THE TRUTH ABOUT TRUTH

The truth is not out there, after all - even in science. A gathering of European scientists, philosophers, historians and theologians this weekend unanimously concluded that there is no reason for science to claim a monopoly on the truth about how the world works. In a democratic society, the observations of science must not be given a privileged status in debates on issues such as embryonic stem cell research. Instead, scientific consensus must be laid out for members of that society to use as they see fit.

The meeting, held in Lugano, Switzerland, discussed the notion of "truth". Science is not a source of indisputable truth, but best seen as "organised skepticism" with a diversity of opinion on any subject at any one time, Oxford University biologist and former UK chief scientist Robert May told the assembly. Though science creates opportunities to improve life for all, we should continue to think carefully about which of these opportunities we want to take. Just because it has made some things possible, that does not give scientists the right to choose whether they should be followed through. "Science has no special voice," May said. "The job of science is to frame the debate clearly, making plain the possible benefits and costs – and the uncertainties."

The symposium was sponsored by the Balzan foundation, an Italian-Swiss charity that aims to promote debate in the sciences and humanities. If there was a central message to the meeting it was that nothing is reliable – and nothing is sacred. After a Roman Catholic cardinal had attempted to make a virtue of the unknowability of God by discussing the mystery of the incarnation, Oxford University's Geza Vermes, a Jewish scholar, swept the point aside by laying out historical evidence suggesting Jesus was nothing more that a particularly charismatic Jewish teacher whose work was rudely interrupted by a crucifixion.

Not that history is reliable either – as it turns out, historians have long given up worrying about the truth in their discipline. "Historians don't have to have a theory of truth," Cambridge University's Quentin Skinner told the gathering. And, he said, science should adopt the same position.

Science is no different to history, Skinner reckons. "Scientists have a method they work by, but historians have a very similar method," he said in an interview after the meeting. "They ask how a belief about the past sits with any other beliefs, whether there any obvious contradictions, does it all hang together? Scientists do the same. All scientists can do is say of some phenomenon that everyone who has investigated the matter will affirm the same thing. That doesn't make it true, he contends. "What's added by saying that it's true?" Skinner says. "I really don't want to talk about truth, because I don't know what it is. Is it a property that things have?"

Oxford University's Keith Thomas claimed that scientists do have something historians don't necessarily enjoy: public recognition and appreciation. Somehow scientists, he suggested, have become the new priests. "Future historians will ask why scientists got into such a position of authority when none of us are able to verify their claims for ourselves," he told the meeting.

That position was underlined when each of the represented academic disciplines put themselves under scrutiny. For starters, it seems there is little that can be claimed for the truth or accuracy of economic theory. “Economics is a relatively new science,” said Mauro Baranzini of the University of Verona, Italy. “Economists are still not agreed on the proper method.”

Life sciences fare no better: their truth is “atomised”, according to Marco Baggiolini, a cell biologist and director of the Swiss Centre for Scientific Computing. “It is a collection of small, relatively easy to understand facts,” he said. “You can speak about evidence, but not truth.”

Cosmology’s claims also have to be taken with a pinch of salt, as Paolo de Bernardis, an astrophysicist based at Rome’s La Sapienza University, told the audience. “The big bang is our most popular theory, but we don’t have direct access to the beginning of time, and there are grey areas not explained by this theory,” he said. “My view is that the main foundation is solid, but different problems require different ad hoc solutions. We don’t have a completely settled cosmology yet.”

Even mathematics did not escape the scepticism. Yuri Mannin, director of the Max Planck Institute for Mathematics, denied the idea that mathematics is a pursuit of notions of truth and free of philosophical stumbling blocks. While Manin believes pure mathematics does have some claim on objective truth, this can only be said for attempts to describe abstract mathematical notions. Real world applications, such as mathematical models of the financial markets, often stretch the logical truths of mathematics to breaking point. “Mathematics is a tool kit, a powerful cognitive device,” Manin told the assembly. “The trouble comes when we start to build models: in this role, the notion of mathematical truth acquires distinctly new features.” Such applications may be responsible for a range of real-world troubles, including economic instability and recession.

The eternal weaselling and prevarication about the nature of truth and authority is not just academic; there are human casualties, according to Mohammed Arkoun, an Islamic scholar at the Sorbonne in Paris. He told the assembly that the refusal of European academics to acknowledge that faith had any claims to truth was depriving European Muslims of the chance to implement any forms of Sharia law. If no one knows what truth is, why is this section of the population denied a say, Arkoun asked.

The only crumb of comfort came from molecular neurobiologist Jean-Pierre Changeux of Paris’s Insitut Pasteur. He pointed out that the brain does not act like a video camera, but an interpreter, modelling the world based on signals received. The unique nature of each human brain means no perception of the outside world can be relied upon as truth: everything is ultimately subjective. If, that is, you believe what comes out of neuroscience…