

# **Auto-Replication: DNA and Torah**

***By: Rabbi Daniel Fridman***

Maimonides, in a celebrated passage in his *Yad ha-Hazaka*, notes that both love and fear of the Almighty are cultivated through the study of science. As one cultivates scientific understanding, one catches a glimpse, and truly, but a glimpse, of the indescribable Intellect which is the author of the cosmos all around us.

For me, one of the most profound illustrations of this Maimonidean doctrine was having the opportunity to study DNA replication. Learning about the complex mechanism involved in the double helix of nucleotides separating, and the various cellular components that were involved in the transcription of the coded genetic information from the DNA, was itself an inspiring experience. Yet, above all, the aspect of the process which most moved me then, and, many years later, continues to move me the most, is the very notion that the source of DNA replication was DNA itself. That is to say, encoded within the nucleotide sequences in the DNA are certain groupings of nucleotides that, when properly interpreted by the cellular machinery, are actually a set of instructions orchestrating the replication of the DNA itself.

It occurred to me a number of years following my exposure to the processes of DNA replication that the Torah actually worked in precisely the same fashion. Encoded within the Torah, in the final two of the six hundred thirteen mitzvot, both found in Parshat VaYakhel, is actually the blueprint for Torah replication. The penultimate mitzvah in the Torah is *hakhel*, a once every seven year event which is an obligation to reenact the giving of the Torah at Sinai. The final mitzvah in the Torah is the obligation incumbent upon the individual to produce a *Sefer Torah* of his own.

Astonishingly, the Torah has prescribed, in its final sequences, the basis of its own replication. By requiring both the public reenactment of the giving of the Torah at Sinai, as well as the production of a *Sefer Torah* by the individual Jew, the Torah has itself ensured its perpetuation from one generation to the next.

There are two distinct components to the perpetuation of the Torah: of course, at the most basic level, there is the production of *Sifrei Torah* themselves, to ensure the ongoing presence of *Sifrei Torah* in the Jewish community, which will be read from, and studied. Yet, there is an additional element vital for the continuity of our heritage, namely, not merely the production of new *Sifrei Torah*, but the public re-acceptance of the Torah every seven years which is the very essence of the *hakhel* commandment. Without public re-acceptance of the Torah, surely, the newly produced *Sifrei Torah* will languish in disuse and neglect. And, conversely, if there are no *Sifrei Torah* being produced, even public re-acceptance of the Torah will not suffice to ensure that the actual content of Torah is being transmitted from one generation to the next.

If DNA is the blueprint for the natural, biological universe, and Torah is the blueprint for the spiritual universe, how profoundly appropriate it assuredly is that both DNA and Torah have mandated their own self-replication.