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From The Editor



June 2013 Levanah and Stan Tenen Bill Haber

Meru Foundation Moves to California

As we announced last year, Stan and I have moved from our 17-year home in Sharon, Massachusetts, back to Marin County, California, north of the Golden Gate bridge—barely ten miles from where we began our journey with Meru Foundation in 1983. Our sojourn in Massachusetts was educational and productive; colleagues and friends in the Jewish community opened up the world of traditional source material for our learning, without which we could not have written *The Alphabet That Changed the World*. We now consider *TATCTW* to be the definitive, comprehensive introduction to the Meru theses: a textbook, if you will, that provides a foundation for understanding future materials and research. More information on *The Alphabet That Changed the World* can be found at www.tatctw.com.

The Alphabet That Changed the World: The eBook

We began receiving requests for an eBook version of *TATCTW* almost from the first day it was released in print. Our publisher, North Atlantic Books, has been working on making the conversion to electronic format, and now informs us that it will be ready for release this summer. The eBook of *The Alphabet That Changed the World* will be available on iTunes only, formatted for iPad (though other Unicode-capable devices should also be able to display it); Apple's list price for *TATCTW* will be \$39.95.

Future Plans and Future eTORUSes

Regular readers will notice that recently, there has been a long interval between Meru's eTORUS Newsletters. The process of writing our book, *The Alphabet That Changed the World*, took several years, and in fact from 2009 through 2011 it was our entire focus. During this period Stan and I necessarily set aside other writing projects and potential research; and in 2012, with *TATCTW* completed, we turned our efforts towards moving back to California—a more suitable place for the next phase of the Meru work.

Now that we're settled in our new location, we have been unpacking and organizing our unpublished essays, draft posters, and other projects we've started and set aside over the last ten years. We plan to polish, update, and release much of this material, and have several new publication projects in mind:

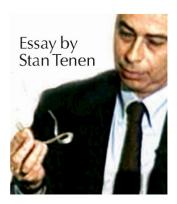
- 1) A hardcopy edition of eTORUS Newsletters: essays and graphics from our most recent issues, updated with cross-references to *TATCTW* and supplemented with previously unpublished material.
- 2) Four-Dimensional Torah and the Structure of Judaism: Meru President Bill Haber's personal perspective on Jewish tradition, as his understanding has matured during his long-term relationship with Meru research.
- 3) Meru eTORUS Newsletters: This is where we'll begin releasing our newly-unpacked and updated materials. This month's essay, *Evolution: The Missing Link*, was originally written in 2009 as an email to our *Sharon Colloquium* study group, during a period when so-called "Intelligent Design" was being heavily promoted as an "alternative" to modern evolutionary theory. (For our thoughts on this, see *eTORUS #30*, with Stan's essay titled *Intelligence vs. Information*.) In the essay below we've added references to *The Alphabet That Changed the World* and updated some of the terminology, but the basic ideas are unchanged, and accurately reflect our current thinking. —*Levanah Tenen, ed.*



Evolution: The Missing Link

"Not noticing the 600-pound gorilla in the middle of the room" is a colorful way of saying that we often look right past the most obvious and significant facts.

When it comes to evolution, the 600-pound gorilla in the room (the "missing link," so to speak) is the fact that no evolution can take place in isolation, because without a community there can be no future generation. And without a coherent social group, an outlier—an individual with qualities "outside of the norm"—would be no distinction, and offer no distinction, since there is nothing to be distinct *from*.



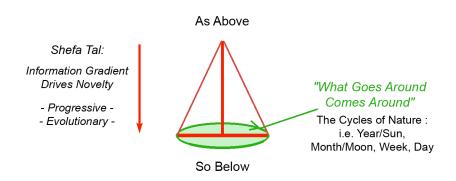
The idea of "linkage" is the idea of community. So in evolution, one can say that the "missing link" is the community itself: evolution is an emergent quality that stabilizes and is perpetuated within a cooperative community. And when the community succeeds, then the new qualities of its individuals spread.

Evolution comes from the assembly: the community/knesset, the minyan.

Evolution is an emergent quality: the dreams of the future of the community and its members.

If it weren't for the *shefa tal*—the constant stream of negentropy, "as above, so below"—then "what goes around comes around" would always be the same. The *shefa tal*—the stream of negentropy—feeds the community, but makes no choices. The community "digests" the *shefa tal*, and points it in the direction of emergent qualities. The community makes the new choices that modify and modulate what would normally "go around and come around" in the progression of the seasons and the cycles of nature.

The *shefa tal* provides the opportunity for novelty.



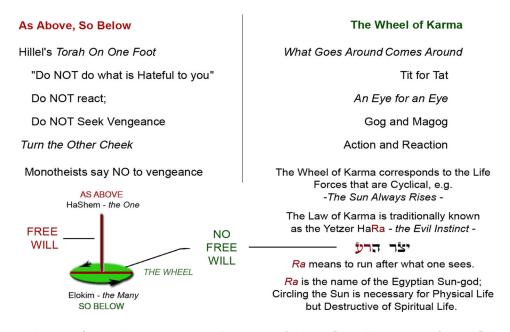
The inverted-T: Negentropy, the "information gradient," provides the opportunity for novelty

Illustration adapted from eTORUS #48, "The Golden Rules"

Without what is "as above" being available to what is "so below" nothing would change, because there would be no negentropy to feed novelty. No new information means no change—and no opportunity for choice.



An Overview: The Two Golden Rules



The two Golden Rules, contrasting "As Above, So Below" with "The Wheel of Karma" Illustration from *The Alphabet That Changed the World* p. 249

Evolution is only "the survival of the fittest" when it's understood that the fittest are those who cooperate best, and thus provide room for novelty—not those who carry the biggest bludgeons, or succeed by physical force. Physical force just continues to force what goes around to come around.

The chronicles of our world history have led us to the default assumption that the fittest—the survivors—are the most physically and mechanically agile, the most warlike, the most aggressive, and that they win by overwhelming their victims.

But consider this alternative: a cooperative community is open-ended, and many choices—good, not so good, not so bad, and bad—can emerge. The good can be selected and reinforced. In contrast, the warlike, brutish horde carries only negative and self-limiting qualities. If *fittest* means the most adaptable to changing conditions, then "brutish survival" is not the survival of the fittest; in fact, it represses the survival of the fittest. (And when a brutish horde succeeds, it succeeds not because it's brutish, but because it's a horde—a coordinated community.)

Game theorists have shown that in a Newtonian mechanical universe, "tit for tat" behavior is often the most successful. But we don't live in a Newtonian universe. An article in the December 4, 2004 issue of New Scientist, "Quantum tricks that read your thoughts," describes research showing that when the equivalent of quantum entanglement is factored in to a "game" where players either share or do not share resources with others, "cheating doesn't pay, and quantum theory deters freeloading and promotes a better outcome." (See Note 1 below.)

We live in a quantum mechanical universe, and when quantum mechanical superposition is allowed for, it turns out that "tit for tat" is not the best strategy. More recently, Harvard professor of mathematics and biology Martin Nowak has been able to describe mathematically how various forms of cooperation "give us an edge" in terms of natural selection. In a 2011 interview in *New Scientist*, Prof. Nowak remarked: "Cooperation is interesting because it essentially means that you help someone else, someone who is a



potential competitor. You reduce your own success in order to increase the success of somebody else. Why should you do that? To answer these questions I use evolutionary dynamics, evolutionary game theory and experimental tests of human behavior...[The] results of our paper are beautiful: simple mathematical models based on natural selection are sufficient to explain the evolution of eusociality [i.e., a cooperative society]." (See Note 2 below.)

The best strategy in the real world is based on the golden rule, because ultimately this leads to the greatest common and individual good.

What we're seeing here is that God is not the "intelligent designer" directing evolution choice-by-choice. Rather, the contrast, *Hashem-Elokim=Echad* is the source of the *shefa tal*, a stream of negentropy, God's loving-kindness, that we ourselves can harness to make choices.

When we examine the science of flocking, swarming, and schooling communities—whether of individuals or of abstract dimensions—we find that "community process" comes into play at ten individuals. (For more detail on this, see Note 3 below.)

It takes ten individuals to form the minimum flock. This may be why in Judaism, the prayer *minyan* consists of a minimum of ten individuals.

When this community of ten "harmonize" on the same prayer/song, new qualities can emerge—prayers can be answered. Thus a "miracle"—NeS—emerges from a "community"—kNeSset.

Quoting from The Alphabet That Changed the World, pp. 258-9:

Reading the word *knesset* acronym-style, we have the letters *Kaf* , *Nun*, *Samek* , *Tav* . *Tav* simply indicates the plural of the word it is attached to, and *Kaf* ("palm of the hand") means "to hold." The dictionary meaning of *Nun-Samek* : is "miracle." Letter by letter, *nes*, *Nun-Samek* : outlines the geometry of emergence: *Nun* —connecting line; and *Samek* —circle, "*SMoKe-ring*" (as a translingual pun).

Emergence

NES Di Miracle Nun: Connecting Line Samek: Smoke-ring

A miracle *Nes* 🗗 emerges. The *Nun* of *nes*, "connecting line," is illustrated by the vertical line. The *Samek* of *nes* is the horizontal smoke-ring. Together, they embody the circle-and-line geometry of emergence.

Text and Illustration from *The Alphabet That Changed the World* pp. 258-9



The future health and prosperity of the community is the dream of the community, and it is this dream that drives the emergent qualities of the community that increase the health and prosperity of the community.

When it comes to evolution, we are co-authors. God provides the organizing fuel. We make the choices that break the endless cycles of nature. We dream the future.



Note 1: Mark Buchanan's essay, "Quantum tricks that read your thoughts," New Scientist 04 Dec. 2004, is available to subscribers online at www.newscientist.com/article/mg18424765.400-quantum-tricks-that-read-your-thoughts.html.



Note 2: Michael Marshall's *New Scientist* interview with Prof. Nowak (March 20, 2011) is available at *www.newscientist.com/article/mg20928045.200-the-mathematics-of-being-nice.html*.



See also Prof. Nowak's 2011 book, *SuperCooperators: Altruism, evolution, and why we need each other to succeed* (New York, NY: Free Press/Simon & Schuster, 2011).

Note 3: From *The Alphabet That Changed the World*, chapter 8, note 14, p. 279: "Although not explicitly emphasized, ten also appears to be a significant threshold quantity in the research of lain Couzin, *et. al.*, into flocking, swarming, and schooling phenomena in nature...Couzin's work demonstrates a three-stage process to this phenomenon: gathering/apparently random motion; toroidal/ringlike motion (which coordinates the group), and finally motion in a straight line (when a single preferred direction emerges in the group). In several instances ten individuals (of the particular type being studied) appears to mark a threshold between one and another states of motion..."

In addition, there are also mathematical/geometric reasons for considering ten as a significant threshold quantity: see the section "On Emergence" from *The Alphabet That Changed the World*, pp. 255-8, and also Appendix N: *Ten-Ness, the Tetractys, and Marion's Theorem,* on pp. 338-9.



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 Meru President 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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Intro Packet



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