

Seeing, Science, and Spirituality

So, who here likes science?

Nice.

I have always been fascinated by science – loved AP Bio in high school, riveted by my science classes in college, always turn first to *Science Times* on Tuesdays, and enjoy watching the Science Channel with my sons including shows like *How It's Made*.

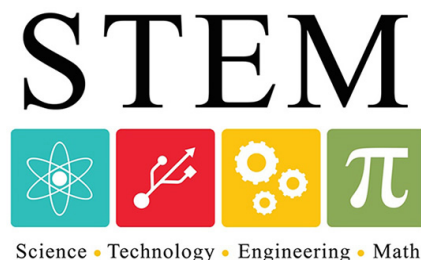


Anyone here ever take a class in college in a STEM (Science, Technology, Engineering and Math) field?

What about a major? Anyone have a bachelor's or graduate degree in anything STEM-related?

Wow – take that in.

That's a huge percentage of our *shul*.
I have even met members of our community who had doctorates in two scientific fields – one they were using for their work and the other one they kept in the back pocket just in case of.... I'm, I'm not really sure.... 😊



So, in case you haven't noticed, science has been getting a bad rap; there are school districts that do not teach evolution and many Americans who reject the science behind climate change.

Some have really been on a crusade that science is not factual. And many of these attacks have come from people who claim, in the name of religion, that science is wrong.

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So, let me state this unequivocally: science and religion are not mutually exclusive. Science explains what the universe is and how it came into being; religion, ideally, all spiritual paths, come to answer: why is there a universe and what is our purpose in it?

Let's make sure that I, as a fairly religious person, have my facts straight.

So, this is the history of the universe, as we know it today:



Our universe (I will not speak to previous or parallel universes as my knowledge of them is mere conjecture), is approximately 13.5 billion years old.

While we just ushered in the year 5,778 on the Jewish calendar, and it is 2017 since the year that our most famous Jew was born (though Jesus was probably born

four years before that in reality), we know with a high degree of probability that the universe is much, much older.

Some highlights on our human timeline:

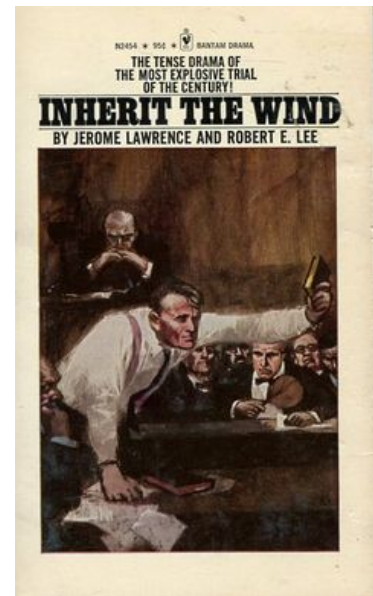
- 4.5 billion years ago, the Earth formed.
- 3.8 billion years ago, organisms formed.
- 6 million (note the jump from billion to million) years ago, the last common grandmother of humans and chimpanzees died.
- 2.5 million years ago, the genus *Homo* evolved in Africa.
- 500,000 years ago, Neanderthals evolved in Europe and the Middle East.
- 300,000 years ago, the daily usage of fire is commonplace for humans.
- 200,000 years ago, our species, *Homo Sapiens* evolved in East Africa.

At first, you might listen to that list and say, wait a second, doesn't that contradict the story of Creation in our Torah?

True, for many years, most Jews and Christians believed that one could not hold these two narratives simultaneously. This led to confusion and events in American history like the Scopes' Trial and even the current backlash against science.

But, almost two thousand years ago, our rabbis already knew otherwise. One of our famous *midrashim* states that "until this point [the sixth day of Creation] the counting is done relative to the universe; from this point on, a different system of counting commenced. (Midrash *Bereisheet Rabbah* 9:14)

Another midrash echoes this approach: "And there was evening, and there was morning, the first day.' This [the rabbis teach] is a thousand years, which is the day of God, as it says: 'For a thousand years are in Your eyes as a day.'" (Psalm 90:4) (Midrash *Pesikta Rabbati*, *Hosafah* 2:1)



So already thousands of years ago, our rabbis were aware that the six days of creation were not actually six days, they were much longer. The Torah text comes to teach us not what literally took place in a day, but the overarching themes of creation – that the world is filled with goodness and blessing and that we, as humans, are entrusted to protect the world: the plants, the animals and the environment.

And that we humans are ALL created in God's image – male and female; therefore, both genders are equal and every human being is of infinite worth, of inestimable value.

That is what the Torah teaches, not the hard science of astrophysics.

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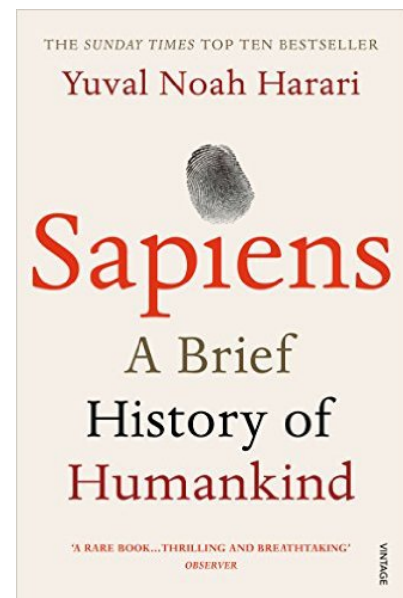
I want to explore how science and Judaism can truly enhance each other, helping us appreciate the sparks of the Divine that lie all around us.

And to do this, I want to start with a book I have been reading this summer: *Sapiens: A Brief History of Humankind* by Yuval Noah Harari, a professor of history at Hebrew University in Jerusalem.

In this brilliant book, Harari, who writes in English with clarity and color, narrates the history of our species: how we evolved. He presents the timeline, the major events in the evolution of *Homo Sapiens* (as distinct from other similar species that did not survive: Neanderthals and *Homo Erectus* as examples) and then how we as *Sapiens* have continued to evolve.

Harari describes three revolutions — the cognitive revolution some 70,000 years ago, the agricultural revolution about 10,000 years ago, and the industrial revolution.

(We are currently going through a fourth revolution, but that is his next book....)



Each of these three revolutions, catapulted humanity forward bringing blessings, but also, in their complexity, creating many challenges that we have had to learn to cope with and in some cases we are still learning how to cope.

Not a believer in God, Harari presents a challenge in this book: “As far as we can tell from a purely scientific viewpoint, human life has absolutely no meaning, humans are the outcome of blind evolutionary processes that operate without goal or purpose.”

“Our actions aren’t part of some divine cosmic plan and if Planet Earth were to blow up tomorrow morning, the universe would probably keep going about its business as usual. As far as we can tell at this point, human subjectivity wouldn’t be missed at all. Hence, any meaning that people ascribe to their lives is just a delusion.”

But there’s more; his conclusion, “[human beings] have developed through science and technology, the power of gods.”

In his words, “we are more powerful than ever before, but have very little idea what to do with all that power” and then his closing sentence: “Is there anything more dangerous than dissatisfied and irresponsible gods who don’t know what they want?” (p.416)

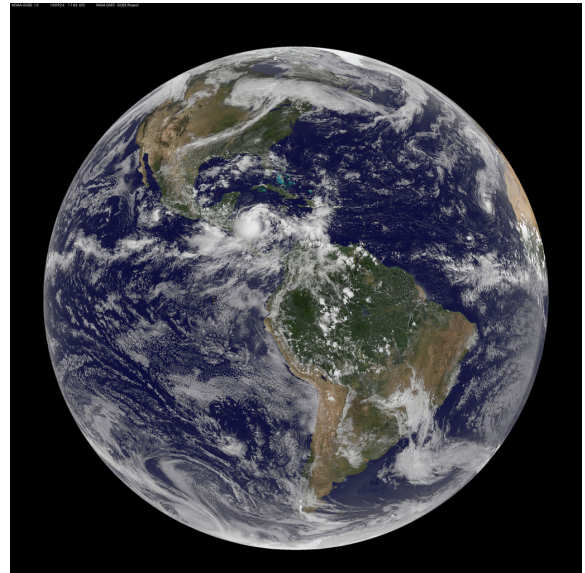
Writing these words in 2015, little could he have known how prescient they were.

But I want to look at the deeper challenge.

If you push evolution to its end, then, as he claims, there is no point to human existence.

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Rabbi Jonathan Sacks, the brilliant chief rabbi of Great Britain, was challenged by Harari and offered



a rather simple explanation. Responding to Harari, [Sacks, in a video](#), said that there is God because there are no morals without God.

While I am normally moved and impressed with Rabbi Sacks' teachings, this one I found wanting.

First, it is not true – I know plenty of people who are atheists and are quite moral; they root their morality in ethical or secular humanism. And, sadly, I have seen many believers who, hypocritically, do not act ethically.

So, I need another answer to Harari's challenge.

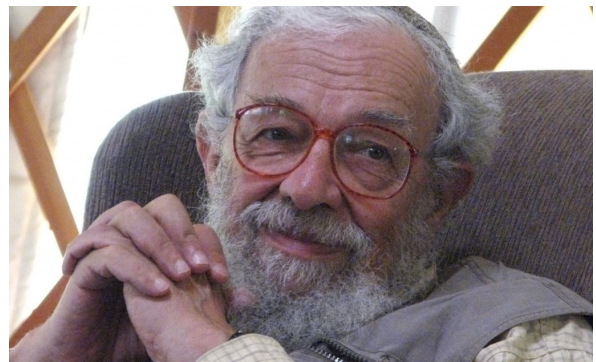
As it happened, a few weeks ago, I was paying a *shivah* call to my teacher [Rabbi Art Green](#), whose wife, Kathy, z"l, had passed away after living with debilitating Parkinson's Disease. Watching him care for her at places like the Newton Centre Minyan and [Hebrew College](#), was always moving, modeling not just someone who writes about *hesed*, about love, but also someone who incorporates it into his very being.



Sitting in the *shivah*, we discussed several topics including the fun story of how he met his wife. An interesting aside: they were set up by [Rabbi Zalman Schachter Shlomi](#), the founder of the [Jewish Renewal movement](#), who was picking her up at the QE2 in New York on her return from Israel and in the car was also [Elie Wiesel](#) whom Zalman was driving to a

conference in the Catskills.

Apparently, Zalman was into Catholic spirituality at the time and as he drove the car, started extemporizing on the greatness on a specific form of Christian poetry. When Wiesel



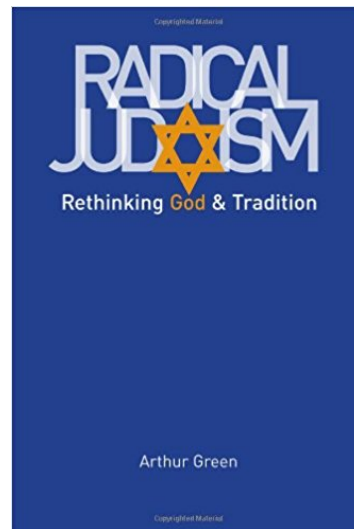
could not take it anymore, he started a *niggun*, while waving his finger. Art said it was unclear if he was just keeping the beat or shaking his finger at Zalman!

Art and Kathy were in the back seat; that was their first date!

After Art shared with me stories about his wife, we turned to his latest book: [Radical Judaism: Rethinking God and Tradition](#) – which was helpful since it was the topic of the book group I was to lead the next night.

Radical Judaism strives to redeem science and religion including the challenge of evolution posed by Professor Harari.

According to Rabbi Green, God is not an external being, but rather “A God, who underlies all being, who *is* and dwells within (rather than ‘who controls’ or ‘oversees’) the evolutionary process is the One about which – or about ‘Whom’ – we tell the great sacred tale, the story of existence.” (page 17)

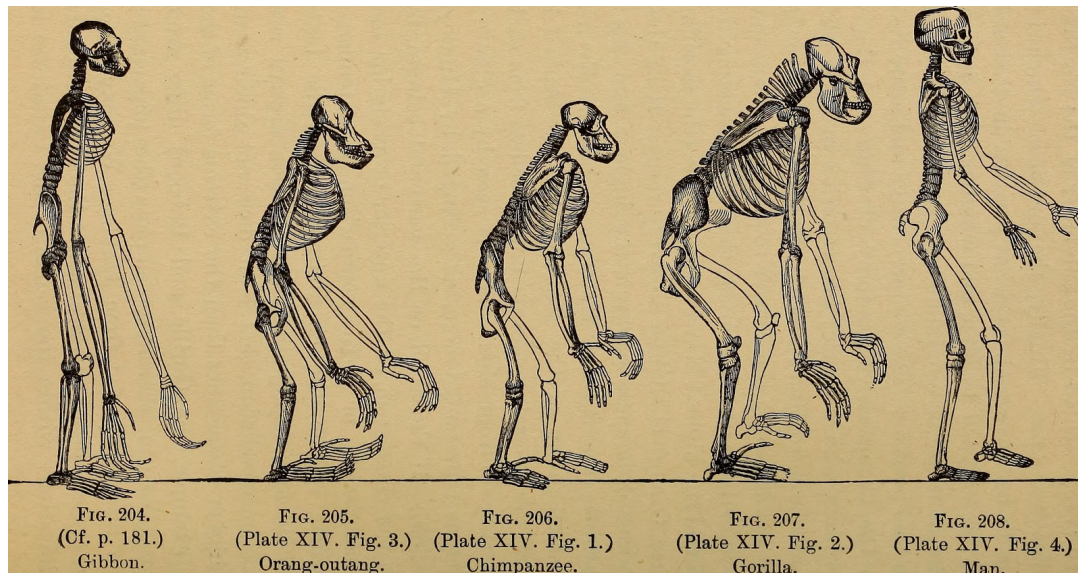


Rabbi Green offers us a different understanding: God is not in the heavens utilizing a vertical metaphor, but rather within all of nature, including all of us. In his own words, Green is a “mystical panentheist, one who believes God is present throughout all existence, that Being or Y-H-W-H [related to the word for existence or being, what we call by four Hebrew letters in our tradition: *Yod-Heh-Vav-Heh*] underlies and unifies all that is. At the same time (and this is panentheism as distinct from pantheism), this whole is mysteriously and infinitely greater than the sum of its parts, and cannot be fully known or reduced to its constituent beings.” (p. 18; see also p.168, fn.#4)

So, given that God is part of nature, we can understand the entire process of evolution as a “*meaningful* process. There is a One that is ever revealing itself to us within and behind the great diversity of life. That One is Being itself, the constant in the endlessly changing evolutionary parade. Viewed from our end of the process, the search that leads to the discovery of that One is our human quest for meaning.”

“But turned around, seen from the perspective of the constantly evolving life energy, evolution can be seen as an ongoing process of revelation or self-manifestation. We discover; it reveals. It reveals; we discover.

As the human mind advances [...], understanding more structure, process and history of the ever-evolving One, we are being *given* (from its point of view ever-greater insight into who we are and how we got here.” (p.20)



So instead of seeing evolution as a force destructive of spirituality, it can be the opposite. We are supposed to notice nature, evolution, the wonder of all existence.

This then becomes a “miraculous” process, “not because some outside Being made it happen but because Being itself, residing in those simplest and most ancient of life-forms, pushing ever forward, step after simple step, to reach where we are today, continues to elude our complete understanding.” (p.22)

What a brilliant shift – instead of seeing evolution with its survival of the fittest and genetic mutations as random or worse, we can look at them from the vantage-point of the universe, noticing the movement from simple to complex, from unaware to aware, from amoebas to us.

And we can finally start to appreciate the entire picture. We can become aware of the basic Oneness that underlies it all. We can become aware of God who has been

yearning for us – as Heschel explained, *God is in Search of Man* [or today, he would have written, God is in search of humans!]

And in turn, we yearn for God, for the experience of that fundamental unity of all.

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But there is more. As I learn more about science and the universe, I find even greater levels of spiritual meaning and depth. For example, the first of the three revolutions that Hariri explicates, the cognitive revolution, has deep religious and moral meaning to me.

As Hariri explains: 70,000 years ago, our species made a huge leap forward. He calls it the Cognitive Revolution. There was already fire and some language, but *Homo sapiens* developed something new that Neanderthals and *Homo floresiensis* did not; those species died off over the next 55,000 years, but we did not.

What was this leap?

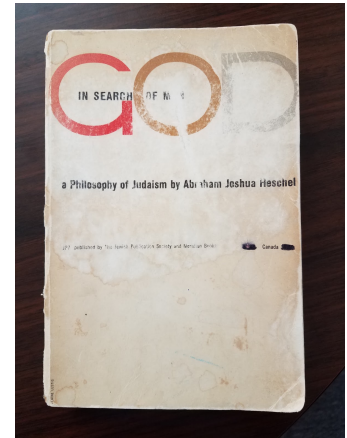
We developed the ability to imagine things that could not be seen. We could imagine things that did not exist or did not yet exist. And then, *Homo sapiens* created fictive language to transmit these ideas.

We were no longer limited by describing what we could literally see; now, we could see what was unseen.

This allowed new ideas, new inventions, to be born – from legal fictions like corporations to entire religions and civilizations. These could now be created and grow. Built on myths and narratives – whether they were fully true, partially true or not, these transformed human civilization.

Seeing beyond a moment is something very powerful.

You can create narratives that teach us morals like: all human beings are created equal – Hariri points out that this is not literally true – some of us are born rich, some poor, some smart, some fast, some artistic....



But we have created a deeper truth which is not actually real, but is a deeper statement about our values: that all people are or, maybe, should be, equal.

This Cognitive Revolution was transformative. It allowed large groups of *Homo sapiens* to work together, do business together, and advance human knowledge in myriad ways. It created a huge evolutionary advantage over other species who had other advantages over our ancestors, but did not have this!

But there are two sides to it – you can use this power to invent or create something new – for example, to teach people that we are all fundamentally connected, to the One that Rabbi Green described OR you can use it for destructive purposes.

You can convince lots of people that Jews are bad and should be killed, as the Nazis did or you can frighten millions of Americans that there are dangerous Mexicans waiting to cross over the border and rape our women.

But, overall, I like to think that we human beings, have used this power to create hope, to see, to discover new insights, to imagine a better tomorrow.

This idea of seeing was highlighted in our Torah reading on *Rosh Hashanah* as Avraham is told that God will show him, literally: “make him see the place to sacrifice his son, and that root, *reish-aleph-heh*, the word for “see” is everywhere in this narrative. Avraham sees the mountain, tells his son that God will “see” to the missing sacrifice, the ram is “seen” caught in the thicket. And Avraham names this place “*Adonai yireh* – Adonai sees,” leading to the expression “On the mount of *Adonai*, there is vision.” (Gen 22:14)

Vision has been a major part of our Jewish tradition. The prophets could see things that others did not notice: Moses at the burning bush; Elijah at the cave with the still, small voice – the sound of silence. And of course, Isaiah opens his book with “*Hazon Yishayahu* – the vision of Isaiah;” he could see the problems in society that others overlooked and offered us a vision of something that was not there – a better tomorrow, a vision of hope.



Prophet Isaiah by Antonio Balestra (1666-1740) currently at the Castelveccchio Museum

We still do that.

We offer visions of redemption; visions of justice; visions of self-transformation; visions when we cannot actually see; we offer light into darkness.

That has always been the Jewish way.

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But all theology has limitations. It does not know for certain what is and, while it can ask good questions and help us make some sense of our mysterious existence, it cannot speak to everything. It cannot speak to areas beyond human understanding.

While I love Harari's science and his explanations of how our species rose to prominence, his conclusion that we have no purpose leaves me empty. A meaningless world is meaningless; to me, it does not make any sense. Why would there be a meaningless universe?

Hariri might claim that I am now living a delusion.

That may be.

But I find value in morality, ethics, religion, and spirituality.

I find value in transcending our natural, animalistic instincts to simply preserve our lives and pass on our DNA.

Our tradition offers us, in my humble estimation, a more compelling narrative, a more encompassing myth.

It is ultimately about weaving together meaning.... living a life characterized by our relationships with others – through love, compassion, and service – working to create a more equal and more just world...

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Sitting with Art at *shivah*, I was given a far more powerful lesson than all the information I learned from any part of the book *Sapiens*.

He told me how his wife passed away.

Although Kathy suffered from Parkinson's and toward the end of her life, struggled to communicate, she could still sing. Songs are stored in a different part of the brain and some songs and prayers, like the *Shema*, get locked in so deeply that they can still be accessed, even when we lose our mental capacities. I have witnessed this time and time again.

On the morning that Kathy died, Art told me that her very wonderful Jamaican aide, Velette Edwards, heard Kathy up and singing at 4:30 AM. That was nothing unusual. Then, at 7:45, she went down to wake her, calling out her usual cheery "Good morning!" Getting no response, she checked, then ran up the stairs to call Art, saying: "I think she passed." Immediately, instinctively, Velette opened the front door to let the spirit out."

That's fascinating, since that is an ancient Jewish practice as well – when someone dies, we open the door or the window, we pour out the water in the room, we close their eyes, kissing them goodbye and then lovingly cover them up.

Velette attended Kathy's funeral the next morning. And during the funeral, Rabbi Claudia Kreiman led the



very moving singing of the 23rd Psalm, מזמור לדוד ה' רועי לא אחסר.

Velette came back to the house a couple of days later and told Art: “You know that song they were singing at the funeral? That’s the one Kathy was singing at 4:30 that morning.” [...]

Now, who is to say if Kathy knew she was going to die or not, or simply sang a song she knew. But, it is a powerful vision to imagine that as her soul departed, she sang the psalm we traditionally recite at a funeral and at the end of Shabbat, the psalm that reminds us of Moses’ death, a psalm of deep comfort.

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Science and religion come to answer different questions – science answers what and how and religion answers why.

How humans evolved is fascinating, but why are we here is another and more significant issue.

Perhaps we now understand that human beings evolved to see what does not yet exist – a dangerous power to be sure, but also a power that can transform the world into something better.

We evolved into beings who sing songs that transcend life and death.

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Let’s pray that we use our power as Sapiens to create relationships of meaning and worlds of meaning, using the Torah as our guide – that we utilize the synthesis of science and religion to create a vision of a truly enlightened civilization – one that honors the past while evolving to the present.

And as we make the transition to *Yizkor*, I invite all of us to honor the past, the legacy of those who have come before us and to see them, even if we cannot literally see them anymore.

Perhaps we can see them in a more powerful realm – through our memories and our souls. And through that, we lift them and their memories higher....

And, in turn, they lift us up a little more today as well.