

Congratulations, Dan Shechtman! by John Knapp II

[Israel—past, present, and future—is close to the heart of the Seed of Abraham Ministries. So we pause in our usual Bible-related teaching to highlight a recent high honor received by a citizen in that tiny country the size of New Jersey. This moment of secular celebration, we feel, is another piece of evidence that God’s hand is upon the Middle East—as well as upon our whole planet. Dr. Shechtman teaches a valuable lesson on how to face conflict in life.]

On April 8, 1982, God’s book of nature began a new chapter, one that specialists at first strongly resisted, and that most of the rest of us since then haven’t even tip-toed through. The title? “Quasicrystals,” a new form of matter that science textbooks say doesn’t exist. The practical consequences? They run past us, just under our noses, as we shave each morning.

Quasicrystal science goes far past what we do here, but the curious can Google “Dan Shechtman” to locate reputable sources that let you run as far as you can follow. (And yes, there’s drawings and pictures.)

Shechtman the man, however, is a hero we can understand and admire.

After his discovery and confirming work, quasicrystals coasted under the radar for several years as Dr. Shechtman was laughed at, vilified, removed from his research group as an embarrassment, with his research ignored by scholarly journals because they “would not interest the community of physicists,” said one critic. (Note: physics and chemistry are bedfellows in basic research on the atom.)

Until his dying day, double Nobel winner Linus Pauling

declared that Dan Shechtman was talking nonsense. "There is no such thing as quasicrystals, only quasiscientists," he said.

But slowly—over years—attitudes towards his work began to change. Because of Shechtman's quiet persistence scientists privately began to consider the evidence (about ways crystals could form) and one-by-one changed their minds.

The tide turned.

The textbook definition of "crystal" had to be, and was, rewritten.

According to colleague Patricia A. Thiel at Iowa State and Ames Laboratory, quasicrystals "revolutionized our understanding of how atoms arrange themselves in solids. It was a scientific revolution." (And practically speaking, newly produced quasicrystals, recognized for their strength and durability, are, among other things, now used as alloys in razor blades and surgical needles.)

Shechtman, born, raised, and educated in Israel, now a professor at the Technion-Israel Institute (as well as Iowa State) was congratulated by Israeli President Shimon Peres, as bringing "an enormous gift to the State of Israel," being the tenth recipient of a Nobel by a citizen in a country of only 8,000,000 people.

According to Shechtman, a shy and patient man: "A good scientist is a humble and listening scientist and not one that is sure 100 percent in what he reads in the textbooks."

After his initial discovery was shared, "I was thrown out of my research group. They said I brought shame on them with what I was saying...I never took it personally. *I knew I was right and they were wrong.*" He just needed more confirming work to better explain what he'd found.

God has given us two books of Truth: the special God-inspired revelations of the Bible, and the God-created "book" of nature.

We believe they fit together and complement each other both displaying the holy and immutable character of the Living God.

Seed of Abraham Ministries struggles diligently to rightly interpret the Bible and present it as the harmonious unity from Genesis to Revelation that it is. We are not always well received or accepted in the Christian community as we often challenge cherished doctrines that don't seem to fit the facts as presented in God's Word.

Science does the same with facts and theories about the natural world. It does not easily accept new ideas or theories from "heretics" who challenge what is considered foundational and axiomatic, but in reality is regularly only a consensus of academic opinion. But science, as every other discipline, can jump ahead of the "facts" it knows and get things wrong and create their own doctrines.

Thanks to the Royal Swedish Academy of Sciences for acknowledging a necessary correction. The citation from the Royal Academy for Shechtman's Nobel award is simply, "For the Discovery of Quasicrystals."

Seed of Abraham Ministries applauds the persistence of this wonderful Jewish scientist and the adventure of serious science and the courage to take a stand and go where the facts go. Pray for us to have the same boldness.

(Dr. Shechtman's picture is one of the few that hangs on the third floor of my Tower Office.)

Author: John Knapp II, PhD