Ki tisa dvar, march 14, 2020

The key issues concerning special relativity in physics involve time and measurement. Both are highly contested, dating back to 1922 when two jews argued out their opposing positions before the world, in a key event in Paris. Einstein argued for objective time, and the fact that two clocks measured times differently depending on their relative speed in relation to each other. Classically there would be a stationary clock, say on a train station; and a rocket ship clock moving away from the train station. The one that moved recorded time more slowly. That’s called the dilation of time. Actually, any physical objects with mass in the train got heavier, as the train speeded up. And there was a limit to its speed, the speed of light.

All that is both amazing, and quite abstract, seeming to have no relation to our lives. The opponent to Einstein was Bergson, the most famous philosopher of his day. For him scientific truth as abstract and objective did not capture the meaning of truth in life. The act of measuring had to entail human perception and perspectives, the clocks only had meaning as relating to life. The one on the station was ensconced in time as we know it; the one on the train, especially as it approached the speed of life and thus made significant changes in time and mass, was theoretical, symbolic, meaningless for us.

Truth as science, truth as philosophy went to war, and science won.

But although I much preferred the figure of Einstein, and his argument, Bergson had a point. What does it mean to be in the world, as we experience it; what does it mean to be able to study and measure things, people, events, as a scientist, leaving us in the position to ignore the philosophical, or emotional, or subjective side to things. Can we have measurement without humans, without us being caught up in the process. The quantum theory of uncertainty, meaning we change what we measure as we are engaged in the measurement, that the whole apparatus of measurement includes us in the process and effects, turns the simple idea of objective vs subjective difference on its ear.

For now, let me take just one small part of this huge debate, my preferred topic for now, and that is time. Can we read our parshah asking whether there can be concepts of time that are different? I suggested earlier the image of a bush that burned without being consumed offered an image of time that was unreal. Unreal because time means change. Unchanging implies not part of the physical universe, and I assume there is only the physical universe, nothing beyond or outside it. When genesis begins, there is an act of creation. We can call that our big bang. What is created with the big bang, following the scientists, is both matter, i.e., mass and energy which are variants of each other (e=mc2), and space. As space is created by the big bang, that continues on now, space is expanding. We can’t really imagine anything without space and time. So scientists more or less stop with the big bang, or with the interior of black holes where the conditions there approximate those of the big bang, and where we cannot speak of matter or time. Let’s call this the limit of the imagination of scientists whose imagination, since Einstein in 1905, required thought experiments to advance their theories and opened the possibilities for experimentation and scientific knowledge to develop.

We have, too, time in at least two frames in this parshah, and limits to the imaginary about time and space. I want to call one of those time-space configurations the unreal, or magical, or transcendental—trying carefully to imply not a reality, not a “god” or divine time, but a space-time to which the attachment of the word divine would imply a non-empirical object. If it isn’t real, it isn’t any the less subject to the creativity of our imagination. And that is the space-time when god comes down, speaks to our boy moses, and freezes change, freezes time, freezes the aspects of the world as we know or can know it. It isn’t real; it isn’t knowable; only a fool would take it for real, much less use knowledge of it to presume to speak for god. Yet that’s what preachers of today do; and in fact, that’s what the figure of moses does.

The opposite time concords more with our experience. No crazy time dilations or mass increases with speed, no quantum leaps or entanglement mysteries, but experience as our memories best recorded it. time and memory. The events involving memory occur in human time, in the human time frame. Aaron says, we had to make a calf. Moses says, this is god’s commandment. Consider then these passages from the point of view of human time vs divine time; time with humans, change, emotions, subjectivity; time outside of the human.

First moses:

30:11 The Lord spoke to Moses, saying:

12"When you take the sum of the children of Israel according to their numbers, let each one give to the Lord an atonement for his soul when they are counted; then there will be no plague among them when they are counted.

A second example of the divine time, like the one above that issues commands on what should be done with offerings is this;

1The Lord spoke to Moses, saying:

2"See, I have called by name Bezalel the son of Uri, the son of Hur, of the tribe of Judah,

3and I have imbued him with the spirit of God, with wisdom, with insight, with knowledge, and with [talent for] all manner of craftsmanship

4to do master weaving, to work with gold, with silver, and with copper,

5with the craft of stones for setting and with the craft of wood, to do every [manner of] work.

6And, behold, with him I have placed Oholiab the son of Ahisamach, of the tribe of Dan, and all the wise hearted into whose hearts I have instilled wisdom, and they shall make everything I have commanded you:

These acts, these enumerations of offerings, are all done without dates, without recordings of what did what when and where; but in a kind of time out of time, a time of god’s actions that are not recorded as memories, or events, but facts. The time is given, “And behold.” This is the space where the relationship with god, who commands, and people who obey, is recorded. Their hearts being transformed into wise hearts; the making the clothes or cloths to be done, in a future like that of the god-name, I am that I am, I shall be that I shall be.

Here is the human time, time people like to joke about, where being late is a comforting notion of something that is conferred by our identity. jewish people time, black people time, African time—versus Mussolini, science, making the trains run on time.

After chapter 31 is done, the tablets are given to moses, he sets about to return into human reality and human time, we turn our gaze to aaron, his speaking brother, the guy temporarily in charge, the father priest who was to lose two of his sons to the absolutism of god-space-time. Aaron’s moment:

32;1When the people saw that Moses was late in coming down from the mountain, the people gathered against Aaron, and they said to him: "Come on! Make us gods that will go before us, because this man Moses, who brought us up from the land of Egypt we don't know what has become of him."

2Aaron said to them, "Remove the golden earrings that are on the ears of your wives, your sons, and your daughters and bring them [those earrings] to me."

3And all the people stripped themselves of the golden earrings that were on their ears and brought them to Aaron.

It doesn’t end there. Our time, our stories, are too amazing to take an easy path to knowledge. The struggle between two temporal orders, two space-times, ensue, and here are the words that set them in motion.

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| 9And the Lord said to Moses: "I have seen this people and behold! they are a stiff necked people. |
| 10Now leave Me alone, and My anger will be kindled against them so that I will annihilate them, and I will make you into a great nation." |

And so it goes.

The problem for religion, at least in our version, and the African versions I know best, is how these two orders connect, at least temporarily. Connection, as of two trains going at different rates, one approaching the speed limit of 186,252 miles per second; the other ambling along, or just waiting at the train station, having given their offering and now assured the plague won’t get them.

Shabat shalom; leave your tithe at the door on your way out, just to be sure.