





# SLICE OF LIFE

## Blending Torah and Science by Rabbi Rabbi Levi Greenberg



Dr. Alexander Friedman earned his doctorate in brain physiology from Bar-Ilan University in Israel and joined the University of Texas at El Paso last year after completing his post-doctoral training and working as a research scientist at MIT for 10 years. He also authored three major publications in the Cell journal and two in the PNAS journal.

Dr. Friedman moved to El Paso in August 2020 together with his wife Miriam and their children. A Chassidic scholar and graduate of the Chabad Yeshiva in Kfar Chabad, Israel Dr. Friedman combines a unique passion for Torah and the exact sciences.

*Rabbi Levi Greenberg: What led you to become a scientist?*

Dr. Alexander Friedman: I was born to a family of scientists in the former Soviet Union. My grandfather Dr. Olodovsky was a prestigious physicist and both my grandmothers were science professors. It was a profession many Jews preferred since it was possible to observe Shabbat with minimal hassle.

Providing a proper Jewish education in the USSR was very difficult but my parents did their best under the circumstances. I was always attracted to the sciences and after applying to several universities I was accepted to Machon Lev in Jerusalem which led me to make Aliyah to Israel.

Machon Lev combines a university education and a Yeshiva education and while earning my B.A. I caught up on my Judaic studies as well. I was introduced to Chassidic philosophy by Dr. Yaakov Fridman, a great scientist in his own right, and I decided to spend a gap year pursuing more intense Torah study at the main Chabad Yeshiva in Israel. After a year I wanted to continue full time, but Rabbi Zalman Gopin, the chief Chassidic mentor at the Yeshiva insisted that I earn my doctorate.

I enrolled in Bar-Ilan University which is a half hour drive away from the Yeshiva and divided my day between the Yeshiva and the university.

*LG: Is it possible to balance these two seemingly opposite studies?*

AF: I admit they were very long and grueling days, but they were stimulating and rewarding. Rabbi Gopin explained to me that although learning Torah full time is a privilege, with my background and education it was crucial for me to excel in science to discover how it all blends beautifully with Torah teachings and observance. It's not the typical route for a Yeshiva student, but everyone has their journey and purpose in life. Being simultaneously submerged in both worlds was a unique experience that shaped my life work ever since.

*LG: Has your scientific research enhanced your appreciation of Judaism and vice versa?*

AF: The definition of science is discovering the principles of the organization of the universe. When studying physics, chemistry and biology you discover how complex yet astoundingly exact nature really is. Obviously none of this could happen randomly and it was certainly created by a superpower.

My field of research is brain physiology and, let me tell you, even the brain of a mouse is extremely complex. The tremendous discoveries we make in their brains help us understand the human brain which is far more sophisticated. To date we understand precious little about the nerve center of our body, yet we take for granted that there are billions of these in the world. Multiply this by trillions of other organisms, minerals and particles and you have yourself an awesome universe created and maintained by an awesome creator.

5,781 years ago, when Adam the first human being was created on the day we celebrate Rosh Hashana, he intuitively realized this and called out to creation to acknowledge G-d's sovereignty. That's why the High Holy Days liturgy is packed with these ideas

and it's the core of what Judaism is all about.

G-d gave the Torah to the Jewish nation at Mt. Sinai. Fascinatingly, this only happened after Jethro, Moses' father-in-law, who was also the greatest scientist and philosopher at the time recognized that G-d is the supreme power of the universe.

When the Jews stood at Sinai and heard the Ten Commandments from G-d, all humanity realized with brilliant clarity – albeit temporarily – that all of nature is truly a reflection of G-d. This was preceded by Jethro's conversion to Judaism to illustrate how this clarity must come from within nature itself. The more we know about nature the more we know G-d.

Since then the world is progressing in its scientific knowledge and its appreciation for and knowledge of G-d so that the Sinai experience becomes a permanent reality. This is the definition of the Messianic Era; that every created being will recognize the creator. Not only Jews – everyone!

*LG: Have you found this attitude in modern science as well?*

AF: Certainly. Sir Isaac Newton defined scientific experiments as our way of asking G-d how to do things. In my opinion he continues to be the most important scientist of the modern era and I find it fascinating that the overwhelming majority of his works were translations of Torah scholarship. Ivan Pavlov, the father of brain physiology and the legendary chemist Dmitri Mendeleev were both deeply religious and their religious convictions impacted their scientific work. Faith does not hamper scientific discovery. It enhances it, just like it enhances every detail of life.

*LG: Do you feel this idea can be experienced by everyone?*

AF: Such an attitude needs to be nurtured. I study Chassidic philosophy daily to keep this perspective fresh and relatable. You don't need to be a neuroscientist to appreciate how complex and awesome our world is, but to experience life in a way that allows you to discover the divine element in everything and to introduce peace and serenity into every detail of life – it's crucial to study Chassidic philosophy.

The good news is that there is so much available in multiple languages in so many formats and platforms and it's very convenient to learn it nowadays. Clearly this is another sign of the imminence of the Messianic era when, as Maimonides writes, the knowledge of G-d will fill the entire world and there will be global peace and tranquility for all.

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## Today Is...

### 20 Av

Just as with the commandment of tefillin for example, there is a designated place for them on the head and arm, and one feels the weight of the head-tefilla and the tightness of the hand-tefilla, so too with the commandments of love and fear (awe) of G-d. As Maimonides writes (*Yesodei Hatorah 2:1*): It is a commandment to love and fear the revered and awesome G-d, as it says, "Love the L-rd your G-d", and "You shall fear the L-rd your G-d."

# The Rebbe Writes

from correspondence  
of the Lubavitcher Rebbe

Freely translated

Aleph d'Rosh Chodesh Tammuz, 5710 [1950]

This is in reply to your question regarding the significance of the custom during the marriage ceremony that the bride makes seven circuits around the groom under the Chuppah.

The answer to this question, it seems to me, has to cover the following sub-questions: 1) The significance of the circuit, 2) its repetition seven times, 3) the bride circling around the groom and not vice versa, 4) the bride then joining the groom, standing by his side within the circle.

I trust that the following may give you a satisfactory answer.

It is stated in the *Zohar* (Part III, 72) that marriage, which is a union of two distinct persons, is in reality a union of two halves of the same soul. Each one, when born, possesses but half<sup>1</sup> of that soul which becomes one and complete only in wedlock, through Chuppah and Kiddushin.

This is why marriage is one of the greatest soul-stirring experiences of the bride and groom, for their respective souls have found at last the other half. Something of this joy is experienced, by way of illustration, at the re-union of two close relatives or beloved friends who had been separated for decades.

To a certain extent, therefore, the marriage marks the beginning of a complete and full life, while the pre-marital life of either the bride or groom may be considered in the nature of a preparatory period.

The union of the two parts of the same soul is not a union of two identical halves which make one whole. But they complement each other, each of them enriching the other with powers and qualities which hitherto were not possessed by him or her. For the "masculine" and "feminine" parts of the souls have basic differences, reflecting, broadly speaking, the character differences of the sexes. One such difference is what our Sage called "the nature of the male to conquer," i.e., the propensity of the male to conquer new provinces (in business, profession, science, etc.) outside his home. This quality is generally not found in the female. On the other hand, the woman is called in our sacred literature the "Foundation of the House," for within the house her personality and innermost qualities are best expressed and asserted (*Psalms 45:14*).

It has been mentioned earlier that marriage,

in a sense, marks the beginning of a full life. The wedding ceremony reflects this by an allusion to the beginning of all life. The Blessings of Betrothal (*Birchoth Hanesuin*) also begin with a reference to the creation of the first man, the first woman, and their wedding.

Ever since the Creation of the world, human life has been based on the seven-day cycle. G-d created the world in six days and hallowed the seventh as a day of rest. Man was then commanded to work for six days of the week, but to dedicate the seventh as a Sabbath unto G-d. When a Jew is about to set up a home and begin a full life, it is fitting that this basic principle of a happy life should be symbolized during the wedding ceremony.

Hence the "Seven Days of Feasting," and the "Seven Blessings" (*Sheva Berachot*). This brings us also to the seven circuits of the bride around the groom.

Bearing the above in mind, as well as the earlier introductory remarks concerning the basic character differences between the male and female, the ceremony of the seven circuits which the bride makes around the groom suggest the following explanation:

The groom, who takes the initiative<sup>2</sup> in bringing the union to fruition, is initially the center of the new Jewish home. He is the first to take his place under the Chuppah. When the bride is led to the Chuppah, she proceeds to make a circle around the groom. This symbolizes the delineation (in space) of their own world within the outer world, with her husband-to-be as its center. She continues to make circuits one after the other seven times, symbolizing that she, the "Foundation of the House," founds an edifice that would be complete on the first day of each and every week to come as on the second, third, etc., to the end of all times and seasons, a lasting and "eternal edifice" (with the infinity of the "cycle"). Her own contribution to this sacred union is also implied in the fact that she makes the circuits around the groom.

Having completed the seven circuits, she stand besides her husband-to-be in the center of the circle, for after the preparations for the building of their home, both of them, the husband and the wife, form its center. From here on, throughout the entire ceremony both the bride and groom form the center of the holy ceremony, like king and queen surrounded by a suite of honor. Their lives become united into One full and happy life, based on the One Torah given by the One G-d.

With all good wishes and kindest personal regards,

1) This does not mean that it is half a soul, but in the sense that in some respects an individual is but a "half," and his soul is likewise a "half." 2) This is expressed by the saying of our Sages that "it is the custom of the man to seek a wife." During the marriage ceremony this is symbolized by the fact that the groom declares "You are betrothed unto me..." while the bride remains silent.

## MOSHIACH MATTERS

"And you shall teach them diligently to your children, and you shall speak of them when

you sit in your house, and when you walk by the way, and when you lie down, and when you rise up" (*Deut. 6:7*) Rabbi Shmuel of Lubavitch offered a Chasidic explanation: "When you sit in your house" refers to the time when the soul is contained in the physical body; "when you lie down, and when you rise up" refers to the period after the resurrection of the dead. (*Sefer HaToldot*)

# A WORD FROM THE DIRECTOR

*The Shabbat is Shabbat Nachamu, Sabbath of rejoicing. We are hopeful that G-d will console us for the destruction of the Holy Temple and Jerusalem. The Haftora portion for this week and the next six weeks reflects this theme of consolation.*

*This Shabbat is known by the special name of "Shabbat Nachamu" because we read the Haftora portion which begins, "Nachamu, nachamu ami – Console, console My people."*

*Our Sages have taught that it is significant that there are seven Haftora portions of consolation. The first consolers are the tzadikim trying to comfort Jerusalem upon her loss. But she will not be comforted. The second, is the patriarch Abraham. Again, the city will not be consoled. Next is Isaac, then Jacob and then Moses. Each time the city will not be consoled. The sixth Haftora is Jerusalem's plea for consolation and finally, G-d Himself, consoles the Holy City.*

*According to the Midrash, the reason why the word "console" is repeated twice is that G-d is comforting us for the destruction of the first Holy Temple and also for the second Holy Temple. G-d's consolation and our comfort lies in the fact that G-d has promised us that there will be a third Holy Temple, greater than the first two. This will take place through Moshiach in the Messianic Era as the Rambam writes: "In the future time, the King Moshiach will arise and renew the Davidic dynasty, restoring it to its initial sovereignty. He will rebuild the Beit HaMikdash and gather in the dispersed remnant of Israel."*

*This year may we merit to have the true consolation which G-d has promised us all these years with the coming of Moshiach and the rebuilding of the Holy Temple.*

Shmuel Belman

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The name of our publication has special meaning. It stands for the name of Rebbetzin Chaya Mushka Schneerson (obm), wife of the Rebbe.



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