



SHAVOUT

Shavuot Day 2

SHAVOUT> From Mount Sinai To Silicon Valley: Modern Technology 3330 Years Old

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FROM MOUNT SINAI TO SILICON VALLEY: MODERN TECHNOLOGY 3330 YEARS OLD

ABSTRACT

The difference between people and machines is that machines are getting smarter and thinner.

Technology has transformed life as we know it. Information is readily available to billions of people with the click of a button. The nuclei of existence can be engineered into nuclear energy that could energize countries or, as we've seen with Iran and North Korea, threaten its very existence.

Silicon Valley did not create the technological revolution. Nor did Albert Einstein. The present revolution began at Mount Sinai.

Fascinatingly, every web browser has a tab titled "history." One pithy sentence sums up the difference between the present and the past:

"Today, deleting history is more important than making it."

If one is embarrassed of one's history one seeks to delete it.

We Jews would never delete our history. We make history. And have been doing so for 3330 years.

This high-tech sermon will explore how the tablets of Shavuot and Sinai pave the path for the smart tablets of today – providing apps to ensure that technology is used to better the world, never destroy it.

Albert Einstein proved mathematically that $E=MC^2$, that mass and energy are interchangeable.

But this reality was created and revealed to us 3330 ago, at Sinai.

Filled with humor and anecdotes, this sermon promises to rivet your audience with a refreshingly relevant Shavuot message.

1. Technological Humor

They say that the difference between people and machines is that machines are getting smarter and thinner.

I don't know about you, but it's definitely true with me: I don't know if I'm getting any smarter, and I'm certainly not getting any thinner.

Technology is indeed transforming humanity, often for the better. Sometimes, however, technology could potentially dehumanize us. Take this recent conversation between two teenage girls.

“You know,” says the first, “I’m on Facebook, Twitter, Instagram, LinkedIn, and Pinterest.”

“Girl,” says the second, “you really need to get a life!”

“OMG!” replies the first. “You’re totally right. Could you send me a link?”

More than humorous, this conversation is indicative of today’s reality. If it’s not on social media it probably didn’t really happen. To upgrade the famous quantum mechanical joke: “If a tree falls in the forest, and no one posts it on Instagram, did it really happen?”

And then there’s the older generation, who did not grow up with technology, Smartphones, Googles, Facebooks, and are trying desperately to adapt.

Take my mother, for example, who tries to convince me how technologically savvy she is. She once told me that she uses the Internet for everything, even to check the weather.

Surprised, I asked her how she does that.

She replied: “Simple – I carry my laptop outside and if it gets wet, I know it’s raining!”

Has technology furthered the human condition or has it only furthered our challenges? Have advances in machine life advanced who we are, helped make us better people, better parents, better children, better spouses, or have machines turned us into machines?

Is technology a gift or albatross, a blessing or curse?

Maybe I should Google it...

2. Browse Your History

I love how every web browser has a tab titled “history.”

A media pundit summed up the difference between the present and the past in one witty sentence:

“Today, deleting history is more important than making it.”

We Jews would never consider deleting our storied history. On the contrary, we celebrate it every single day. We are celebrating it right now, with the festival of Shavuot and the commemoration of the giving of the Torah 3330 years ago. That’s history! When one is proud of one’s history one does not try to delete or hide it, but rather advertise it for all to see and to emulate as a shining example.

Today, everything is reduced to data points, ones and zeroes, and recorded and stored, whether we like it or not. Unfortunately, as the news demonstrates daily, too many people have shameful (if not criminal) pasts that

they do everything to try and bury. Technology is merciless in its documentation and data retention.

No matter how much one tries, one cannot truly delete one's history. One could simply ensure that it is a history one is proud of.

Technology is many things. But, if we could distill its core power, at its best technology unites – it unites matter and energy; it transcends and eliminates the conventional boundaries of time and space, allowing us to access anything, anytime, anywhere. It revolutionizes and organizes information, allowing us to access, process, and apply it in profound and, hopefully, life-bettering ways.

Technology could put a Talmud in your palm, a divine concept in your brain, allow you to learn the intricate complexities of Kosher laws and moon cycles even if you have limited Jewish education. Technology ensures that no one has a limited Jewish education, unless of course one chooses to limit one's education. Literally speaking, any single person on planet earth with a computer and internet access could download into his or her consciousness information about every single Mitzvah, its details, and its meaning. And it's just getting easier.

Of course, as we see with Iran and North Korea (not to mention data breaches and all the rest), technology could also be distorted and manipulated to threaten life. Nuclear energy, one of the most powerful manifestations of our technological age, could empower and energize a country – just as it could, heaven forefend, destroy one.

And, to a subtler degree, an email or social media post. Because of technology, a few taps of a keyboard and click of a button could enliven a spirit – or, G-d forbid, destroy one.

3. Sinai To Silicon

The number one question is: How to ensure that technology is used for bettering life not worsening it? How to use machines to make us more human and humane, not less? How to use tech to bring more light into the world, not darkness?

The answer lies in the origins of technology. Where and when was technology first innovated and toward what end (or beginning)? Astonishingly, the forces in nature that allow for the World Wide Web, iPhones, social media, nuclear energy, and the overall information age aren't new at all; they were just recently *discovered*. But they were set in motion a very long time ago – 3330 years ago to be exact.

Silicon Valley is called thus because of the chemical element used in the non-metal material used to manufacture electronic circuits and computer chips, silicon. In Israel, the high-tech industry is referred to a "Silicon Wadi," a play on the Arabic word for 'valley.'

Silicon and the microprocessor is but a physical receptacle that allows the power of technology to work. But what is the power of technology and what is its revolution?

All the equipment and parts of modern technology tap into the energy that powers our instruments. But was it the source of that energy? What exactly are we tapping into?

4. Einstein

We can find a clue to the answer with a Jew named Albert Einstein, who revolutionized the modern manifestation of energy and technology in the last century. Einstein basically distilled his Jewish browsing history into a mathematical formula and scientific theory.

A few years ago, Steven Gimbel authored a book called *Einstein's Jewish Science*, in which he made the case that Einstein, was especially well put to come upon such insights because he was a Jew. Gimbel does not say that Einstein was deeply religious. Nor does Gimbel find any particularly Jewish ideas in Einstein's science. What gave Einstein's work a Jewish flavor, Gimbel believes, is an approach to the universe that reminds him of the way a Talmudic scholar seeks to understand G-d's truth.

One of the most towering scientific breakthroughs in all of history is the most famous formula in the world: Einstein's equation – $E=mc^2$. Essentially stating that mass and energy are one.

One. What does that remind you of? Unity – *Hashem Echad*. That our world is not defined by duality, but by unity. Matter and energy, body and soul, the physical and the spiritual, are actually one. The essence of all matter is the divine energy that sustains it perpetually, as explained in the second section of Tanya.

So though Einstein may not have been directly familiar with these ideas, as Gimbel argues, as a Jew his DNA, his psyche and his mind were certainly shaped by his Jewishness. Including the Jewish concept of unity – *Echad*.

And as we shall soon see: this *echad* unity consciousness was introduced into the universe 3330 years ago at Sinai.

5. $E=mc^2$

Though Einstein was not the first to posit the idea of matter and energy being related, he introduced the revolutionary theory that the mass of matter is energy, eliminating the duality between matter and energy.

With his most famous equation $E=mc^2$ (the energy (E) in a system (an atom, a person, the solar system) is equal to its total mass (m) multiplied by the square of the speed of light (c, equal to 186,000 miles per second) Einstein showed that mass and energy are essentially the same thing in two forms. One of the stunning results of this is that the smallest amount of mass, subject to fusion or fission, can produce enormous amounts of energy. This allowed for the creation of the atomic bomb.

[The next two paragraphs are optional:]

Before Einstein, scientists defined energy as the stuff that allows objects and fields to interact or move in some way – kinetic energy is associated with movement, thermal energy involves heating and electromagnetic fields contain energy that is transmitted as waves. All these types of energy can be transformed from one to another, but nothing can ever be created or destroyed.

In relativity theory, Einstein introduced mass as a new type of energy to the mix. Beforehand, the mass of something in kilograms was just a measure of how much stuff was present and how resistant it was to being moved around. In Einstein's new world, mass became a way to measure the total energy present in an object, even when it was not being heated, moved or irradiated or whatever else. Mass is just a super-concentrated form of energy and, moreover, these things can turn from one form to the other and back again.

In simpler terms: Prior to Einstein, the world assumed that matter (the material of existence, like a stone or a tree) and energy (the force that makes that material be, like electricity) were two distinct forces. A stone is not electricity and electricity is not a stone. Matter is matter, measured and quantified by its mass, and energy is energy, measured and quantified by its force. That's it.

Came Einstein and posited that mass and energy are essentially one. Physical particles of matter, atoms and their nuclei, could be engineered to generate the greatest energy possible.

6. The Implications of Unity

Ones and zeroes, mere numbers, could reprogram existence as we know it. The gap between what is and what could be is no gap at all.

The far reaching implications of Einstein's theory are hard to overestimate. They play themselves out in our daily lives. Atomic and nuclear energy is but one of these manifestations. We hope only for the good, but unfortunately they have also allowed for the concerns we have with Iran and North Korea, playing out on the news these days in the efforts being made to curb if not stop their nuclear programs

An atom's positively charged central core, consisting of protons and neutrons and containing nearly all its mass, are called its "nuclei." When these nuclei, this mass, are harnessed, it is called nuclear energy.

This nuclear energy could empower millions of people, or be weaponized to flatten cities. This is the concern with Iran or North Korea. This very real concern, what many would argue is the greatest threat to human peace today, is hard evidence that $E = mc^2$, that energy and mass are interchangeable, that mass essentially equals energy and energy mass. Otherwise, how could the mass of an atom's nuclei produce energy, and such energy at that?

Another example, one much closer to our personal everyday lives, is the email or text messages you send every day. If mass and energy were two distinct, non-interchangeable entities, one would never be able to take the mass of a single letter (never mind a word, sentence, or full book or full library) and convert it into energy (electricity) and then reconvert it back to letters, words, books and libraries.

Every time you compose an email and hit send, the mass of the words you wrote (or emojis) is converted into energy and then reconverted into mass when that email is received and read by an individual across your office or across the world.

The same is true with every Google search, YouTube video, and Facebook post. Technology is the perpetual interchanging of mass and energy, energy and mass. (This is also true with self-driving cars, Amazon Now, Netflix, and everything else.)

In sum: Modern science and technology – in a large way impacted by Einstein's theories – eliminate plurality, duality and fragmentation, and introduce unity – between matter and energy, between people. Communications today dissolve the boundaries of time and space, allowing for instantaneous connections.

As much as we love and respect Albert Einstein, and accredit him for his revolutionary theories, Einstein

would be the first to tell us that he did not create the empirical reality that mass and energy are interchangeable. They were always one and interchangeable, however until Einstein science was unaware of that fact, and was certainly unable to develop technologies to tap into the tremendous energy within matter.

This very reality of the unity within existence – the unity between matter and energy – as embedded into existence by G-d at the time of creation, and it was permanently revealed and unleashed at Mount Sinai with the giving of the Torah.

As the Midrash tells us¹ that at Sinai fusion of matter and spirit was achieved. Until that point there existed an invisible wall between the transcendental and the material. A decree, a schism separated between above and below. “That which was above could not descend below, and that which was below could not ascend above.” The giving of the Torah at Sinai infused the human race with the ability to bridge heaven and earth – to fuse spirit and matter.

We can thus say that the revolutionary idea behind the unity of mass and energy in $E = mc^2$ was rooted at Sinai, which we are now celebrating.

7. Matter and Spirit

The first information revolution, which took place at Sinai 3,330 years ago, shapes and forms today’s information revolution.

What happened at Sinai? What was assumed to be two distinct, even opposing forces were revealed to be one and the same – revolutionizing information, action, and life forever.

Prior to Sinai, the material world – flesh, skin, hair, bones, stones, earth, flora, animals, food, money, etc. etc. – was assumed to be material and thus experienced on a material level. The spiritual world – transcendence, soul, G-d, sublimity – was assumed to be spiritual and abstract and thus experienced in very ephemeral ways.

At Sinai, heaven came down to earth and the earth rose up to the heaven. Matter became interchangeable with spirit, and spirit with matter.

Prior to Sinai it was impossible to turn leather into holiness. If one performed the spiritual service of Tefilin, there was no physical manifestation of that act, never mind interchangeability where the mass itself is now spiritual energy. After Sinai, every time a pair of Tefilin is formed and donned, leather, mass, becomes spirit, becomes holy, becomes divine energy. Every time a Torah scroll is written, mass ink inscribed on biological

¹ Midrash Tanchuma Vaeirah 15. Shemot Rabba 12:3.

parchment of animal hide, is transformed into and revealed as spiritual energy.

At Sinai, the perceived schism between body and soul, heaven and earth, matter and spirit, mass and energy, human and G-d was obliterated, and $E = mc^2$ – mass and energy became interchangeable.

It is our job to affect that interchange by spiritualizing our material lives through Torah and mitzvot. It is our mission to take life's mass and demonstrate how it is truly divine energy, and to take divine energy and concretize it in the very tangible mass of physical earth.

8. Yizkor

This fusion between spirit and body also reveals for us the power of Yizkor.

As we remember the souls of our loved ones, we need to always know that though they are presently not here in physical bodies, they continue to be with us. The matter of their bodies has now turned into energy. $E=mc^2$.

As modern physics has taught us that no substance truly disappears, that it only changes form. A tree, for instance, might be cut down and used to build a house, or a table, or a chair. Regardless of how the form changes, the wood remains wood. And when that same wood is burned in a furnace, it again changes form, becoming an energy that gives off heat and gas. The tree, the chair, and the fire are all merely different forms of the same substance.

If this is the case with a material substance, it is even more so with a spiritual substance. The spiritual life-force in man, the soul, never disappears; upon death, it simply changes from one form to another, higher form. It is inappropriate therefore, to use the term “afterlife” to define what happens after death. “Afterlife” implies that we have entered another, separate place, whereas death is actually a continuation of life as we know it, only in a new, higher form.

While the manifestations of life may cease upon death, the soul lives on, only in a different form.

And we connect to rhea souls of our loved ones through our acts of charity and good deeds, spiritualizing our material lives, and fusing matter and spirit.

9. Conclusion: Spiritualize Your Material Life

Every Shavuot recreates the events that happened the first time at Sinai.

On Shavuot we are reminded anew of the source of technology, how the fusion of mass and energy, spirit and matter was born at Sinai.

And we are charged anew with the mission to fuse matter and energy – to spiritualize our material lives through the study of Torah and the performance of mitzvot.

Every physical part of our lives, every physical act, contains enormous amounts of spiritual energy waiting to be released. All of technology was created for this purpose.

We release this energy through directing our activities toward positive and productive ends. This can be done as easily as including a kind and thoughtful word in every email you send and every phone call you make.

We must never forget the purpose of technology: to be used for good and positivity.

Technology in general, and the plethora of magnificent technological apps and tools it begets, exist and were created for one reason: to implement Sinai, to implement how mass and energy are interchangeable and really one, to reveal how matter is really spirit squared and all spiritual and G-dly things are meant to be concretized in physical matter with very real mass.

This realization across all of humanity and all the globe is the ultimate culmination of Sinai, the utter and complete redemption, when matter is spiritualized and spirit materialized.

No, this is a history no one should ever delete.

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