

# MENSA® BULLETIN

The Magazine of American MENSA®



**FINDING FRIENDS**  
What it takes for gifted people  
to unlock the doors to  
meaningful connections.

**OUR BEST  
TEACHERS**  
**THE SCIENCE  
OF LOVE**



# MENSA® BULLETIN

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### Captain Nicholas Quaglietta

joined Mensa in 1986. He has been an active-duty pharmacist with the U.S. Public Health Service since 1987, stationed at several Indian Health Service facilities as well as the Federal Correctional Complex in Tucson. He has often described himself as a hopeless romantic, and the center of his affection is his girlfriend Sofia, who was the inspiration for his article "The Love Particle" (page 18) and to whom it is dedicated.



A licensed professional counselor in Eugene, Ore., **Patti Bear** works at a community mental health clinic providing individual and group therapy for adults and children, as well as contributing her two cents toward healthcare reform. Evenings, she and her husband wrangle two teenage sons and their girlfriends and enjoy the occasional evening out. She likes

to read, knit, read, and do yoga. And read. On the weekend, she hikes and spends hours on the phone with her co-author and best friend of 28 years, Mensa's Lisa Van Gemert (see "Friendship 101," page 22). The pair look forward to retirement, when they may have a shot at living in the same state once again. Or at least the same time zone.



**Hilary Moore** has been a member of American Mensa's National Office staff for six and a half years. As the art director for the *Mensa Bulletin*, Hilary enjoys the challenge of creating layouts that help tell the story more fully. When she's not busy making the magazine pretty, Hilary takes her dogs running, practices hot power yoga, spends time with her husband

and daughter, and makes chocolate chip cookies that have the entire National Office demanding more.

Mensa is an international society in which the sole requirement for qualification for membership is a score at or above the 98th percentile on any of a number of standardized intelligence tests. Mensa is a not-for-profit organization whose main purpose is to serve as a means of communication and assembly for its members.

"Mensa's purposes are to identify and foster human intelligence for the benefit of humanity; to encourage research in the nature, characteristics, and uses of intelligence; and to provide a stimulating intellectual and social environment for its members."



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# THE LOVE PARTICLE

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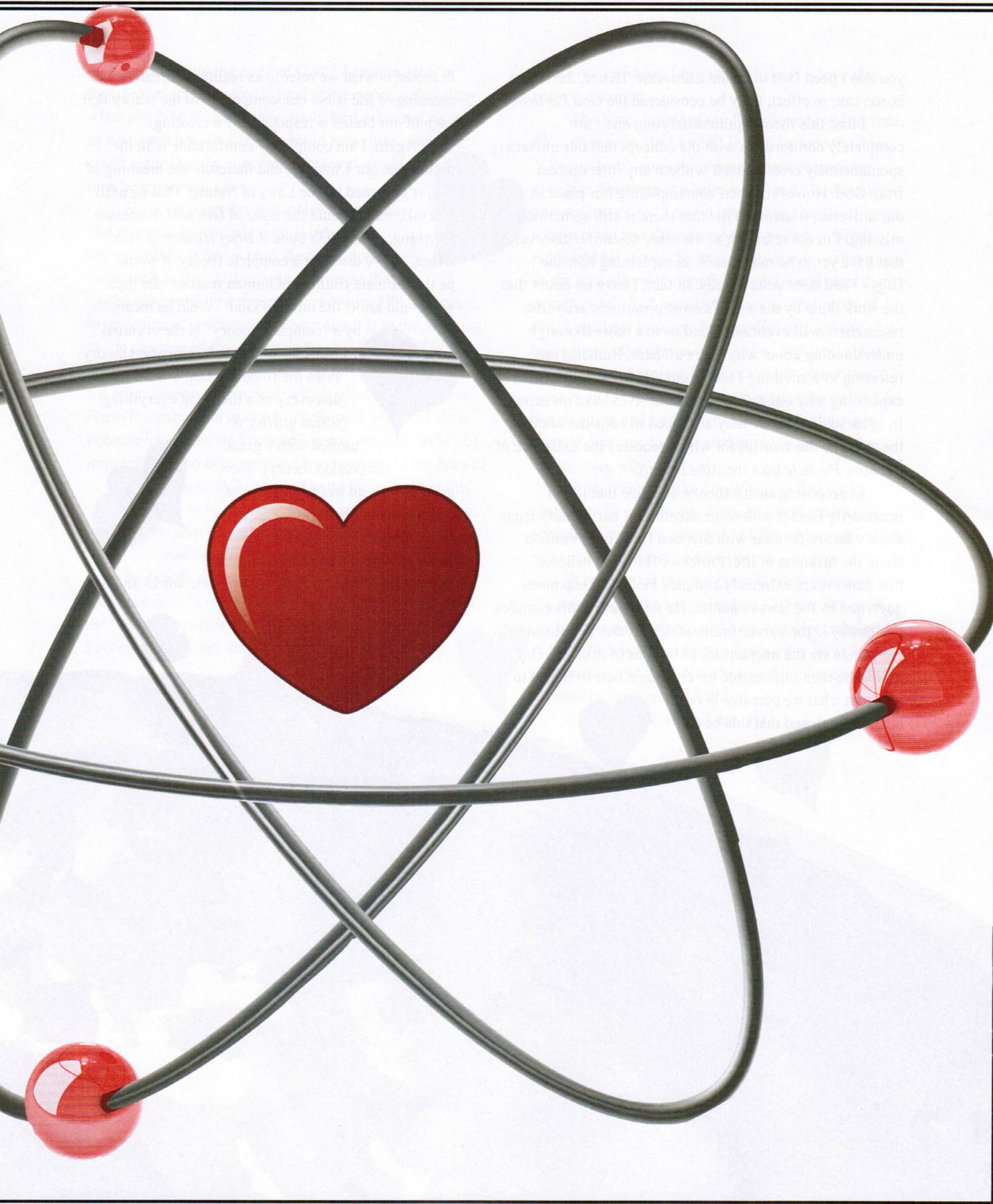
We are getting closer to discovering the secrets of the universe, our minds, and our hearts. By Nick Quaglietta

**A**s we are all well aware, there was some very exciting news during this past summer about a scientific discovery in Europe. The researchers at the European Organization for Nuclear Research (CERN) announced they observed a boson (a type of elementary particle), which they believe is consistent with the prediction made by professor Peter Higgs, et al., nearly five decades ago. The term boson is used to describe an extra excitation of an already elevated quantum field. The observation of this particular boson helps to substantiate the existence of the Higgs Field and is, therefore, known as the Higgs boson. Why is this so important? The Higgs Field, unlike other quantum fields, is not more concentrated in certain places, meaning it has a non-zero value everywhere (i.e., no empty space). Consequently, other elementary particles interact with the Higgs Field all the time,

causing these other otherwise massless elementary particles to travel slower than the speed of light, thus allowing them to effectively obtain mass. This also means that the Higgs Field is essentially responsible for making the law of gravity relevant in our universe. For without mass, the law of gravity would have nothing to govern and the concept of tidal forces would be meaningless.

The Higgs boson was nicknamed *The God Particle* by the Nobel Prize-winning physicist Leon M. Lederman in his 1993 book *The God Particle: If the Universe Is the Answer, What is the Question?* Lederman claims to have given the particle its nickname because it has been the most sought-after particle in modern physics and the search for its existence was so central to the state of physics at the time. Several years later, Stephen Hawking, in his 2010 book *The Grand Design*, concluded that God was not necessary “because there is a law such as gravity, [therefore] the universe can and will create itself from nothing.” By relating Hawking’s statement to the recent discovery at CERN, one could also argue that if the Higgs Field is real, then







you don't need God to create a universe. Hence, the Higgs boson can, in effect, truly be considered the *God Particle*.

I find this theory quite satisfying, and I am completely comfortable with the concept that our universe spontaneously created itself without any intervention from God. However, when contemplating our place in our universe, it seems to me that there is still something missing. I'm not referring to the other scientific discoveries that have yet to be made, such as explaining how the Higgs Field does what it does. In fact, I have no doubt that the work done by the world's most prominent scientific researchers will eventually lead us to a more thorough understanding about why we're all here. Rather, I am referring to something I feel is equally important, which is explaining why our universe and our lives have meaning. In order to do this, we may also need to consider another theory: The mechanism for which requires the existence of the *Love Particle* (aka the *Alfie* boson).

In proposing such a theory, I realize that it will necessarily be met with some skepticism, particularly from those who are familiar with Stephen Hawking's opinion about the meaning of life. Professor Hawking believes that humans are extremely complex biological machines governed by the laws of nature. He says part of this complex machinery is the human brain, which creates and sustains our minds via the interactions of billions of neurons. Our minds are then responsible for creating a best-fit model to interpret what we perceive in our environment, and that this best-

fit model is what we refer to as reality. Ultimately, the meaning of life is but one component of the reality that each of our brains is responsible for creating.

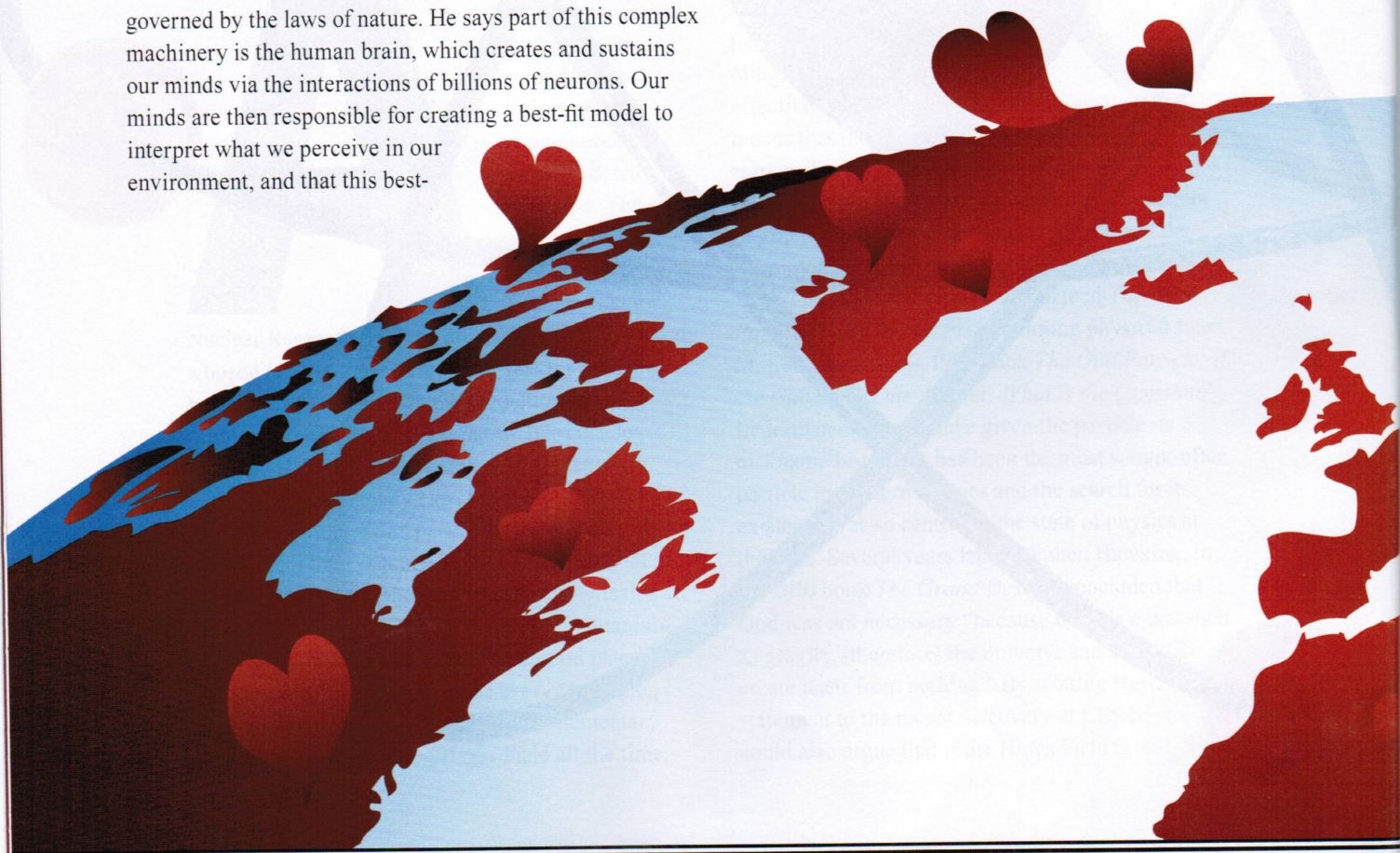
Again, I am completely comfortable with the notion that our Universe, and therefore the meaning of life, is governed by the Laws of Nature. That is, until you take into account the issue of free will. Professor Hawking, in his 1988 book *A Brief History of Time*, wrote, "If we discover a complete theory, it would be the ultimate triumph of human reason—for then we should know the mind of God." What he meant

by a "complete theory" is the eventual discovery of a grand unification theory as an intermediate step toward the discovery of a theory of everything (where gravity is

unified with a grand unification theory). Such

an achievement would allow us to understand the behavior of galaxies on a quantum level and vice versa.

In other words, we would understand exactly how everything in our universe works and why,





thereby “knowing the mind of God.” Assuming that a theory of everything would predict everything, including when and how such a theory would be discovered, as well as when and how this article would be written, one could argue that the concept of free will would then be irrelevant.

However, even Professor Hawking agrees that free will exists and that it is inherently unpredictable. If this is true, then how could a thing such as free will exist in a universe that can be explained by a theory of everything? This paradox, in my opinion, is where the theory about how the meaning of life can be explained entirely by physics begins to break down. In order to account for this discrepancy, I am proposing another model, which relies upon the *Love Particle* mechanism in order to achieve a best fit. This is because love is, as we know, inherently unpredictable and imprecise and so does not appear to conform to the laws of nature. All you need to do to understand this is to bring any two or more subjects together, allow them to interact with the *Love Field*, and the results you will achieve will never be exactly the same. The model that predicts the existence of the *Love Particle* must necessarily transcend the limits imposed by the laws of nature. Even if I accept the concept that God is not necessary to

create our universe, I can still believe it is love that gives it meaning.

The lyrics to one of my favorite songs of all time, *Alfie*, written in 1965 by Hal David, include the lines, “I know there’s something much more, something even non-believers can believe in,” and “Without true love we just exist.” I find it interesting that these lyrics were written less than a year after professor Higgs published his theory. So apparently it is love that gives us the sense there is something out there greater than ourselves in which we can believe. To find proof of this, I need not look any further than into the eyes belonging to the person who is now, and shall always be, the most important to me in my life. What I see there is all the reason I will ever need to know my life has meaning and I am where I belong. Without her I would continue to just exist, but I would never be exactly sure why.

It is, therefore, the *Love Particle* that will ultimately be responsible for unifying the theory of everything with the meaning of life and for motivating us to want to further understand our universe.

It is doubtful that the *Love Particle* will ever be observed in the Large Hadron Collider although I suppose machines need love, too. Nevertheless, its effects can be observed every day as we look around us and appreciate love as the most elegant element in the human condition.

I love; therefore, I am. 