



# Meru Foundation eTORUS Newsletter

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Levanah and Stan Tenen

## From The Editor

### Current Projects:

Our last issue introduced some of Meru's near- and long-term projects. One requirement for bringing them to fruition is creating the teams to work on them. We now have several professional teams forming, e.g.:

- Our technical team, which has concrete, real-world projects in its focus. Currently, we're outlining potential computer-assisted interactive tools to learn and explore the gesture-alphabet, along with the Hebrew text of Genesis, and potentially other sacred texts.
- Our scholarly/philosophical team, which is taking up the work begun ten years ago by our "Sefer Yetzirah Study Group," re-examining Sefer Yetzirah in the light of Meru research. (For more on the focus of our earlier group, see *eTORUS #29*.) This study feeds into our long-term goal of producing a definitive new work on Sefer Yetzirah, as outlined in *eTORUS #62*.

We are also actively working with individual rabbinic scholars, both in the US and Israel, introducing them to our research, and showing how it speaks to and enhances traditional Jewish learning. This is an important aspect of our work: ensuring that the material we've discovered is returned to its roots. Our contacts with the rabbinic world are generally private, but they are ongoing, and beginning to meet with some success.

### Book Notes:

Max Tegmark, *Our Mathematical Universe: My Quest for the Ultimate Nature of Reality* (Knopf, 2014).

This spring, Stan and other members of our technical teams have been reading Max Tegmark's new book, *Our Mathematical Universe*. What Tegmark proposes in this book is consistent with the Meru hypothesis: namely, that the best way to understand the universe is to examine the highest underlying abstraction, i.e., the realm of mathematics.

Tegmark introduces the reader to the past 50 years' important discoveries in physics and cosmology, and then (as noted by NY Times reviewer Edward Frenkel) he asks the key question: Why is mathematics so effective in describing the world? Tegmark's answer, in brief, is that the universe itself is a mathematical structure, and therefore, mathematical, logical principles are the best way to describe and understand it.

Many reviews of *Our Mathematical Universe* appear online; the best and most thoughtful I've found is by Andrew Zimmerman Jones, for *About.com-Physics*. Jones understands Tegmark's point and its potential implications, and explains them lucidly and clearly. And unlike many reviewers, Jones also appears to understand why Tegmark's perspective might be important. His review is at:

<http://physics.about.com/od/Max-Tegmark/fl/MathematicalUniverse.htm>

*Our Mathematical Universe* is a well-written and important book, and though parts of it may be challenging for non-technically trained people, it's well worth reading.

—Levanah Tenen, Editor

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Our featured essay, *Political Science*, begins on page 2.



### Political Science

Recent secular scholarship and science tell us that communities that operate based on the golden rule out-perform communities that operate based on transactional Newtonian “tit-for-tat” competition. (Note 1)

Quantum mechanical systems are consistent with the golden rule, while Newtonian systems are consistent with tit-for-tat reactivity. (Note 2)

Community activity, i.e., swarming, flocking, and schooling, is dependent on the golden rule. From *The Alphabet That Changed the World*, p. 45: “A swarm forms when individual animals both repel and attract one another, but do not try to align themselves with their neighbors. A torus of animals moving around an empty center forms when the animals try to align themselves with their closest neighbors. A school or flock that moves as a group in one direction forms when animals begin to align themselves more tightly with other animals in the group.” In other words, the formation and behavior of a flock depends on awareness and coordination with one’s “neighbors” in the group. (Note 3)

In the illustration below, turkeys approach a food source, circle, and then leave filing in a single direction. In order for the turkeys to approach, circle, and move away, they have to maintain both their individuality and their relationship with the other participants—i.e., they have to treat each other as they would like to be treated, and not treat each other as they would not like to be treated.

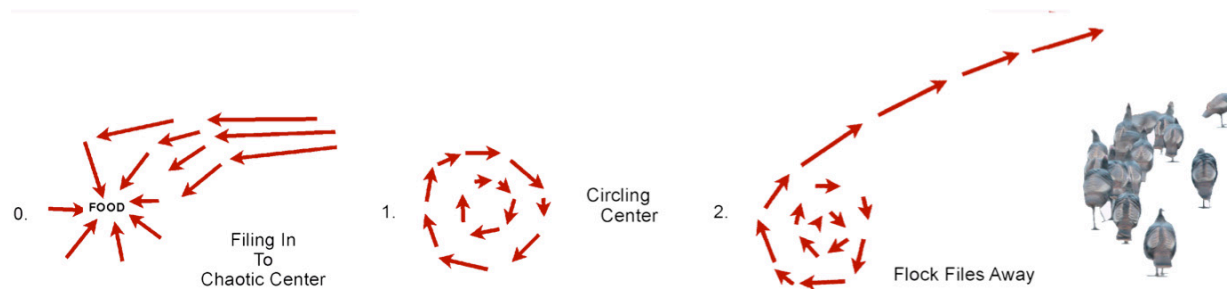


Fig. 2.27 from *The Alphabet That Changed the World*, p.46

Wave-particle duality can be expressed by the same geometrical relationship as the golden rule. (Note 4)



The Dirac delta function and its transform spectrum are the basis of wave-particle duality.



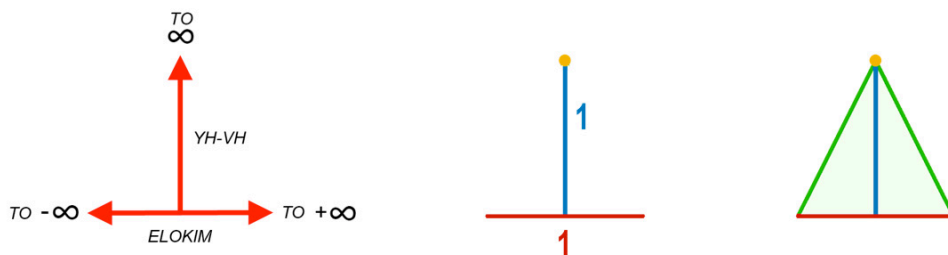
In Torah, we find:

The proclamation of the Sh'ma:

*Hear, Israel, the Lord our God, the Lord is One*

שמע ישראל יהוה אחד

Echad YH-VH Elo-keinu YH-VH Yisroel Sh'ma  
Read Right to Left



Adapted from fig. 2.2, *The Alphabet That Changed the World*, p. 19

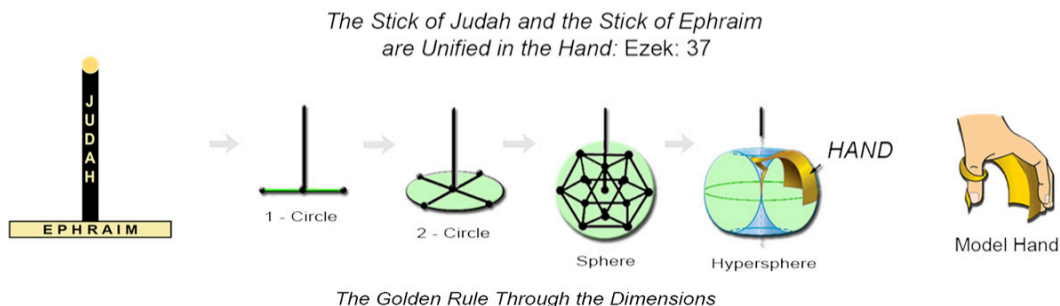
The equation of the Sh'ma—" [Hear Israel] The Lord (YH-VH) our God (Elokim), the Lord is One"—can be understood as having two parts, both equal to 1, albeit in complementary ways:

$$\begin{aligned} \text{Lord-God} &= 1 \quad \text{and} \\ \text{Lord} &= 1 \end{aligned}$$

Lord (YH-VH) refers to the infinite extent of the vertical line, while God (Elokim/Elokeinu) refers to the infinite expanse of the horizontal line. Since both infinities are of the same class, the inverted-T triangle has the same proportions when we divide through by infinity. This leaves the infinite vertical extent equal to 1, and the infinite horizontal expanse equal to 1. In other words, even though they are oriented at 90°, both Lord and God have the same absolute value: 1 (and the triangle of the inverted-T stays the same).

It follows that  $\text{Lord-God} = 1 \times 1$ , which equals 1; and  $\text{Lord} = 1$ , ergo  $\text{Elokim} = 1$  as well.

Ezekiel 37:15-26 [paraphrase]: "When the stick of Judah and the stick of Ephraim are united in the hand, there will be one nation, one language, one God, and there will be peace in the land."

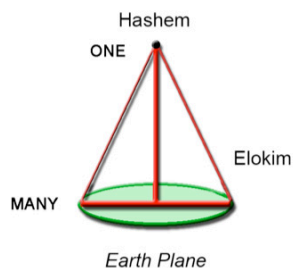


Adapted from "Unity: The Inverted-T," eTORUS #57

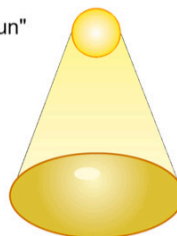


Psalm 84:12:

“A Sun and a Shield is Hashem-Elokim” Psalm 84:12



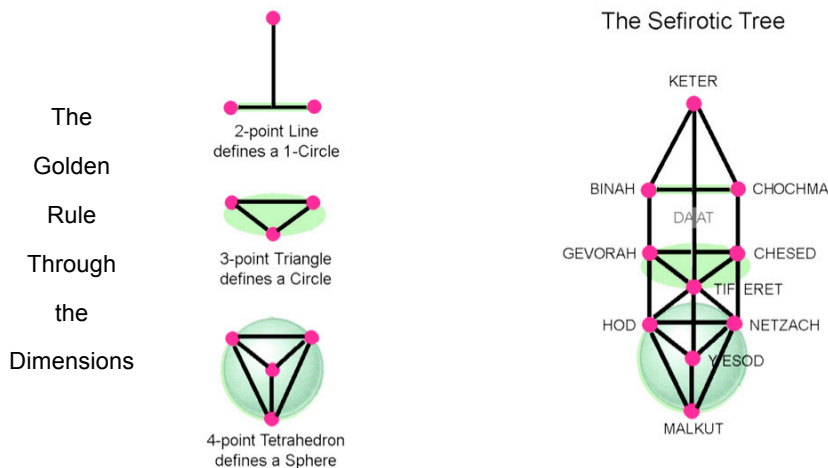
Singularity / "Sun"



"Shield" / Sky

Fig. 8.14 from *The Alphabet That Changed the World*, p.270

The Sefirotic Tree of Life:



The Golden Rule Through the Dimensions

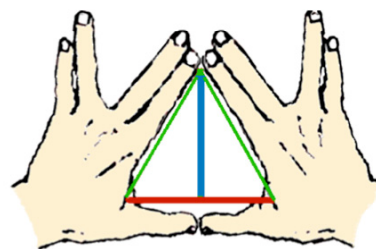
Detail from “The Golden Rule Through the Dimensions and the 4-Dimensional Tree,” eTORUS #62

The Tree of Life and the Tree of Knowledge of Good and Evil in the Garden:



The apex angle of the green triangle is 53°, the numerical value of *Gimel-Nun, Gan*—“Garden”

The Priestly Blessing:



The two Hands of the Priestly Blessing form the GAN EDEN Triangle

Adapted from “Gan Eden: The Arena of Time,” eTORUS #60



The golden rule is not an admonition; it's a law of nature. What "goes around" the earth, "comes around" the earth. What "goes around" the sun, "comes around" the sun. What "goes around" the galaxy, "comes around" the galaxy. The seasons follow a yearly cycle, and all of life is based on Genesis 1:11—"Fruit tree yielding fruit whose seed is in itself" (i.e., what "goes around" from the seed, "comes around" to the new seed).

Pharaoh could not escape the wheel of karma because he was bound to the earth-plane, where Newtonian transactional reactivity is the law of nature. No one escapes the wheel of karma, except by appeal to the non-transactional transcendent Singularity of Hashem.

### An Overview: The Two Golden Rules

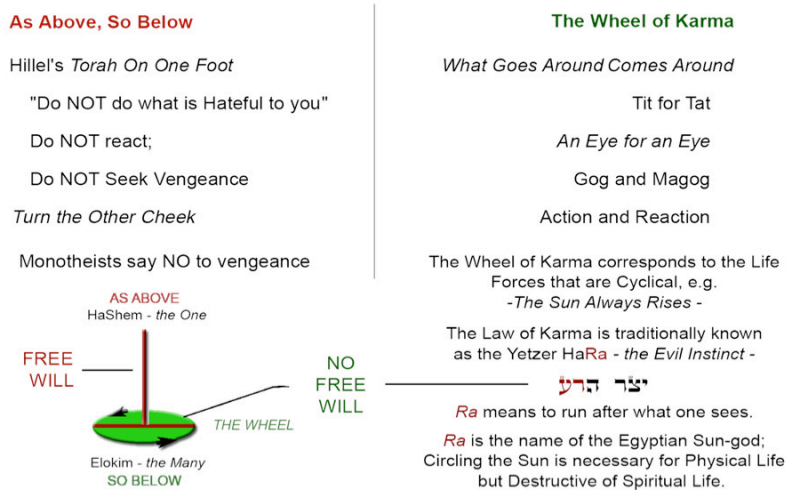


Fig. 8.1A from *The Alphabet That Changed the World*, p. 249 (2nd printing)

The term *Yirat Hashem* is generally translated as "fear of the Lord," but a better translation would be "overarching awe of the Transcendent." Without *yirat Hashem*, we are often afraid to say "no" to tyranny, or to the landlord, our boss or to anything else that we're subject to. *Yirat Hashem*, coupled with the Commandment for exclusive recognition of Hashem, means that we have to treat all of the other fears and forces that we encounter as petty idols, impotent compared to the Transcendent. This gives us the courage to say "No."

There are no limits to the golden rule, just as there are no limits to God's loving-kindness. God's life-force fills the sails of all creatures and all entities, including the good and the bad. The sun shines just as surely on the weeds as on the crops. As long as we are confined to living exclusively on the earth-plane, flatland, Mitzrayim/Egypt, there is no escaping the golden rule. There are no exceptions, there are no exemptions, there is no contingency that overrides the transactional Newtonian character of the wheel of karma, acting on the earth-plane of existence.

There are lessons to be learned here. For example: regardless of how we are treated, when we treat others poorly, when we disrespect other people, other religions, other perspectives, we guarantee that what we have sent around (disdain for others) will come around (disdain for us).

As long as we teach that other faiths, other peoples, other philosophies, are not just different, but inferior, other people will see us in the same light. If we do not find honest means for respecting and appreciating "the Other," then we can expect "the Other" to disrespect us.



There is no *halacha* (Note 5), there is no great rabbi, there is no self-validating belief system that can change or override this law of nature. It may not seem fair to us that the good and the bad are all sustained by the same life-force, from the same single Source. It may not seem fair to us that we have to credit the Other (in spite of our reservations and skepticism) if we are to expect the Other to credit us.

The great king, the great father, the great leader, the great philosopher, is the one who encompasses the widest domain: It's the most inclusive. It is our job as caring people to demonstrate this by our behavior. It is our job to show how the unembodied God of the Abrahamic traditions has been accepted and embodied by all cultures, albeit in their own terms.

Psalms 84:12 tells us that "A sun and a shield is Hashem-Elokim." This is the abstract principle, which comes before all embodiments. But we should not be surprised that other peoples thereby may say that the sun is an embodiment of God. This is not entirely incorrect; it is just aiming too low. But the principle is the same.

The key to legitimacy of all faiths is not how they describe or embody the Transcendent, nor whether or not they make use of what to others might seem to be idolatrous imagery. The test for us, and for all others, is: Do we adhere to the golden rule? Do we say "no" to the temptation to do what is hateful to us, to others? Do we recognize a higher power? Do we choose in the light of *yirat Hashem*, and have the courage to treat even our most adamant adversaries with the same golden rule we use to treat each other among ourselves?

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Notes:

<sup>1</sup>The last decade of research on altruism, cooperation, and similar subjects ranges from mathematical studies based on game theory, to studies of the survival rates of bacterial communities, to behavioral/developmental observations of toddlers, chimps, etc. For example: "How a Simple Mathematic Formula is Starting to Explain the Bizarre Prevalence of Altruism in Society" (*Science Daily*, 21 July 2008) reports on a game theory approach by theoretical physicists Jorge Pacheco, Marta Santos, and Francisco Santos. This model allows for social diversity—i.e., the fact that in any society, some members are more "popular" than others. From the *Science Daily* report:

And in fact, when social diversity was taken into account the numbers of those cooperating increased in direct relation to the system diversity. Furthermore, cooperation, according to this model, spreads even faster when the act of cooperation is considered more important than the amount given, with these societies presenting also a much fairer distribution of wealth. This new mathematic model for society's evolution is particularly interesting because not only it reveals a logic behind the large numbers of cooperators that we know exist in all human societies, but also it gives us a glimpse of the principles that can help "pushing" them into a better, fairer, path.

The full article is online at <http://www.sciencedaily.com/releases/2008/07/080718074652.htm>

<sup>2</sup>From Mark Buchanan, "Quantum tricks that read your thoughts," *New Scientist* 04 Dec. 2004, available to subscribers online at <http://www.newscientist.com/article/mg18424765.400-quantum-tricks-that-read-your-thoughts.html>:

Take one of the most famous dilemmas in social theory: the problem of "free-riding" with public goods—enjoying things like clean air or national defense, whether or not you have helped to create them. Individuals face a temptation to cheat—to save energy or money by not contributing, while still enjoying the benefits. All too frequently, the outcome is social disaster...

The key difference in the quantum game lies in the links between particles. A change in the state of any one particle will instantly influence the state of the particles held by other players. Consequently, players automatically receive "tip-offs" about the willingness of others to cooperate, and on this basis can then adjust their own strategy. In effect, entanglement allows players to link their decisions together in a way that would not be possible classically. So it becomes likely that cheating by one person will automatically



be met with cheating by others. In this way, cheating doesn't pay, and quantum theory deters freeloading and promotes a better outcome. "Quantum entanglement allows individuals to pre-commit to agreements," Hogg says. And as he and his colleagues have found, the "best" strategy in the quantum game, even for a completely selfish individual, leads to cooperation at least part of the time.

<sup>3</sup>See the groundbreaking work of Iain Couzin at Princeton University on flocking, swarming, and schooling behavior in nature. Although the golden rule is not mentioned as such, the formation and behavior of a flock depends on awareness, and coordination, with one's "neighbors" in the group. Information on this work can be found online at <http://icouzin.princeton.edu>.

<sup>4</sup>See the discussion of the Dirac delta function and its Fourier transform in *The Alphabet That Changed the World*, pp. 30-38, for more on this subject.

<sup>5</sup>[From [jewfaq.org](http://www.jewfaq.org/):] The word "halakhah" [or *halacha*] is usually translated as "Jewish Law," although a more literal (and more appropriate) translation might be "the path that one walks." The word is derived from the Hebrew root *He-Lamed-Kaf*, meaning to go, to walk or to travel. (From *Judaism 101*: <http://www.jewfaq.org/halakhah.htm>)







### Meru Foundation on the Web

**www.meru.org** Meru's original website was created in 1996, and has a large selection of essays and posters on many different aspects of this work. This is a site for leisurely exploration; the home page also includes a PayPal button for contributions.

Our eTORUS Newsletters include the most recent essays and graphics; all issues are archived at **www.meru.org/Newsletter/journalindex.html**.

A basic introductory packet on Meru Foundation, including a research summary, endorsements, a sample eTORUS, and biographical information, is posted at **www.meru.org/MeruIntroPacket.2013.pdf**.

**www.meetingtent.com** Meru's secure-server website for ordering our lecture DVD's, books, and other materials, and for making contributions via credit card. This site also includes a Meru FAQ, sample videos, and contact information for the media.

**www.tatctw.com** Website focused on Stan Tenen's 2011 book, *The Alphabet That Changed the World: How Genesis Preserves a Science of Consciousness in Geometry and Gesture*. Includes professional and reader reviews, and a portal for ordering from Amazon.

**www.youtube.com/user/filmguy2121** Bill Haber's YouTube channel, featuring our introductory video *First Light*, animations, and video excerpts from live lectures by Stan Tenen.



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