levinas for Philosophy, Literature and Religion* (London: Routledge, 1995). The term 'first philosophy' was applied to metaphysics. Since 1961 Levinas claimed that he was developing ethics as first philosophy, and I think he meant to critique the traditional privileging of metaphysics. By contrast, Levinas privileges the ethics of the face-to-face encounter. Levinas reordered our philosophical priorities, and in that regard he was brilliant, but does that mean that Levinas explains everything that needs to be explained about the world? No. Philosophically speaking the Levinasian worldview is incomplete because all worldviews must include ontology and cosmology because we need to know how the world is organized.

Levinas is not going to help us when it comes to cosmology or ontology because he asks us to focus on a different aspect of life: ethics. Levinas's philosophy is a direct outcome of his experience during WWII, as we have already noted. Levinas witnessed what it means to live in a world that gave up on ethics. Traditional philosophy which prioritized metaphysics (or ontology) failed in WWII. Levinas reflects on that breakdown by focusing on ethics instead, namely, on human relations.

Relational philosophy or dialogical philosophy as it is also called did not begin with Levinas and it characterizes Jewish

philosophy in the 20th century. This approach to philosophy was articulated by Martin Buber and Franz Rosenzweig before Levinas, and this approach goes to the heart of Judaic concept of creation and the Judaic notion of covenant. So Levinas has to be understood in the context of Judaism, even though he resisted being treated as a "Jewish philosopher." Levinas has become a celebrity of sorts, but learning from his insights does not mean that all other Jewish philosophers are unimportant or that Levinas could be understood apart from his Jewish cultural and religious context.

Levinas has become a philosophical celebrity and he has many fans, but I do not believe that any philosopher could or should be the one and only philosopher who tells us how to interpret reality or how to approximate truths. Perhaps because I am an intellectual historian who studies how human thought has changed over time, I prefer to take the best insight from whatever philosopher I read. That means that each philosopher and each philosophical system has deep insights but that no one philosopher and no one system are self-sufficient. Similarly, to do philosophy one is called to engage ontology, cosmology, psychology, ethics, and politics rather than focus on but one kind of philosophical questions. This comprehensive approach to philosophy may reflect my familiarity with ancient and medieval philosophies, especially the Aristotelian tradition, which is characterized by its comprehensive scope.

When we introduce students to the history of philosophy, we need to help them identify the leading insight of each thinker or the distinctive approach of this or that philosophical school, so that they could understand how Western thought evolved over time, but even when a leading insight is deep or instructive, it does not exclude other insights. So this is my approach to Levinas: I do not think that he is the one and only philosopher (or the one and only Jewish philosopher) whose ideas should be taught to exclusion of all others. Such privileging is a mistake in my view. Rather, we should listen to the insights of Levinas and incorporate what is profound, meaningful and useful, but without avoiding or ignoring other philosophical voices.

12. Ethics without God

Question: Can you have ethics without God? Or another way to phrase this question: must God be in the picture when discussing ethics?

Response: That is a very good question to which my answer is: "No, you can't have ethics without God." Obviously my answer reflects my Judaic perspective.

Are there attempts to have ethics without God? Sure there are. The entire discourse of academic ethics is secular, explicating the moral situation without reference to God. The dominant theories of contemporary moral philosophy – Deontology, Utilitarianism and Consequentialism – are secular, which means that for many philosophers belief in God is not needed for articulation of moral categories. Indeed, most ethicists in departments of philosophy in American universities are atheists and their philosophizing about ethical situations or problems makes no reference to God because they do not think that such reference is either philosophically sensible or necessary.

Yet, all ethical reasoning has to wrestle with the question, what is the source of value? You always have to come back to that. As a Jew, at least, I think it is very hard to say that you can do ethics without God because to define oneself as a Jew requires one to say something about God. Judaism as a worldview is meaningless without reference to God. So, yes, even though there are secular Jews who are atheists, they cannot speak as Jews without some reference to God. In the context of Judaism ethics requires God.

So, the question is, "What does God mean?" Or what does it mean to believe in God? To these questions Jews have given all sorts of answers so that the concept of God in Judaism has been interpreted in numerous ways. By the same token, within the Jewish traditions there are various reflections on the origin of morality, the nature of evil, the meaning of virtue, or the human ability to discern between right and wrong. All of these diverse and even conflicting reflections include some reference to God, so to think about ethics

as a Jew cannot be devoid of God.

This is to say that contrary to secular ethics, the Judaic tradition maintains that human reason is not enough to determine the difference between right and wrong. Human reason is necessary but it is insufficient; human reason needs to be complemented by divine revelation. This view was shared by all medieval philosophers, Jewish, Christian and Muslim, regardless of the nuanced differences between them.

Modern secularism challenged that premodern consensus, and secularism has given us moral philosophies that make no reference to God. But we should ask ourselves: has secularism given us all the answers we need in order to live well in the world? I wouldn't say so. Today we live in what is now called the post-secular world, which means that we are increasingly aware of the limitations of modern secularism. Religion today functions very differently than the so-called Secularization Thesis has predicted. Today religion is no longer satisfied being confined to the private sphere and instead religions have demanded a prominent place in the public sphere playing a more active role in public discourse. As a result we experience growing tension between secular and religious outlooks all over the world.

The phenomenon of post-secularism is very interesting historically. In the 19th and early 20th centuries secularism was taken to be a necessary feature of modernity and modernization. That was the core of the so-called Secularization Thesis. But at the second half of the 20th century, the nexus between modernity and secularization has been seriously challenged all over the world, when people have realized that secularism is not enough; something is missing. Various secular ideologies that have dominated the first half of the 20th century (e.g., Liberalism, Socialism, Communism, and Nationalism) have all been proven problematic and unsatisfactory whereas religions have become much more appealing. In all sorts of forms, both traditional and innovative, religions are thriving today whereas pure secularism is on the decline. Why is that the case? Perhaps because human beings are wired to be religious animals,

namely animals that ask religious questions or animals that find meaning in religious answers. I am with Andrew Newberg on that.[409]

Put differently, religions have emerged because human beings pose questions to which religions are the answer. We are animals that are aware of our own death, and because of that awareness belief in God will never go away, because such belief offers us a meaningful way to make sense of our mortality. Not only are we mortal, we are mortal with the consciousness of mortality. The consciousness of mortality pushes us to think in terms of the ultimate. That is why God language will not go away as long as human beings are here.

Will belief in God disappear when computers rule the world? I'm not good enough on computer thinking to answer that kind of question, but I do not believe that computers (or super-intelligent machines) can or should replace humans. So as long as human beings exist, they will continue to pose questions to which religion is the answer. All religions have some conception of God, although these conceptions are quite different from each other. Each religious tradition has a different name for God; a different conception of what, or who, God is. Because we have the innate capacity to think about ultimate reality, thinking about God, wishing to encounter God, or desiring to be like God will not go away. We can give up the notion of the ultimate a notion that functions as the human horizon. The horizon is where the divine is, so to speak.

As Mircea Eliade, the great scholar of comparative religions, has taught us: we are innately religious beings. We are *homo religiosus*, whether we like it or not. That means that secularism does not capture the full complexity of being human. Today the rapid developments of science and technology raise deeper questions about the meaning of being human to which mere secularist viewpoints, for example, that we are also *homo economicus,* are proven to be insufficient. In other words, in the post-secular age

409 Andrew Newberg, MD is a neuroscientist who studies the relationship between brain function and various mental states. He is a pioneer in the neurological study of religious and spiritual experiences, a field known as "neurotheology."

religions and spiritual traditions will not go away; rather, there will be all sorts of attempts to hybridize them with science and technology. I am currently engaged in the study of the interplay of science, religion and technology in the post-secular age, and religious environmentalism is one type of hybridity characteristic of our post-secular age.

Discussion 3, Saturday Afternoon

Topics considered in chronological order:

1. Maimonides' Influence on Newton
2. The Dark Side of Ecology
3. Romanticizing Agriculture
4. Habad Movement on Campuses
5. Success of Kabbalah
6. Interconnectedness and Choice
7. Dew and Environment
8. Engineering and the Liberal Arts
9. Educational Systems and Time Pressure
10. Environmental Conflict and Collaboration

1. Maimonides' Influence on Newton

Question: I was very interested in your initial comment: Maimonides said, "To be a good Jew, you must be a good physicist."

Response: This is my way of saying what he said, obviously.

Question: Can you comment on the influence of Maimonides on Isaac Newton? I know that Isaac Newton was non-Trinitarian and that was due to Maimonides' theological influence. But it seems like there may be a lot more of Maimonides' influence on Newton and on his physics. Can you comment on that?

Response: Well, I'm going to disappoint you because I am not a Newton scholar. For my knowledge, Newton did have access to Jewish sources, including Maimonides, but he was more influenced by the Hermetic tradition which was inseparable from numerology, alchemy, and astrology and was associated with Kabbalah. Newton did have access to Jewish texts and he studied Josephus Flavius, the Mishnah and the Talmud, as well as Maimonides' *Code of Jewish Law* (Mishneh Torah) which was translated into Latin in 1641 by Dionisyius Vossius. Maimonides' "Laws of Idolatry" (Hilkhot

Avodah Zarah) provided Newton and others with information about ancient pagan practices. According to Maimonides, ancient pagans slipped from true monotheism into idolatry by worshipping the heavenly bodies, the sun, the moon, and the stars. Newton believed that before the corruption of pristine religion, a scientific priesthood held both theological and natural truths, but these were largely hidden from the masses. The priests knew that the sun and not the Earth was the center of the universe and for that reason ancient temples had perpetual fires which represented the sun and the temples themselves stood for the solar system, as a kind of "symbol of the world." In other words, Temples functioned as talismans, an idea that Abraham ibn Ezra and other medieval Jewish philosophers have also held. Newton was very obsessed with the measurements of the Jerusalem Temples and he read the Revelation of St. John as being physically set in the Temple precinct. He also regarded the Temple as a model for the true Church that would be rebuilt in the eschatological End of Days. In short, Newton was more interested in the information about the Temple and ancient Jewish practices he could glean from Maimonides' *Code of Jewish Law* than he was interested in Maimonides' *Guide of the Perplexed*, the focus of my second Lecture.[410]

No less influential on Newton was Kabbalah, or more precisely a Christian version of Kabbalah, which flourished in the early-modern period especially among the Cambridge Platonists, such as Henry More, who was Newton's teacher and friend. Between 1677 and 1685 authentic Kabbalistic texts were translated into Latin in *Kabbalah Denudata* by Christian Knorr von Rosenroth. Kabbalistic texts, including selections from the *Zohar*, now became accessible to European scholars, including Newton and his archrival, Leibniz. In the 17th century Kabbalah was very attractive to Christians as was the Hermetica, the Sibylline Prophecies, and the Orphica.[411]

410 See Matt Goldish, *Judaism in the Theology of Sir Isaac Newton* (Dordrecht: Kluwer Academic Publishers, 1998)

411 See Allison P. Coudert, *Leibniz and the Kabbalah* (International Archives of the History of Ideas, vol. 142) (Springer, 1995)

All of these intellectual traditions were regarded as ancient, esoteric wisdom that God had imparted to Moses on Mt. Sinai. Many Christian intellectuals in the early-modern period regarded Kabbalah as preeminent source of *prisca theologia*, but Newton regarded Kabbalah as a pagan theory that infected ancient Judaism with idolatrous ideas and through converted Jews introduced the corruption into Christianity. Regardless of this negative judgement, Newton was deeply interested in numerology, alchemy and to a lesser extent astrology which were inseparable from the practice of Kabbalah. To say that Newton was influenced by Kabbalah and the Hermetic tradition at least as much as Maimonides may be unsettling because Newton is popularly regarded as an icon of rationalism, but that is a misleading image that betrays our rationalist prejudices rather than the historical facts about Newton.[412] Newton's alchemical investigations could not be separated from his scientific endeavors and should be seen as part of his interest in occult (i.e., hidden) properties of the material world.

2. The Dark Side of Ecology

Question: Ecologists understand nature to both be red in tooth and claw but also rife with cooperation and collaboration. You ended your second lecture talking about how relationship to land through physical labor and other things informs our theology. I would like you to talk about that. I think you referred to it in an earlier writing about the dark side of ecology, the pain, the suffering of death. What can we learn as humans about how to live with one another and with the rest of the created order by acknowledging and understanding that pain and even suffering, loss, death are part of ecology that maybe can instruct us regarding our own limits, our own fragility, those kinds of things.

Response: Let me start by saying that you as an ecologist probably agree with me that we understand today the difference between

412 Newton's alchemical manuscripts have been edited by The Chymistry of Isaac Newton Project at Indiana University.

the so-called "old ecology" and "new ecology." The old ecology highlights nature's harmony. Thinkers like Samson Raphael Hirsch or the people before him adhered to the model of nature as harmony, balance and stability. But ecological science today actually tells us that that's not the case. Nature exhibits chaos, change, and randomness. How do we fit those two models together into the discourse of religion and ecology? Lisa Sideris of Indiana University in Bloomington is an example of an ecologist who has been quite critical of the religion and ecology discourse for its non-scientific understanding of nature. In effect she has been telling people in religion and ecology to stop romanticizing nature and instead to learn from the science of ecology how nature really works. [413]

The science of ecology, the kind of the cutting edge of work that you do, is not well-known by Jewish environmentalists, at least the religious activists among them. They're not informed by ecological scientific data or theories and the findings, debates, and subtleties of environmental studies in general do not inform Jewish environmental movement. Jewish environmentalists are more concerned about a new earth-based Jewish spirituality and social activism rather than the science of ecology or environmental sciences more broadly.

So, what can we learn from the science of ecology that is relevant to the discourse on religion and ecology? Your question started to give us a direction: we learned that death is part of nature and that there is nothing wrong with this. I would say that death is good in the sense that it allows for new life to come up. Viewing death as part of the cycle of life is one reason why I am quite critical of transhumanism, a movement that is devoted to a "crusade on death." The more you understand life ecologically the more you understand that life is a process and a cycle. In the web of life, everything is interconnected, but everything is also bound to come

413 See Lisa H. Sideris, *Environmental Ethics, Ecological Theology and Natural Selection* (New York: Columbia University Press, 2003)

and go, to live and die. That's the power of life which is greater than all of us, individually or collectively; we're just part of life, but we are not all of it.

Ecologically-minded persons are concerned with ensuring that life goes on and that the conditions of life will be present in the future. Our ecological crisis threatens the conditions of life and I am most concerned not only with the possibility of life but also with the capacity of all forms of life (including human life) to thrive and flourish. In the Anthropocene thriving and flourishing will become harder and harder because of climate change and environmental devastation we humans have brought about. We cannot predict the future, but the trajectory that we have identified already does not bode well for the future of life on Earth, unless we change our course of action.

That general observation is quite separate from the idea of going back to the land, which was the core insight of Zionism. When A.D. Gordon, and other Zionists insisted that Jews must return to the Land of Israel in order to renew the vitality of the Jewish People, he definitely expressed a Romantic understanding of nature that coheres with "Old Ecology." Although science may challenge that idea, it does not mean that the idea was wrong or that the Jewish return to nature was misguided. It really wasn't.

As I indicated, I grew up in a kibbutz in Israel where Gordon's ideas were very much part of the ethos. Gordonism was instilled in me as a child growing up in the kibbutz and, although I left the kibbutz many years ago, I still resonate with the Gordonian approach and appreciate its deep wisdom. Here in Goshen Indiana many people are still engaged in farming in one way or another and anyone familiar with farming can appreciate its emotional and mental benefits. Farming is good for the soul and farmers are literally grounded in ways that are quite enviable. This is especially true in a world gone amuck with technology, in which people lack rootedness and suffer from alienation and the harms of deceptions and dissimulation. So Gordon understood something deep about the healing power of nature and the challenge is to translate his

ideas to the reality of the 21st century. Indeed, the ideas and spirit of Gordon's teachings inspire and inform contemporary Jewish environmentalism, but translating Gordon into English is quite difficult, if not impossible.

Yet, the project of updating Gordon for the 21st century is worth undertaking. To make sense of Gordon it is necessary to explain not only the various layers of Jewish sources (Bible, rabbinics, philosophy, Kabbalah, and Hasidism) but also to Russian philosophy, especially the ideas of Leo Tolstoy and Vladimir Soloviev. As much as Gordon was influenced by Tolstoy we should note that Tolstoy who preached the return to simple life of labor and who lived with the peasants, didn't do the physical labor he advocated; his peasants did the physical labor on the estate while he was writing. In contrast, Gordon labored in the fields under rather difficult conditions and he knew from experience what physical labor does to those engaged in it. From my own experience of growing up in a kibbutz I can also vouch for the transformative power of physical labor. Agriculture labor is a good thing especially for children who need to learn a thing or two about responsibility, and it is a good thing for everybody to grow up knowing how to care for the land. Today children and adults have no idea where food comes from or what goes into food production and the result is alienation from the natural world which only contributes to environmental degradation.

In short, I am saying that we need to be more informed about the science of ecology and environmental studies and that we need to include farming practices in our education experiences. This recommendation is based on my own experience in the kibbutz during the 1950s in which all children were involved in agricultural labor to some extent.

3. Romanticizing Agriculture

Question: We've talked a lot about agriculture and going back to the land. In some ways it sounds kind of like a fairy tale, because

when I think about agriculture, part of what I think about is big factory farms, and agriculture is probably the biggest way that we impact the environment through water use, soil degradation, species extinction, deforestation, and all of these things. How we balance these things? How do we think about agriculture in a way that doesn't push those things under the rug?

Response: I don't know that I have answers. When I discuss Zionism I'm telling a historical story that may or may not fit contemporary agricultural practices. At the turn of the 20th century Zionism looked at agriculture as a way to heal the Jewish people from the ills of 2000 years of exilic existence. Agriculture in Palestine at the turn of the 20th century was done on very small plots and with relatively few and simple implements. It was not industrial agriculture as it's done today in the United States. Agriculture on industrial scale is undoubtedly harmful to the environment and has been justifiably criticized by environmentalists. For example, those who advocate permaculture, an idea that was developed in Australia in the 1970s, seek to develop agroecology on the basis of local knowledge so that permaculture farms are organic, low-input, and biodiverse, using techniques like intercropping, planting perennials, water harvesting and resource recycling. This type of agriculture is not so different in scope from what was developed by the kibbutzim in the early 20th century. In other words, it is possible to do agriculture with less damage to the environment than we actually do. The industrialization of agriculture is the problem, but this was a response to the rise of population and the need to feed millions or even billions of people. The question is, How are we going to feed all the people that need to be fed?

Can we do it in small farming? Probably not, or at least it's very difficult. I'm not the right person to give you ideas on how to solve the problem, but I definitely see the impact precisely as you have said. The use of pesticides obviously is a big problem. What's going on with water resources? The way we irrigate open fields as we still do in Arizona is baffling given the massive loss of water in

this method of irrigation. Israeli agriculture is pretty advanced in terms of irrigation technology and Israel has shown how to be more economic, less wasteful, and more technologically advanced in the use of water resources. [414]

It's about scale. America has the scale that enables it to do big things. But this also makes it possible for America to—how shall we say?— destroy the land on a big scale. Right? Can we revive small scale farming in America? Probably not, but the loss of small farms and the dominance of agribusiness has far reaching environmental, social and cultural consequences. I am fully aware of the challenges (physical, financial, mental) that farmers face and the uncertainty inherent to farming. So, please do not misunderstand me; I do not romanticize agriculture. All I am saying is that in order to rethink our relationship with the natural world we must reexamine agricultural practices and challenge some of the conventions, including the use of pesticides which inflict a lot of harm not only on the soil but also on the farmers.

Farming is a very lively concern of Jewish environmentalists today. A Jewish Community Farming movement has been launched in 2004 with the founding of Adama Farm at the Isabella Freedman Jewish Retreat Center in Falls Village, Connecticut. There are now twenty Jewish farming organizations in the United States whose common goal is to connect Jews to land cultivation, to food production, and to environmental justice work. These organizations are inspired by biblical agriculture and they look to Jewish history and to Jewish values to move the Jewish community in America toward a more sustainable way of living.

4. Habad Movement on Campuses

Question: You mentioned the Kabbalistic movement this morning. I was wondering if you were referring to the Hasidism or whether you were referring to the Habad movement which is now

414 See Seth M. Siegel, *Let there Be Water; Israel's Solution for a Water-Starved World* (New York: Thomas Dunne Books and St. Martin Press, 2015).

very prevalent on all the campuses in the United States. I just don't know how broad your referral was.

Response: I actually didn't say much about Hasidism because I ran out of time, but your point is well taken. Hasidism, which emerged in the 18th century, is an off-shoot of Kabbalah, especially Lurianic Kabbalah. Medieval Kabbalah emerged in the 12th century in Provence and thrived in Spain during the 13th, 14th, 15th centuries. After the expulsion of the Jews from Spain in 1492 Spanish Kabbalah flourished in different locations, especially in Italy, North Africa, and the Ottoman Empire. In Safed, Palestine, during the 16th century Kabbalah experienced another creative outburst under the leadership of Isaac Luria, hence it is known as Lurianic Kabbalah. That version of Kabbalah spread during the 17th century to Italy, Western Europe, and Central Europe and shaped Jewish culture on elite and popular levels. Hasidism was a Jewish renewal movement that reinterpreted Lurianic Kabbalah and offered a new way of being Jewish, less intellectual, more emotional, and more immersed in the corporeal world. Hasidism emerged in Ukraine and then spread to Poland and to parts of the Russian Empire. Since Hasidism preserved many Kabbalistic traditions, Hasidism brought Kabbalah into the modern world, while transforming many Kabbalistic traditions.

Habad is a particular branch of Hasidism that was founded by Rabbi Schneur Zalman of Liadi. The Hebrew name is an acronym of Hochmah, Binah, Da`at ("Wisdom, Understanding, and Knowledge") which refer to the three upper Sefirot, or attributes, of God. These are the intellectual dimensions of the Deity which suggests that Habad type of Hasidism is not anti-intellectual at all; in fact, the leaders of the movement during the 19th and 20th centuries were very sophisticated theologians. After WWII the Habad movement has been thoroughly transformed under the leadership of Rabbi Menachem Mendel Schneerson who made it into a very successful movement with branches all over the world. You are absolutely right that Hasidism today is thriving primarily

because of the missionizing activity of Habad and that the movement is particularly strong on the campuses of American universities.

Why Habad movement has been so successful on campuses of American colleges and universities is an interesting question. The success is partly due to style: Habad houses on campuses offer students a place to eat and to socialize and to be with other Jews. Habad presents itself as "authentic" Judaism and offers students a "Jewish home away from home," which is very appealing to Jewish students, whether they are observant Jews or secular Jews. There are other competing Jewish organizations (e.g., Hillel), but they don't do as well as Habad. Why Habad is more successful has something to do with their message. The message is highly optimistic and life affirming since joy is a very important value in Habad theology and ritual. Habad offers a brand of Jewish spirituality that speaks unabashedly about the Jewish distinctiveness, the Jewish soul and its inner layers, and that may be appealing to young Jewish adults who want to affirm their Jewishness. The students who come to Habad houses are not necessarily more informed about Judaism or Jewish religious texts than other Jewish students, but the Jewish experience in Habad houses on the Sabbath and Jewish festivals solidify their Jewish identity.

5. Success of Kabbalah

Question: Based on what you said this morning, why is Kabbalah so successful today?

Response: I don't know what your data are for the success of Kabbalah. Do you have someone in mind when you talk about the success of Kabbalah? Are you speaking of celebrities like Madonna? Is that why you think that Kabbalah is so successful?

Question: No, I'm only going by what you said this morning.

Response: This morning I said that Kabbalah is influential among Jewish environmentalists. And I'll say more about them tomorrow. I will explain what Jewish theologians such as Arthur Green,

David Seidenberg and others do with Kabbalah. But Kabbalah is also thriving in American popular culture in books, films, and television shows and it is of interest to people who know little about Kabbalistic theosophy, meditative practices, or rituals. Kabbalah is particularly attractive in Hollywood and certain producers and writers are most influenced by it. For example, Darren Aronofsky, who is among the people who created the Matrix series is very influenced by Kabbalah.

There's definitely a renaissance of Kabbalah in American culture and I view it as an expression of spiritual search or spiritual quest characteristic of the post-secular moment in American culture and globally. People are seeking something that they're not getting from organized forms of religion. Therefore people, including Jews, look to spiritual traditions, among them Kabbalah, because these traditions touch their heart, their imagination, and their quest for meaning. Kabbalah is especially exciting and attractive because it is very visual and because its rich and powerful symbolism is highly erotic and sexual. Kabbalah after all claims to fathom the mysteries of life and the mysteries of creativity and that includes the mysteries of creation and procreation. Kabbalah depicts the Sefirotic world as androgynous and interprets the relationship between Israel and God as well as the inner life of God in erotic and sexual terms. So it is no surprise that Kabbalah is so appealing today since popular culture is so saturated with eroticism and pornography is a big business today.

It seems reasonable to predict that Kabbalah will continue to be popular in the foreseeable future and that more rationalistic forms of Judaism will probably have a harder time in the future.

Kabbalah is specifically relevant to Jewish environmentalism today because it accentuates immanence over transcendence, which can be interpreted to mean that the natural world is inherently holy and worthy of human protection. The story is more complex, since Kabbalah generates both positive and negative attitudes toward the natural world, as I'll explore tomorrow, but in general Kabbalistic and Hasidic doctrines have inspired contemporary Jewish eco-theologies.

6. Interconnectedness and Choice

Question: One of the metaphors often used in biology, when we romanticize ecosystems, is to think of ecosystems as organisms. So the question is whether in an organism all the different parts of the body work harmoniously together for the greater good of the whole.

But as a biologist, when I think about the development and the ongoing sustainability of an organism, this becomes a rather totalitarian system. The reason that you don't have webbing between the fingers in your hands is because the cells that were there were all programmed to die. When we think about humanity's role in a sustainable or resilient ecosystem, I wonder if that's compatible with humans' free will or whether we're willing to subjugate ourselves that radically to the good of the whole.

Response: Interconnectedness is a recurrent theme in the literature on religion and ecology. In all statements by religious environmentalists, be they Christian, Jewish or Muslim, the language is remarkably similar. They all highlight the value of interconnectedness as the mark of ecological consciousness.

What does interconnectedness mean? Your question seems to pose a challenge to the discourse on interconnectedness by saying: "Well it's nice to claim that we all depend on each other and that everything is connected to everything but in fact that is not the case." You seem to be saying, "No, everything is not connected to everything but rather relationship between things reflects various options and choices that are dictated by the very structure of things."

I agree with you that interconnectedness is a somewhat fuzzy idea, and for me it is more of an attitude or a posture toward the world. Understanding that what we do in place A influences what happens in place B is worthwhile because it allows us to appreciate the complexity of environmental problems. I don't think we need to go further than that.

I agree with you that interconnectedness does not explain everything but if one thinks ecologically one cannot avoid thinking about interconnectedness especially within a given ecosystem. If

we want people to be ecologically minded we need to teach them to think that what one does, let's say in Indiana, affects something that happens very far away from Indiana.

To think ecologically requires us to think about the interconnected web of life. Therefore, interconnectedness is a good environmental value but I don't want to push it too far.

The value of interconnectedness offers us a way of thinking that does not conflict with your understanding of developmental biology, especially on the level of an organism. I guess the point you're making would be a good critical remark regarding what I'm going to talk about tomorrow, when some eco-theologians really push the idea of holism. And you, if I hear you right, are saying, "Don't push holistic thinking too far, because it doesn't work that way."

Question: (continued) It seems that the place of humanity depends on whether humans are really just one more thing among many.

Response: Yes. What you're saying is correct and the question is where does the human being fit into this very complex order?

Question: (continued) Can we actually get away from human distinctiveness?

Response: I say "no." I definitely think that human distinctiveness is real and I do not want to give it up, as many environmentalists do when they rail against speciesism. [415] The term 'speciesism' signifies the distinctiveness of the human species which presumably allows human to rule over and exploit other species. Environmentalists consider speciesism a major sin but I don't think that is the case. Human beings do not think like trees, like mountains, or like scorpions because human perception of reality is distinctive to humans. What is available to us humans is the human perspective, and not any other perspective, not God's, not machines', not animals', not plants', not rivers', not mountains' and so forth. Since

415 Speciesism assigns special consideration to individuals on the basis of species. Animal rights advocates argue that this term is prejudicial.

we can only think as human beings do, we cannot pretend to think otherwise, but that does not mean that humans cannot take other entities into considerations.

So what does human thinking obligate us to do? To answer that question I want to go back to the Jewish ethics of responsibility. We have to be responsible for what's around us. Can we control it? No! Responsibility doesn't mean control, mastery, or dominion. Responsibility means facilitating all the conditions in a proper way so that life continues to grow. The value of responsibility coheres with the value of sustainability more than the value of holism which has a totalitarian tinge to it. In a holistic system, everything and everybody has only one specific way of being or acting. So I value greatly human distinctiveness and moral responsibility that flows from it, but responsibility is not about human entitlement but the obligations of humans toward other beings, both human and non-human.

7. Dew and Environment

Question: I gave the Homily about three years ago here at the conference. I had done a lot of reading and research about the phenomenon of dew in the ancient Near East and I worked with Ron Kennel to come up with a prayer sequence dealing with dew. So I was interested in your comment last evening about desertification and the patterns of rainfall in different regions of Israel. The dew, mainly in Old Testament scripture, was regarded as something magical. It caused a diamond-like appearance on the grasses. It had to do with fertility not only of plants, but it had symbolic associations. Are there any further references to the importance of dew in the history of Israel?

Response: That is an interesting question. The Jewish tradition has a special prayer for dew (in Hebrew, *tal*) and the importance of dew for the growth of plants has been recognized by the rabbis. In addition to mentioning dew as part of the regular daily prayer (known as Amidah (literally, standing, since it is stated while

standing) there were special liturgical poems in which Jews requested God to ensure that there will be dew during the hot summer months. The reference to dew appears in all prayer rites, both Sephardic and Ashkenazic, illustrating that the rabbis were not oblivious to the natural world and that they recognized divine benevolence in the very functioning of nature.

The prayer for dew is a particular relevant example how Zionism both perpetuated and transformed rabbinic Judaism. In the kibbutz most people did not go to the synagogue, although there was a synagogue. The prayer for dew, however, was sung during the Passover Seder to a beautiful melody, although in traditional Passover Seders this prayer is not included. Why did the Seder in the kibbutz mention dew? Because the prayer is about the natural world and the Seder in the kibbutz movement revolved around the inherent goodness and fecundity of the Land of Israel.

So yes, I think that if you live in an environment such as the Land of Israel you know how important dew is in the summer months; without dew vegetation will not be able to survive, and everything will become too dry. I don't know about the connection between dew and fertility, but it is plausible and logically it makes perfect sense. If things are alive they are going to be fertile, if they're dry they're not going to be fertile.

If you are interested in more about Judaism and environment in terms of biographical information, I wrote a biographical essay, that is an annotated bibliography, on Judaism and the environment for *Oxford Bibliographies Online*, which covers the literature of the 40 years. There are a hundred and eighty items on this list, which is available online. [416] There you will find everything you need to know about the field in order to start studying it.

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416 Hava Tirosh-Samuelson, "Judaism and the environment", Oxford Bibliographies Online (2015) http://www.oxfordbibliographies.com/view/document/obo-9780199840731/obo-9780199840731-0118.xml?rskey=GExMq2&result=1&q=hava+samuelson#firstMatch].

8. Engineering and the Liberal Arts

Question: In a previous discussion you mentioned that you wanted to push for engineering schools to study classes that may not be related to their major.

Response: The liberal arts, yes, absolutely.

Question: Yes, the liberal arts. I was wondering what were your thoughts on how you would try to motivate those students to think it's worth their time to do so?

Response: Well, the easy question is, how do you get them to do it? You just require them to take courses in the liberal arts. That's the easy part. If we change the curriculum and require two courses in the liberal arts in order to graduate with an engineering degree, the goal of introducing engineering students to the humanities could be accomplished.

The difficult question is, how do I convince the leaders of the engineering school to take the humanities and the liberal arts more seriously. Now that's a challenge. Over lunch a group of us as faculty were reflecting on that challenge. So to me the problem is that many of the people who lead in the humanities do not have the right kind of vision and foresightedness to really see that if we lose the humanities we're going to lose our identity. Without the humanities we're not going to be able to survive as a group because the humanities pertain to our culture.

It seems to me that to be an engineer without thinking culturally is very shortsighted. So, I am quite conservative, if you want to call me that, in regard to the importance of culture and its relevance to being human. The challenge for educators today is not so much the difference between STEM education and the humanities but the harmful impact of the entertainment industry. Many aspects of popular culture (e.g., television, videogames, sport spectacles, etc.) are designed for entertainment only and people who devote time and money for these pursuits are not interested in the texts, issues, and problems that constitute the purview of the humanities.

The challenge to the humanities then comes not from the fact that engineers are not interested in learning philosophy, literature, or history, but from the fact that popular culture generates people who do not care about thinking seriously because life is all about having "fun" here and now.

The humanities/liberal arts are crucial for our future and the universities should do much more to accentuate the importance of the humanities and require all students to become literate in the humanities. Of course that will mean hiring more professors to teach the humanities, which can be expensive, but all education is expensive and requires investment of financial resources. Education requires investment but such investment is crucial for the future of our society. The humanities preserve, perpetuate, and reinterpret our cultural resources which have made us who we are today. Without knowing our cultural past we will not be able to survive into the future. For this reason I am very much in favor of teaching courses on the great literary and philosophical treasures of the past.

I used to teach at Columbia University and that university still requires of every student to take two years of courses that introduce the students to the great literary and philosophical texts from antiquity to the present. This type of "Great Books" course exists in other universities (e.g., University of Chicago and St. John's University) but the tradition of "Great Books" has been attacked in the 1980s and 1990s as oppressive, exclusionary, and fundamentally undemocratic. I did not and do not share this critique of the Western canon even though I recognize that the canon needs to be expanded and periodically revised. My point is that if all universities (private and public) will teach these types of courses and will require them of all students in engineering schools, law schools, and business schools, our college students will be much better informed about their own culture and will greatly benefit from being exposed to this literature.

The emphasis on liberal arts education stands in conflict with the utilitarian emphasis of higher education today. Why is it the

case that students should take B.A. in business? It makes more sense to me to require students to have a B.A. in the liberal arts and go to business school, or any other professional school, for an advanced degree.

The preference for undergraduate professional degrees reflects short-term thinking: today students and their parents regard higher education as a means to an end: a high-paying job. But the focus on securing a job has diminished the value of the humanities because they are viewed as useless or irrelevant to the workplace. This is a mistaken approach that will inflict long-term damage on our society because it perpetuates cultural illiteracy and cultural amnesia. So I think that the decline of the humanities in higher education especially in public universities is a serious problem which we must address. Here in Goshen College students are very fortunate to have an institution that values the liberal arts while aspiring for excellence in the natural sciences and engineering. Small colleges like this one can find a balance between these educational pursuits better than large public universities.

I consider the failure of administrators to insist on the value of the humanities a case of short-sightedness and perhaps even lack of courage. We often graduate people who are culturally uninformed if not culturally illiterate and that will have profound negative ramifications.

Comment: I am a physician, I was an engineer before that, and I do some medical ethics. So, I can at least hold my own in the humanities from time to time, especially since my push is to teach medical students medical ethics.

However, I want to avoid romanticizing humanities too much here. The opposite way of approaching this would be to say that what we really need to do is to teach high school students a little more science, because when I look at major problems that I've had to deal with, lately it has been the deniers of science.

In ecology, it's certainly been the climate deniers who have been the biggest issue. Exxon Mobil has added to that by basically

distorting and corrupting science in the same way that the tobacco industry did for smoking.

In the vaccine resistance, which is more to my heart as a pediatrician, there's been a constant problem with false science being out there. So it seems to me that if you really want to solve some of the logic problems that we have, we need a public with a higher level of science literacy and health literacy.

Response: I fully agree with your comment and concerns. Let me begin my response by relating to your medical practice. In my view one cannot be a good physician if one relies solely on scientific information. To be a good physician, one needs a lot more than just the knowledge of how a specific organ functions or how the entire human body functions. Bodily health, we know today, is not merely physiological but includes emotional and mental aspects that cannot be reduced to material processes. So, definitely medicine would be a good example of where the humanities in the sciences come nicely together. As I indicated in my response to the previous question, I really don't think that we have a conflict between science and the humanities. In this conference, for example, many students major in the sciences and yet they are able to participate in this conference and ask questions about the humanities. The humanities are relevant and meaningful not only to students who major in the humanities. So I don't see a conflict between the sciences and the humanities.

As I already suggested, the low status of the humanities is the result not so much of STEM education but of other cultural factors such as the prevailing ethos of entertainment. Entertainment is neither STEM education nor the humanities. It's something else. And we can take it further than that. What about false science? False science is bad science. Can science be made into a bad use? Absolutely. We've seen seriously in the 20th century how science was made to promote very pernicious agendas. The science conducted in Nazi Germany was in part good science but in part very bad science skewed by a vicious racist ideology.

The point is that we need to teach good science and if corporations use science badly they need to be cited and they need to be exposed. To ensure that science will be taught properly we need to start early in elementary school. As we all know public education in this country is not doing well for lack of funding and for lack of respect for teachers and for the task of education more generally. Can we improve public education? We sure can. But in order to do that we shouldn't put the money into sports by building ever bigger stadiums at the expense of other dimensions of education. We need to greatly improve the quality of public education, especially at a high school level so that the first two years at a university level will not need to be devoted to remedial work necessary to bring students up to college-level proficiency.

In our current system of public education, the first two years are mostly remedial work so that proper level of academic instruction takes place only in the last two years of one's college experience. All this could be avoided if students received higher level of education in high school, properly preparing them for college. And high school should impart the right level of cultural literacy. E. D. Hirsch said that in the 1970s.[417] We are now 40 years later and the situation has not improved; it has gotten worse.

So our task as educators is to do both, namely, to teach science as well as the humanities so that we could prepare young adults to become good citizens. I do believe that education has a crucial civic mission and that the quality of our democracy is hampered by the lack of proper education in the sciences and the humanities. I believe it is doable, but good education demands not only resources,; it demands as well a vision and a will.

Comment: I'm also an engineer by training. For a number of years I ran the pre-engineering program here at this college, which

417 Eric Donald Hirsch Jr. (b 1928) is an American educator. He is professor emeritus of education and humanities at the University of Virginia and is best known for writing *Cultural Literacy: What Every American Needs to Know* (New York: Houghton Miflin, 1987). He is the founder and chairman of the Core Knowledge Foundation.

included my Alma Mater.

In the middle of the 90s the engineering societies, or the accrediting agency for engineering colleges, decided that engineering should not be a four year degree but it should be a five year degree, because no other professional degree pretends to do it in four years. The reason they were going to do that was because they wanted exactly what you're asking for, which is more of a background in the humanities. We pointed out to our binary students at Goshen that they were getting that already, and of course it was taking five years to do it.

The engineering schools were in a panic because they were not quite sure how they were going to fulfill the humanities requirement. And now it seems to have fallen by the wayside. I am no longer directing that program at Goshen College, I am an emeritus professor. Maybe somebody else knows what's going on. But that at least was a move at one point.

Response: I cannot comment on that. But I really believe that if a student is a good student he or she can be a good student in both intellectual pursuits. It doesn't have to be one or the other. I do care about the transmission of culture because I consider culture so crucial for our personal and collective identities. But how are we going to transmit the culture from one generation to the next and which culture will be transmitted? I would like to see our students being able to do that but they will be able to do so only if we impart to them the wisdom of the past. Currently, the level of cultural ignorance is pretty shocking and that means that our students will not be able to transmit the culture of the past to future generations. Cultural amnesia and cultural ignorance, as I have already indicated, will be detrimental to our society and especially to our democracy.

9. Educational Systems and Time Pressure

Question: I can just add to the previous comment. When I was in high school I visited a couple of state universities looking at

engineering. And they all indicated to me that it was a four year program. So, yes, I think you're right, that it has fallen by the wayside.

Response: All our educational system is under a lot of time pressure. Do more, do everything fast is today's imperative. But where is the quality? That's why I'm very much against what's going on in online education.

Online education is thriving in public universities because it opens higher education to a wider scope of students in terms of age, occupation, income, and abilities. We're all pressured to move into online education and do everything in units of seven weeks. I have resisted the demand to teach online in part because I do not believe that a subject could be properly taught in seven weeks. And obviously I'm on the losing end of this battle, because online education is thriving both in terms of numbers and in terms of income it brings to the university. But that does not make online education good.

Unfortunately, online education is the future of education for public universities. Only the small liberal arts colleges like Goshen College will be places where the humanities will be engaged with the proper depth. The public universities will not be able to be committed to the humanities because of the pressures, primarily financial ones, that they're under. The public universities have already succumbed to these pressure and they shift to online education not because it is inherently better but because it is profitable.

Personally it pains me to witness the decline of the humanities so, I am very happy to see that at least the liberal arts colleges are still committed to a different kind of education. Liberal arts education in my view produces different kinds of people, people who are reflective, able to think critically, and engage in tackling social challenges.

At ASU the Barrett Honors College exemplifies the liberal arts tradition but this nationally known college is part of a public

university. In the Barrett Honors College students study the classics in the way the classics should be taught. I have argued that all students at ASU should be taught in the way that Honors students are taught, but, of course, that costs money so that the idea is immediately dismissed on the ground of lack of funding.

10. Environmental Conflict and Collaboration

Question: In American politics there is a definite discord between the political extremes of right and left, even though they sometimes have very similar goals and methods. You mentioned earlier that some evangelicals are very pro-environmentalism, as are many liberals. There's a gap in the ideology, and they're both going at it from different directions. Is there a similar kind of conflict in Judaism? Does Judaism bring them together to bridge the gap?

Response: I'm not sure I fully understand you. Let's try to focus the question on Judaism. Now tell me what the question is.

Question (continued): Are there varying ideologies in Judaism that normally prevent people from working well together, which are bridged, because of the severity of the crisis and the similarity of environmental goals?

Response: The answer is yes and when I speak about Jewish environmentalism tomorrow I will be able to address your question more fully. Contemporary Judaism is a religious spectrum of beliefs and behaviors. The ultra-Orthodox would be on the right side of the spectrum and the secular Jews, including secular environmentalists, would be on the left side of the spectrum. All Jews are somewhere in between these poles. So your question is, "Do we have collaboration between Jewish groups, Jewish individuals, Jewish public speakers, and Jewish public intellectuals who come from different perspectives around those environmental concerns?" And the answer is generally yes. This is why I'm rather hopeful that environmental issues and especially the environmental crisis can bring people together. It doesn't have to pull people apart.

The environmental crisis brings people together because it will impact all of us, albeit not equally; the poor will be more negatively impacted than the rich. So between Conservative Jews and Reform Jews and some modern Orthodox Jews who are engaged in environmentalism, the difference is negligible. Environmental organizations affiliated with different Jewish denominations can work together, although I would admit that there is room for greater collaboration.

How much are ultra-Orthodox Jews involved in it? Not very much. Some of them are not involved at all. However, in some Orthodox communities you can actually get a lot of environmental action done. Recycling, for example, is much more successful in Orthodox communities than in other communities because religious authorities can make it mandatory. So ironically the very authority structure of certain ultra-Orthodox communities, can bring about the implementation of environmental action (e.g., recycling), better than in the other communities.

The very fact that a Jew is Orthodox or ultra-Orthodox doesn't entail that one is necessarily opposed to environmentalism. For example, Ultra-Orthodox newspaper in Israel, Yated Neeman, has published essays on environmental issues such as water, pollution, open spaces, and so forth.

Because the environment is really about the conditions of life, concern for the environment can bring people together, regardless of ideological, religious, or cultural differences.

This leads me to another question raised during my session with the students: environmentalism and the environmental challenges can bring nations together and should bring nations together. The Paris Accord of 2015 is an example of how nations can come together to address the ecological challenges. Finally in Paris, after years of dragging their feet many nations, including the United States, got together in a way that could have been done 10 or 15 years ago much more successfully. The fact that the United States later withdrew from the Paris Accord is very sad and even shameful, but it does not invalidate the accomplishments of Paris.

Addressing the environmental crisis is our responsibility and failing to do so is our guilt and shame. The most recent IPCC report gives us only 12 years to address the challenges by changing our practices. If we fail to act it will be too late to reverse the process that will eventually make the planet uninhabitable. We still have time to act rightly, but the failure to act is a failure of will rather than lack of information about what needs to be done. The failure is due to powerful economic and financial interests which have been translated into politics. The result of our political and cultural wars is that the environment suffers and that the conditions of life deteriorate. Over time environmental challenges have become more complicated and more difficult to address and at some time we will get to the point of no return and then it's going to be too late. We have to act now while we still have a window of opportunity, but in order to do so we have to work together, we need to collaborate, and we need to overcome ideological, religious, and political differences and that is hard.

Collaboration takes effort, takes leadership, and takes commitment. Most people don't like to collaborate because they believe that they alone have the answer and the only answer. Well, I believe that the immense ecological crisis requires us to cooperate with each other because, in principle, there is no one answer to these challenges; all we have are partial answers that need to be applied locally and flexibly. So we all need to collaborate with each and we all need to do our share in ensuring the future of life on our planet, our one and only home. That attitude is the beginning of an answer to the environmental challenge. I am very grateful for the organizers of the Goshen Conference on Religion and Science for showing us how collaboration between science and religion and between various religious traditions can take place.

Thank you very much for the opportunity to address the conference.

Discussion 4, Sunday Morning

Topics considered in chronological order:

1. Christianity and Climate Change
2. Judaism and Community
3. Neglect of Ecology
4. Centers/Topics/Christian Community
5. Personal Motivation and Sytems
6. Ethics of Care/Ecofeminism
7. Activism and Scholarship

1. Christianity and Climate Change

Question: I am thinking of the importance of approaching the ecological question from a religious standpoint. Anybody who has dealt with these topics as a scientist must have realized the truth of what you've said. We do not excite people by telling them scientific facts. They hate to hear it. We do not excite people by telling them the honest fear that they perhaps should have about what might happen. They don't want to hear that either. But religion does bring the human being into the question herself. And I think that if we can possibly, as Christians, learn in some way to go back to our Jewish roots and realize that people should hear this, that this is our obligation, this is our call to defend the planet. So that's what I heard so clearly in the last part of this lecture.

Response: I could not agree with you more. My lectures do imply that Christianity should embrace its Jewish roots in order to address the ecological crisis. That's how I read *Laudato Si'*. I believe the *Laudato Si* affirms the approach of the Old Testament, or rather the Hebrew Bible, because it minimizes metaphysical dualism and highlights the interdependence of materiality and physicality. Of course there are other theological teachings that go beyond the Old Testament, but speaking as a Jew I deeply resonate with *Laudato Si* and consider it a document that could function as

the foundation for inter-faith collaboration. The same can be said about "The Ecological Crisis: A Common Responsibility," issued by Pope John II. In my course on religion and environment I teach both documents and find them to be marvelous. Teaching about religion and environment has led me to realize that how much agreement can emerge when the Abrahamic traditions Judaism, Christianity, and Islam are engaged in light of the environmental crisis. There are of course differences between the three traditions, but in terms of concern for the environment they share what I have called an ethics of care and responsibility.

2. Judaism and Community

Question: I'm glad you brought up again the communal outlook on decision-making and actions in historical Judaism. It is probably more difficult for many of us here in the West, with an individual outlook, to adopt this, although it may be possible over time. Do you think that in Judaism today, given its different manifestations, the communal way of living comes through even across the diaspora.

Response: Well, the simple answer to your question is "yes."

It is true that contemporary Judaism is highly diverse both in the diaspora and in Israel. However, we should remember that one cannot be a Jew alone. That means that Jewish existence is necessarily communal. One really can't exist as a Jew without interacting with other Jews both ritually and culturally. Let us recall that for prayer, the Jewish tradition requires the presence of 10 adults. Well, originally in rabbinic Judaism and still in Orthodox Judaism this means ten adult males, but liberal or progressive forms of Judaism (namely, Reform, Conservative and Reconstructionist Judaism) count women in this minimal requirement of adult people. Of course, one can also pray individually, but that does not fulfill the obligation for communal prayer. In other words, the communal aspect is built into the religious practices of Judaism. That seems to me a major difference between Judaism and Christianity. If I understand it correctly, in baptism one enters into Christianity

as a single individual, not through birth. To be a Christian then is inherently an individual matter since at stake is the condition of the individual soul. By contrast, to be a Jew is inherently a social matter since Jews require other Jews to be Jewish. Today given secularization, acculturation and assimilation, there are many Jews whose Jewish identity and identification is very marginal; they are not associated with the Jewish community; they do not participate in Jewish life; and they are not engaged with other Jews. The total number of Jews in the United States is less than 6 million but many of them are not involved in the Jewish community, even though they refuse to be anything other than Jews.

Secular Jews are not interested in conversion to other religions. Very few convert to Christianity, but many secular Jews are attracted to Buddhism, which is a very interesting phenomenon. Some Jews are also attracted to Unitarianism, but most non-observant Jews define themselves ethically or culturally Jewish and express themselves spiritually in all sorts of ways.

The communal dimension of Judaism is evident in all forms of Judaism, but especially so in the Orthodox and Conservative varieties of Judaism. This is most evident in the celebration of the Sabbath each and every week. The rituals of the Sabbath take place both at home and in the synagogue, so every week on the Sabbath Jews socialize with other Jews in order to worship God. The communal dimension of Judaism becomes less pronounced in more liberal forms of Judaism, but the community is the basis of Jewish life no matter what kind of Judaism one endorses.

3. Neglect of Ecology

Question: You criticized the *American Journal of Science* (AJS) because of its lack of including ecology as a subject.

I have been active in the area of religion and science for 25 to 30 years and co-led a seminar at Cal Tech for two years on this subject. I cannot recall whether we had anyone speak about ecology in that particular seminar program. We may need something like a neo-

religion and science conference because historically the religion and science conversation in general has not included ecology. So it's not just the AJS. It is our own inclination.

At Goshen College we have also talked about how difficult it is to bring the Merry Lea Environmental Learning Center[418] directly into this conference. This is probably the first time we've managed to do that in a direct way. Thank you for helping us do that. It's a challenge for all sides.

Response: Thanks for your comment. When I mentioned the AJS I did not refer to the *American Journal of Science* but to the Association of Jewish Studies. Nonetheless, I want to understand the problem better: has it been hard to recruit somebody who can talk about ecology as a scientist or as a religionist, or as a person who is interested in the interplay of religion and ecology?

Question (continued): I would say that the religion-science conversation historically has been predominantly in particular areas of the academy, vis-à-vis the biological sciences and physics. The conversation has not been so much located in the environmental sciences. The importance of environmental science has only been evident since about 1972. It's interesting that our conferences haven't reflected the new reality.

Response: Since I have a foot in both camps, so to speak (even though I do not like to speak about religion and science as "camps") I think that the Goshen Conference on Religion and Science should bring to campus people who engage the field of religion and ecology or religion and environment. My impression is that the science and religion discourse has been dominated by physics rather than biology, let alone ecology. It seems that the physicists, with their problematics and their kind of struggle, primarily with the focus on the origin of the universe, origin of life, have dominated the academic field religion and science at the expenses of other sciences,

418 Merry Lea Environmental Learning Center of Goshen College is located just south of Wolf Lake at Bear Lake in Noble County, Indiana, United States. Merry Lea is the largest privately held land reserve in the state of Indiana.

including environmental sciences or the science of ecology. The field of religion and science must include these sciences as was done, for example, in *The Oxford Handbook of Religion and Science* (2008) or the *Routledge Companion of Religion and Science* (2012).

4. Centers/Topics/Christian Community

Question: Yes, certainly physics has dominated in some areas of the study of religion and science. In particular there is Bob Russell at the Center for Theology and the Natural Sciences[419] (CTNS). In the Chicago community, however, the focus is almost entirely on what they call the human sciences. The emphasis anywhere depends a lot on the leadership, what they are familiar with, and the people they attract.

Most of my life I have been familiar with the Christian community. I have not encountered individual Christianity. The center has always been the community. Perhaps we don't have to have a required quorum to pray, as in Judaism, but there is still concern about the community and your place in it, your responsibility for it, what you learn from it. I have never been in a very individualistic Christian situation. I am sure there is that in the Christian tradition, there are certainly the Desert Fathers and such people. There are also some sorts of orders that I think probably emphasize that. But I doubt that it's the majority.

Response: Your comment raises three important points. I am in full agreement regarding your first point. The various research centers that promote the discourse of religion and science reflect the preference of the individuals who lead these centers.

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419 CTNS promotes the creative mutual interaction between theology and the natural sciences. The CTNS mission is carried out through three program areas: research, teaching and public service. The central scientific focus of these programs is on physics, cosmology, evolutionary biology, and genetics, with additional topics in the neurosciences, technology, the environmental sciences, and mathematics. The central theological focus is on Christian theology, ethics and spirituality, with additional attention to the theological issues arising from the engagement between the sciences and world religions.

Unlike other academic fields, the field of religion and science is also indebted to one major funder, and we all are familiar with the importance of the Templeton Foundation. In most other academic fields there are several sources of funding, be they federal agencies or private foundations. As a result, many decisions about the research agenda of the field are determined by the deliberations of the few people who are on the boards of the Templeton Foundation, the Templeton Religion Trust, or the Templeton World Charity Foundation.

Your second point is that in some centers, for example the Zygon Center for Religion and Science located at the Lutheran School of Theology at Chicago there is great attention to the social sciences and the humanities rather than to physics. I also agree with that observation and suggest that the discourse on religion and science should include all the sciences, that is, the natural sciences, the social sciences, and the human sciences. By the same token, the discourse of religion and science should encompass all religions, and should not be dominated by one religion, that is, Christianity. All of us, scientists, religious believers, and humanists are seeking the truth, and we need to get all of it.

Regarding your third point that Christianity is also a communal religion, I will have to take your word for it, and tone down the difference between Judaism and Christianity in that regard. I fully agree that Christianity has a communal dimension, which varies among the various forms of Christianity. However, in Judaism one does not choose a community, because one is born into the community, into the Jewish people. The ritual of circumcision (in Hebrew, *brit millah*) signifies this point of joining the community, the Jewish People. In the end, you are probably right that the difference between the two religions is not as sharp as I have suggested.

5. Personal Motivation and Sytems

Question: Your statement was that religion can motivate people

to act but science doesn't. Carl works at creating more excitement, perhaps, in getting people to see both. I'm wondering, however, if you can really influence a system from the outside. Of course, if you're inside the system you may be too corrupted by it to want to influence it. But my belief has been that while I want to increase science literacy of the public, in the long run it is more effective to get the scientists to care and be motivated to do things.

There are scientists who view science as the search for the capital T Truth and the question of how the universe *really* works. There are also scientists who are strongly interested in what is going to be the result of their work, and I trace some of that back to the Russell-Einstein manifesto.[420] We are responsible for what we've created. When I've done professional ethics of science I find that this idea has carried through everywhere. The question of effectiveness must be decided on the basis of empirical evidence.

At this point I'm going to assert that motivating the scientists to care, and then having the scientists working on the right projects, is going to be better than trying to get the public motivated to deal with environmental issues.

Response: If I understand you correctly, what you are asking for is not historical evidence, but sociological evidence. I obviously don't have that evidence. I don't know that anybody has such evidence. But let me reflect a bit on what you say.

I'll first tell you where I'm coming from. At ASU, my academic

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420 The Russell–Einstein Manifesto was issued in London on 9 July 1955 by Bertrand Russell in the midst of the Cold War. Following the manifesto is the resolution: We invite this Congress, and through it the scientists of the world and the general public, to subscribe to the following resolution: *"In view of the fact that in any future world war nuclear weapons will certainly be employed, and that such weapons threaten the continued existence of mankind, we urge the Governments of the world to realize, and to acknowledge publicly, that their purpose cannot be furthered by a world war, and we urge them, consequently, to find peaceful means for the settlement of all matters of dispute between them."* The signatories were eleven pre-eminent intellectuals and scientists, including Albert Einstein, who signed it just days before his death on 18 April 1955.

home, we used to have a very famous science educator, Lawrence Krauss, who has done a lot for the popularization of science, particularly physics. Professor Krauss is an avowed secularist who has disdain for religion and his position is shared by many other scientists. At ASU there were people who were upset with the attention that Krauss received, arguing that religious perspective did not receive due attention or proper representation. My response has been not to worry about what Lawrence Krauss says or does not say but rather to ponder the more general issue: why is religion not taken seriously by people who represent scientific endeavors, scientific education, and scientific truths.

Actually I have had some interesting conversations with Lawrence Krauss, for example about beauty. As a scientist, he is very attentive to the value of beauty, but the concept of beauty raises many theoretical questions that science itself cannot answer. So even on the assumptions of a secular scientist such as Krauss, in order to reflect on the meaning of science we need to go beyond science to philosophy, art, or theology.

There is another camp of scientists, of those who are morally engaged and socially engaged, especially in regard to environmental issues that raise social justice questions. This is clearly moving in the right direction, but taking ethical issues into consideration is yet another proof that science is not self-sufficient. Many scientists are still uncomfortable getting involved in issues of social urgency because they will compromise the commitment to disinterested, impartial objectivity.

It all depends how you frame your understanding of the scientific method and the scientific project. If you are supposed to be totally objective, disinterested, and disengaged then you are going to think twice before getting involved in certain social projects, or at least you're going to be cautious about it. I fully understand the challenges that contemporary scientists feel and their reluctance to get involved in social issues, but climate change and environmental degradation are examples of problems that demand involvement not only in basic research but also in the social ramifications of such

research. Obviously, I am in favor of scientists who are socially engaged, but I also respect those who do basic science and who want to protect the sanctity of science by shielding it from social engagement. We need both types of scientists, but my personal preference is for the socially engaged scientists.

In general, there is a gulf between scientists (or scholars) and activists and we see that gulf very clearly in Jewish environmentalism. The Judaic scholars in the Association for Jewish Studies (AJS) do not take environmental activism seriously and conversely the environmental activists are not informed by the scholarship about Judaism and nature. What I said about religion and science pertains also to Judaism and environment: we need the scholars or the scientists as much as we need the social activists. Both communities need to be informed about each other and take each other seriously.

6. Ethics of Care/Ecofeminism

Question: You have spoken of the ethics of care and of how that relates to ecofeminism. Is that based on the Hebrew Bible or does that come more from Jewish philosophy?

Response: Do you mean ethics or care in general and in feminism?

Question: Yes.

Response: Both feminism and the ethics of care began as secular endeavors, influenced neither by the Hebrew Bible nor by Jewish philosophy. One of the leading feminist ethicist who has promoted the ethics of care is Virginia Held who is not a Jewish ethicist. Her book, *The Ethics of Care: Personal, Political and Global* (2006) is an example of secular ethics of care that includes care of the environment, although ethics of care is much broader than care for the environment. There are many other secular ecofeminists and feminist ethicists who talk about ethics of care, making no reference to religion, be it Christianity or Judaism.

And yet the story is more complex and relevant to Judaism.

The woman who gave rise to the ethics of care as an alternative to reigning moral theories is Carol Gilligan. Her book, *In a Different Voice: Psychological Theory and Women's Development* (1982) was crucial for the feminist critique of moral theory as well as psychology. Few people are aware that Carol Gilligan is Jewish and that her moral sensibilities were shaped by her Jewish upbringing and involvement in Reconstructionist Judaism. Similarly Joan Tronto, a leading proponent of ethics of care who applied this concept to politics and asked fellow feminists to engage ethics politically is Jewish, and I find that fact to be relevant to the content of her work. So being Jewish or having a Jewish identity is not unrelated to one's intellectual postures even if one does not speak within the framework of traditional Judaism.

I find the ethics of care to be a very fruitful metaphor that cuts across the boundaries between the religious and secular divide. Since we all need care, we all benefit from care, and we are involved to some extent in caring activities, the language of care is particularly relevant and useful whether we interpret it religiously or not. Care for the environment therefore is a very useful concept because it establishes the ground for shared activism regardless of the theoretical justification.

Ethics of care, by the way, was promoted by feminists such as Carol Gilligan who critiqued the dominant moral theories because they focus on rules rather than or relationships. Interestingly, the focus on relationality was articulated philosophically by (male) Jewish thinkers (e.g., Martin Buber, Franz Rosenzweig, and Emmanuel Levinas) and the impetus for their ideas was clearly religious. There is an interesting similarity between feminist ethics of care or ecofeminism and Jewish dialogical philosophy, although feminist thinkers are often unaware of Jewish philosophy.

The main point is whether ethics is religious or secular, it is a very good posture to take in response to environmental challenges.

7. Activism and Scholarship

Question: I think the differences we have been discussing regarding the approaches of ecology and activism versus more objective science we see in religious studies versus theology and in religion versus ecology as well. There are people in religion and ecology who see activism as an important aspect of scholarship. Engaged scholarship is the purpose of the field of religion and ecology. Whereas some other people, for example Bron R. Taylor, see that as precisely the problem with the religion and ecology discussion. They believe that it should be focused on religious studies with some objectivity to it and that we should take activism out. I am interested in hearing your position both as someone teaching in a public university and part of Jewish studies rather than what is usually thought of as a Christian theological field.

Response: That's a good, very good question. So let me try to relate to the various aspects of it. Let's start with the public university, the context in which I'm doing this work. Obviously, in the public university you cannot engage in advocacy in the classroom and you need to be especially careful in regard to religious advocacy, given the separation of religion and state.

But that does not mean that the study of religion has no room in the public university. There are intelligent ways of studying religion, engaging religious concepts, raising religious questions, or analyzing religious texts. That is what the discipline of Religious Studies is all about and Religious Studies can be and should be taught in private as well as public universities. At ASU Religious Studies is committed to the anthropological approach to religion, which is quite suspicious of theology, but that has its own problems. For example, because of the focus on anthropology or sociology of religion, theological literacy is gone. Students are not familiar with the theological richness of their own traditions, let alone know something about theologies of religious traditions other than their own. The lack of theological literacy or even literacy in the history of one's own tradition means that we teach Religious Studies we

need to provide an awful lot of background information so that students will be able to read the texts, whether primary sources or secondary sources. I find that to be a problem.

For that reason I try to avoid juxtaposing Religious Studies versus theology. One can be a scholar of Religious Studies as well as a theologian, since one does not exclude the other. But of course one needs to do them well and intelligently. In the field of religion and ecology there is no need to choose sides between Mary Evelyn Tucker and Bron Taylor, since both are contributing to the discourse of religion and ecology in their own way, emphasizing different aspects.[421] In my course on religion and ecology we read texts by theologians such as Sallie McFague[422] and Calvin DeWitt.[423] These are constructive Christian theologians whose writings demand considerable theological literacy. I can teach these texts as a scholar of Religious Studies, even though I am not a Christian theologian, and my students can understand these texts even though they may or may not be Christian believers. Of course, these same texts would be taught quite differently in courses on religion and ecology in a Christian seminary, a Christian divinity school, or a Christian liberal arts college associated with a particular denomination. Teaching at a public university my goal is to show that religion is not necessarily an obstacle to environmentalism and that religious thinkers, religious texts, and religious institutions have something very beneficial to say about environmental matters. Religion is not just part of the problem but also part of the solution to our ecological

421 Mary Evelyn Tucker is the co-founder and co-director of the Forum on Religion and Ecology at Yale University with her husband, John Allan Grim. Bron R. Taylor is the founder of the Society of Religion, Nature, and Culture and the editor of the Journal of Religion, Nature, and Culture. I explore the differences between them in the Introduction to this book.

422 Sallie McFague is a feminist theologian who claims that metaphore is at the heart of our understanding of God. She has used this in her treatment of ecological issues considering the care of the earth as if it were God's body.

423 Dr. Calvin B. DeWitt is Professor of Environmental Studies at the University of Wisconsin-Madison, co-founder of the Evangelical Environmental Network, and Director emeritus of the Au Sable Institute.

crisis. But that's different from asking how I as a Christian, or as a Jew, or as a Muslim should interpret my traditional text in order to advance an environmental position.

I always begin my courses by locating myself religiously. I tell students that I am a Jew and they know that I cannot and will not engage in Christian hermeneutics. Students very much respect me for clarifying my religious particularity and the fact that I recognize that I cannot speak *for* Christianity because I am an outsider to it; I can only speak *about* Christianity or any other tradition for that matter. When I teach non-Jewish texts, I apply my historical, analytical, and interpretative skills as a scholar of Religious Studies but I do not speak as a constructive theologian because that requires a faith perspective.

Now, where do environmental activists fit into the framework of Religious Studies? I occasionally bring religious environmentalists (Jewish or Christians) to the classroom to speak about their own activism. Sometimes the person has an advanced degree or studying toward such a degree, but often that is not the case. For example, I introduced students to David Krantz who is a Jewish environmentalist, who is working for a Jewish environmental organization called Aytzim that runs a website called Jewcology, who is also studying for advanced degree in environmental science at ASU. On another occasion I introduced students to Reverend Douglas Bland who is the head of Arizona Interfaith Power and Light. Reverend Bland is an example of Christian activist who is very involved in inter-faith work in the Phoenix area. This is an example how to let religious activists do the talking and allow students to wrestle with the challenges of religious environmental activism. Their presentations enhance what I teach, which is text-based rather than action-based. So that's how I try to bridge between scholarship, faith, and activism. I regret that to date I have failed to introduce the students to Muslim environmental activists but I will continue to search for one. The challenge is to find a Muslim environmentalist who could not only cite and explicate relevant passages from the Koran, but who could also speak about

Muslim environmental organizations in the West, in Asia, or in the Middle East. Students are required to find information about such organizations from the web, but it will be more effective to introduce them to Muslim activitss. In short, your point is well taken.

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