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Mah Rabu Ma'asecha Adonai
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As many of you probably know, every single rabbi gets asked one question over and over again: “why did you want to become a rabbi?” The dozens of times that we are asked this question force us to cultivate an elevator speech about what our motivations were for choosing to serve the Jewish community—an incredibly challenging but joyful life decision. However, for me, there has also been a second question that has come along the usual “why did you want to be a rabbi” conversation. When I tell people about my background in organic chemistry and biology from my undergraduate years, the question inevitably becomes: “Hmm, biology and then the rabbi. That seems like a very substantial change. How do you explain it?”

I understand why people ask the question: you don't see many people in lab coats on the pulpit. But the underlying assumption behind this question, that science and religion are antithetical to each other, troubles me. What could a man trained in biology and evolution want to do with the world of the spirit? Isn't a person who believes in God just going to be disillusioned if he learns about the laws of nature? These sorts of questions lead one to believe that he can either have his belief in God as the Creator of the Universe or his science, but he cannot have both.

The conflict between science and religion is nothing new; it has been going on for centuries. Galileo, through his observations that the planet Venus has phases like the moon, hypothesized that the Sun was the center of the Solar System and not the earth. These assertions led him to be tried by the Vatican and put under house arrest. In this country, the Scopes Monkey Trial of 1925 brought the debate over evolution to the

forefront of the national consciousness. John Scopes, a science teacher in Tennessee, broke the Butler Act in teaching about human evolution in public high school and was fined \$100 by the state. The trial was overturned on a technicality but it was momentous because it pitted Modernists against Fundamentalists who believed that the word of God took precedence over all human knowledge. Of course these are debates that persist to this day, as Fundamentalist Christians are fighting to insert their Creationist pseudoscience into school textbooks and to present Evolution as a disputable theory.

The conflict between Creationists and Modern Scientists blew up all over social media a few weeks ago as a debate between Ken Ham, the director of the Creationist Museum in Petersburg, Kentucky, and Bill Nye the Science Guy, the host of a science program for kids, was held over the validity of Creationism and Evolution. The debate lasted for an astounding three hours; it was truly thrilling to watch. Bill Nye laid out very persuasively the overwhelming evidence for evolution: the rock samples that show the earth is 4 billion years old, the fossil record that traces the development of life from lower forms to more evolved forms over the course of hundreds of millions of years, the radioactive dating that allows us to very accurately date all the fossils we dig up. Ken Ham, on the other hand, argued that modern science, as we know it, is actually two different fields. As he sees it, there exists observational science, which allows us to describe the world as we see it, through direct observation. And then there is historical science, which he argues is not science at all, since it is unobservable. Since historical science cannot be observed or verified, Ken Ham argued that Creationism, as supported by the word of God, is the only viable model for Creation. Bill Nye very quickly slammed this assertion that observational

and historical science are two different fields as completely and utterly absurd. Ken Ham, though he was speaking the language of scientists, was clearly a charlatan.

As a scientist and as someone who believes in God and who is entering Jewish leadership as a rabbi, I feel the need to lay my cards on the table. There is zero doubt in my mind that the Theory of Evolution is the only historical theory that makes sense. The fossil evidence is indisputable. Furthermore, we can actually observe evolution taking place in real time, through the bacteria that evolve to become resistant to antibiotics or the HIV virus which is able to evolve and become resistant to AZT or anti-retrovirals. To dispute the Theory of Evolution is not just disputing science, it is choosing a life of willful ignorance.

Willful ignorance is not victimless decision, but rather it has the capability of wreaking havoc in our personal lives and in our society. In our Torah, when Pharaoh was experiencing the plagues in Egypt, he chose willful ignorance that it was the God of the Israelites that was performing these miracles, and he would not let the people go. This willful ignorance led to the destruction of the prosperity of Egypt, the Egyptian firstborn, and Pharaoh's army at the Red Sea. Vaccine conspiracy theorists have ignored the science that says that vaccines do not cause Autism and are a necessary protection from horrific diseases. Their willful ignorance has led to the outbreak of diseases that we thought were extinct and many preventable deaths in infants and small children. Global warming deniers, who willfully dispute the scientific consensus on climate change, are successfully preventing the implementation of technologies we need to stop carbon emissions that pose an existential threat to life on this planet. Compared to this, evolution might seem like small potatoes. You might ask, what's the harm in not teaching evolution, if it is simply a

matter of belief? I believe that there are very negative consequences to teaching Creationism. Not teaching our children evolution makes them unprepared to enter the scientific community when they enter higher education. Moreover, I believe that spreading this ideology fans the flames of hostility to the scientific community and may cause our country fall further and further behind the rest of the world in discovery and innovation. We need the United States to lead the world in scientific innovation if we are ever going to eradicate cancer, Alzheimer's, or combat Global Warming and stop the mass extinction of species that we are currently causing.

While I firmly believe that we cannot afford as a society to place scripture above the discoveries of science, I also recognize that coming to a place where one can reconcile their Judaism with their understanding of the scientific world is not easy. As a people who treasures their sacred text and believes that the Torah is both our revelation from God and the sign of God's love for us, saying that the stories of the Bible are myth and not fact is hard to swallow. So we are left with the question of how we can both treasure our Judaism and our sacred texts while also accepting science. How do we make them not contradict each other? There are many answers to these questions, and I'm sure that a good many of you tonight have thought a lot about this question and come up with creative ways to both accept science and treasure our sacred texts. Tonight I want to present you all with two ways of answering this question: a philosophical answer and a mystical answer.

The philosophical answer to this question is that science and religion do not conflict with each other because they speak to two non-overlapping areas of knowledge. That is to say, science and religion talk about different things, so any attempt to try to combine them or replace one of them is absurd. If we do not allow religion to make a claim about our

knowledge of the creation of the universe, then we can see that science and religion actually do speak to two different areas in our lives. Science gives us knowledge of the mechanics of the universe. Religion speaks to the ethical systems that we create for ourselves. I passionately believe that both of these areas of knowledge are essential to the functioning of society. While science can tell us what is possible to create, it cannot tell us anything about whether those technologies should be created. With science, we know that we can keep a dying person alive with feeding tubes, ventilators, and machines, but we need ethical systems to determine whether preserving life in that manner is moral. With science, we have developed enough nuclear weapons to destroy the world multiple times over, but we need ethical guidance to tell us whether those bombs should be brought into existence. With science we have developed the Internet and all kinds of social media, but we need our religion and communities to help us see the sickness of isolation and depression that is developing in our culture. So we see that religion and science do not have to conflict because they speak to two different and essential human needs.

While this philosophical answer works for some people, for others it is unsatisfying. While they do not want to allow their religion to cause them to be willfully ignorant, these people also do not want to totally eliminate God from the picture of creation. For these people, I offer the mystical answer, described by Rabbi Arthur Green in his book Radical Judaism. Rabbi Green wanted to create a theology for himself in which science and religion were not two separate worlds, but in which they were one and the same. He wanted his theology to be a realistic one, so he decided to use science as the language he would speak in to describe God. Rabbi Green decided to make use of the belief of Maimonides that God was not the micromanaging creator who made everything the way it is now, but rather that

God was the One who set into motion the process of creation. So for Rabbi Green, creation and revelation are one and the same, and God's revelation was not something that happened at one instance, but it is an on-going process. In that regard, we can see evolution not as something that contradicts God's presence in the universe, but rather as the mechanism that God put into place to create the fantastic variety of species that we have on our planet. As much as Sinai was God's revelation to humanity, so was each branch on the evolutionary tree—the first amphibian to walk on land, the first bird to fly in the sky, the development of the human brain. These moments, explainable through evolution, were moments of God's revelation. We see then that God is not so much a thing or a person, but rather God is a process—an ever-evolving and changing Creation that we as humans can understand and participate in.

I want to tell you all something about myself, which might begin to answer the question of how I came to be a rabbi after my years as a scientist. I believe that I fell in love with science and my Judaism at the exact same time. I was eight years old, and my mom and I were reading books about astronomy. And when I saw the pictures in those books—the Big Red Spot of Jupiter, the rings of Saturn, Solar Flares on the Sun, and stars and nebula and galaxies—I felt the most profound kind of awe that a person can feel. When I saw the wonders of the universe I knew that I had to learn everything I could about it. But I also felt the loving presence of something Greater. From that experience of awe and wonder at the astounding beauty of the universe, I understand fully the line in our liturgy that we say every morning: *mah rabu ma'asecha Adonai*: How truly awesome and amazing is Your Creation Adonai. I truly hope that as we discover more about our universe that our love and gratitude to God expands all the more.