

## Our Knowledge Shapes the World

The experimental physicist Anton Zeilinger believes the physicists of today “are more hobbyists than thinkers.” He himself is a creditable exception. At the Waldzell Meeting in Melk Abbey, the native Upper Austrian provided the Oberösterreichische Nachrichten newspaper insight into his philosophical world view.

**OÖN:** In philosophy it is about “the nature of things.” Is this also a relevant theme for your research?

**Zeilinger:** For me the most important discovery of the 20<sup>th</sup> century was when quantum physics came to the realization that things happen without reason. One can actually observe this in experiments.

**OÖN:** Your most famous experiment was the teleportation of light particles.

**Zeilinger:** We produced light particles in pairs and when a specific quality, for example the alignment of the axis, was measured in both partners independently of each other, the same random series of measurements always resulted. There is no reason for any single result, just in that moment when that one particle coincidentally shows a specific quality, then the other one, no matter how far away it is, shows this same quality. How strange is our world?!

**OÖN:** Do these particles really exist or only in our imagination?

**Zeilinger:** They are constructed in the measurement process. One cannot explain this phenomenon with simple esotericism. I have a certain device that takes a measurement. One can only speak of the measurement results and they can be observed macroscopically, by lighting a small lamp.

**OÖN:** Is there a technical application for these discoveries?

**Zeilinger:** In 20 years there will be new information technology consisting of quantum computers that will utilize the ambiguity of quantum mechanics to process information quickly.

**OÖN:** One theme of the Waldzell Meeting was “meaningful life stories”. You have illustrated some from your life.

**Zeilinger:** There have been many things in my life that seem to have meaning. I was very lucky and very privileged. For example, I was lucky to live in a democracy. And it was a lucky coincidence that led me to quantum physics. In 1985 I was invited to a conference in Finland where the strangest prognoses of this research were discussed, which we had not examined at MIT then. I went there and ever since then this topic has fascinated me.

**OÖN:** If your research allowed the time, which reading material provides you with the best distraction?

**Zeilinger:** Heimito von Doderer. And Stifter. I don't remember if I have read „Witiko“.

**ÖÖN:** Do you have a certain reading technique?

**Zellinger:** I always start with the last pages. If you don't finish reading a book, or if you can predict the end of the book from its beginning then this cannot be a good thing.

**ÖÖN:** How would you rate new generation research in Austria?

**Zellinger:** I enjoy working with young people. In Austria, the youth are often scolded, but they are exactly as we once were, with the same capacity for enthusiasm.

**ÖÖN:** Where did you spend your summer holidays this year?

**Zellinger:** As in every year, in Traunkirchen together with my wife Elisabeth. This year, lightning struck our holiday home in the middle of the night. My wife had a sleepless night after that, but I just turned around and went right back to sleep.

**ÖÖN:** Lightning is an appearance of light. What is the nature of light?

**Zellinger:** Towards the end of his life Einstein said all his musings on this matter did not bring him any closer to the answer. We can only describe reality; we speak about our knowledge of reality and believe in the information that we have about it. Our knowledge is more important for the entire world than a pure materialist will admit. This is an age-old school of thought that can be found as early as in the gospels of John: In the beginning there was the Word, and the Word was with God and the Word was God.

# Good Islam, Bad Islam

Three Nobel Prize laureates as well as renowned thinkers and spiritual authorities discussed the meaning of life last weekend in the context of the first "Waldzell Meeting" in Melk Abbey

The Waldzell Meeting is the kick-off to a future event series. The idea behind it: to make the search for meaning into an important matter of concern for society. The name "Waldzell" refers to the elite school in Herman Hesse's novel "The Glass Bead Game". Patron of the event is the Brazilian bestselling author Paulo Coelho ([www.waldzell.org](http://www.waldzell.org)).

The lecture by the Iranian Nobel Peace Prize laureate Shirin Ebadi received especial attention. She called on the seminar participants not to blame the crimes of terrorism on Islam. When killing is done in the name of Islam, then one can be sure that the name of Islam is being misused.

Human misconduct must be viewed separately from religion. Ebadi protested against the view that Islam was not compatible with democracy. In the Orient the relationship between democracy and religion is still unsettled. "That is the source of many differences in the Islamic countries."

Ebadi hopes for a united front of Islamic intellectuals. A modern Islam respecting human rights is possible. But, Ebadi continues, "some Islamic governments are not willing to allow an interpretation of Islam that is in accordance with democracy."

## Under attack

Islam respects cultural diversity and believes in human rights. It is under attack from both sides: "By terrorists who want to justify their crimes by citing it, and by those who are enemies of Islam and who want to justify their warring with the 'black face' of Islam."

## The Roots of Terror

Ebadi cannot understand the veil prohibition in France and some German provinces. Every woman should have the freedom to decide for herself what she wears and why. The Nobel Peace Prize laureate sees the "injustice and social imbalance in this world" as the real root of terror, which took on a new dimension with the killing of innocent children in Beslan. The rich countries must not remain indifferent to those "who have no chance and no future."

## **“Father of the Pill” fears for the USA**

“I fear for America,” the inventor of the pill and successful author Carl Djerassi at the Waldzell Meeting in Melk Abbey said as he described the situation in the USA. The native Viennese, who immigrated to the USA after the Nazis took power, spoke in Melk of an “explosion of religious extremism” in his second home.

America is currently experiencing “horrible extremes” that remind him of the McCarthy era. He is very pessimistic: “I have the advantage of having two passports, and can choose the country in which I want to live.”