

Quantum Spin

Tom Ransom

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Stars everywhere! In all his hours gazing up at the sky never had he seen stars as dazzling as these. This was a dizzying display. The entire stellar dome seemed to be spinning, counterclockwise, as if a planetarium program were in rewind. Why was he laying here on the ground with the widgeting crickets, he wondered? A chill was in the air; why hadn't he worn a jacket?

And then, no sooner had his eyes closed, he felt a familiar warmth upwelling from within. He could fully appreciate how this inner heat was all that separated him from the 'big-chill' outside. He'd read enough biology and chemistry, and atomic physics, to fathom just how deep the innermost things were, but beyond that—ultimately, what was the *source* of this internal radiance?

So with curiosity invoked he began to imagine what was transpiring inside. Taking in a deep breath, he followed the infusion of fresh air as it rushed into his lungs, watching as the oxygen molecules were drawn out, captivated by the iron-laden red cells passing in his bloodstream. He was amused when, with a convulsive pulse, they were suddenly flushed away, through the heart's chambers, into branching arteries and out every capillary. How quickly then this oxygen was evacuated, sucked through the lipid membranes of adjacent cells directly into the import pores of exigent multitudes of microscopic "mitochondria", as if—breathing was all about *them*.

And it is! They're why we breathe. These tiniest organelles within every cell are the metabolic furnaces that "oxidize" ingested carbohydrates to produce our cellular fuel. He had read that the exothermic heat from this combustion process gets absorbed into the bloodstream and circulated throughout, gathering in the central organs. So he knew that mitochondrial respiration was the proximate source of his immediate warmth, but he also knew that to find the ultimate source would require going deeper.

He further recalled that the metabolic processes of biology were really chemical in nature, and that chemistry, when you got down to it, was happening on the atomic scale. So he began to imagine the conjugating molecules and proteins interloping, the fluttering ion channels and reaction cascades, observing how all this activity was actually instigated by myriads of electrons in orbital pursuit. In fact, this intrinsic affinity between the orbiting electrons

and their adjacent protons is the genesis nexus of not just the biologic but the entire material world. Now surely, if heat was the result of matter in motion, then things couldn't get much faster, or hotter.

And yet, he remembered that resident even deeper was a theoretical harmonic oscillation called the "quantum wavefunction". For physicists, this was the bottommost feature of the physical world marking the "event horizon" beyond which nothing more could ever be directly observed. To venture any further would be to leave the particle players of the metabolic and chemical worlds and vanish forever into the dark sequestered underworld of the subatomic domain. He was becoming more dizzy and disoriented than ever. Dare he go any deeper?

And then, suddenly his imagination and the moment merged, for he was certain he was hearing something in the background... an "om"? It sounded remarkably like the transcendent mantra of Eastern mysticism! Was this the harmonic synchrony of the wavefunction itself? Was *this* the ultimate radiant Source?

Holding his breath, listening deeply, he heard it again only louder, closer... this wasn't "om" he was hearing, this was the sound of a distant *voice*, a familiar voice, from an *outside* source...

"Tom! Are you okay?"

Sitting up, the sound of crickets again and the chill in the air, he opened his eyes to see the remains of his baseball glove splayed on the ground before him, severed lacings dangling, the ball pocket *entirely missing*...

"Dude look, that line-drive went right through the web of your mitt, hit you in the head, and knocked you out cold!"

"For... like a minute", came a second voice, "where did you go?"