

Knowing the unknown

This year's winner of the Templeton Prize is a renowned French physicist who has reflected and written over many years on the discoveries of quantum physics. They suggest that reality, he says, is fundamentally mysterious

Once he's finished paying taxes on his £1 million Templeton Prize, Bernard d'Espagnat says that he wants to use part of his award to foster study of apophatic, or "negative", theology. "It's the only form of theology that I appreciate," the French physicist said. "It would be a good thing if it were investigated a little more than it now is."

D'Espagnat is the 2009 winner of the Templeton Foundation's annual award for affirming life's spiritual dimension. The award, which boasts a monetary value pegged above that of the Nobel Prize, was announced on Monday at Unesco in Paris and will be presented to D'Espagnat by Prince Philip in a private ceremony at Buckingham Palace on 5 May.

Now a spry 87, the laureate can look back on a long and illustrious career as senior physicist at the Cern particle physics laboratory in Geneva and physics professor in leading French and American universities. But it's his metaphysical thinking, most recently set out in his 2006 book *On Physics and Philosophy*, that won him the prize.

D'Espagnat developed an interest in philosophy at his Paris *lycée* in the 1930s. But, convinced that philosophy could only progress with knowledge of modern science, he opted to study theoretical physics and, after delays due to the Second World War, earned his PhD from the Sorbonne in 1950.

Once he had established himself as a physicist, D'Espagnat became increasingly interested in the implications of the new discipline of quantum physics for our perception of ultimate reality. Since 1965, he has published 19 books.

Quantum physics presents such baffling phenomena that Albert Einstein challenged it with the famous quip "God does not throw dice". One of these is entanglement, a link that paired subatomic particles retain even when they move far apart. Experimenting on one immediately influences the other, without any apparent communication between them.

While Einstein saw these phenomena contradicting his orderly vision of a fundamental reality that science can now or will eventually comprehend, D'Espagnat took them as proof of the even deeper but ultimately mysterious "veiled reality" inaccessible to us.

Announcing the award on Monday, the foundation's president, John Templeton Jr, said

that D'Espagnat did not stop his research at the limit of quantum physics but "explored the unlimited, the openings that new scientific discoveries offer in pure knowledge and in questions that go to the very heart of our existence and humanity".

Last year's Templeton laureate, the Polish Catholic priest Michael Heller, donated his prize money to fund a centre for research in science and theology in Krakow. Other winners have included Mother Teresa, Alexander Solzhenitsyn and the Canadian philosopher Charles Taylor.

Meeting me in a Paris hotel before the news was announced, D'Espagnat told *The Tablet* that the uncertainty quantum mechanics reveals at the subatomic level means that ultimate reality is fundamentally mysterious. "Kant was not completely wrong when he said you can get only at phenomena, not at what he

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called the thing-in-itself," he said in his precise English. "He considered the thing-in-itself as absolutely unreachable by any means, whereas I think there is still some faint hope of getting at it, not by conceptualising as science does, but by intuitions."

The son of a post-impressionist painter, D'Espagnat learned to appreciate the beauty of nature in his youth and took it as a "signpost pointing to reality". Music played a similar role, he found. "When they hear very good music, people who like classical music have the impression that they get at some reality that way," he said. "In classical physics, the scientist would say there is a rule on how to get to this knowledge, and what you believe you find when you hear music is just something inside you. But today they can't say that."

"I put spirituality in the same category," he added. "There is a quite natural tendency to conceptualise it but I think we should refrain from that."

This spiritual approach puts D'Espagnat at odds with the materialist outlook often found

among scientists. "Materialists consider that we are explained entirely by combinations of small uninteresting things like atoms or quarks. With this notion of an ultimate reality that is inaccessible, it seems more natural to consider that we owe our existence to something that is higher than us. The notion of 'high' is difficult to define, but still this is a point I really believe, and that's what makes me a 'spiritualist'."

D'Espagnat said his spirituality was divorced from faith or an organised religion. "I admire the notion of faith very much, but I separate it from spirituality, which doesn't need this notion of faith. Not everybody has faith. I will certainly not swear that Christianity is true or that Buddhism is true."

"I was born a Catholic and I still have many sympathies; it's my family, in a sense. But it doesn't go further than that. The main point is that I believe we ultimately come from a superior entity to which awe and respect is due and which we shouldn't try to approach by trying to conceptualise it too much."

This is the point where, after his long and careful explanation of the physics and philosophy that have marked his life and thought, his interest in apophatic theology comes in. D'Espagnat said the theologian whose views came closest to his idea of a mysterious ultimate "ground of things" is the sixth-century mystic Pseudo-Dionysius the Areopagite. "This theology centres on the idea that God is completely inaccessible," he said, and so he can only be described by what he is not.

D'Espagnat thought this approach had no friends at the Vatican, but he was pleasantly surprised to hear that Pope Benedict XVI preached about it positively at a general audience in May 2008. The Pope praised Pseudo-Dionysius as a mediator in dialogue between Christianity and Greek thought in his time and said that this thought could now build a bridge to mystical Asian theologies.

Pope Benedict also stressed the importance of religious practice for Pseudo-Dionysius, but D'Espagnat said he felt no need to practise religion even though he understood and respected those who did. "Perhaps it's a lacuna in my own mind," he said with a smile. "It's possible that I still have some progress to make."

■ Tom Heneghan is religion editor at Reuters.