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# How on Earth Can we Live Together?

BY ANDERS STEEN

Forty years ago, Buckminster Fuller said, "What's common to all lives? Problems, problems, problems...our game on our planet is problem solving."





The Globe of Science and Innovation, CERN's exhibition centre is seen lit up at night. This wooden building was given to CERN in 2004 as a gift from the Swiss Confederation to mark 50 years since the Organization's foundation.  
PHOTO: MAXIMILIEN BRICE. © CERN GENEVA

Maybe, but even more common are questions. “Why are we here?” “Why do we think the way we think?” “Are we destroying earth’s capacity to support human life?”

The Tällberg Foundation – a global educational organization based in Sweden – has been asking questions like that for thirty years, focusing on one in particular: How on earth can we live together: we, the humans with each other, and we with Nature?”

As Bo Ekman, founder and chairman emeritus of the Foundation put it, “We could not have asked a more complex question. It required us to focus on staying unfocused. Not to specialize. Not to become reductionist. To ever reach out beyond our own imaginations.”

In that spirit, the Foundation recently convened an eclectic mix of scientists, artists, academics, businessmen, diplomats, filmmakers and others for a three day workshop in cooperation with the European Organization for Nuclear Research (CERN): the Tällberg Workshop at CERN or TW@C. The forty-five participants, coming from 15 countries in Europe, the Americas, and Asia, had only one thing in common: a belief that colliding ideas can spark the kind of new thinking required by the times.

“Our aim was ambitious: to explore the implications for mankind and society of the accelerating pace of evolution, in all its dimensions,” said Alan Stoga, chairman of the Tällberg Foundation. “We defined the starting points for a series of conversations, but had no preconceived ideas of where those discussions would go,” he added.

Why CERN? Tord Ekelöf, a Swedish physicist explained the unique context, “At CERN, experimental physicists from all over the world work together, agreeing by consensus on how to proceed with their experimental work unravelling the fundamental structure of matter. They do so without any reference to religious belief, political ideology and ethnic and nationalistic dogma.” What better place to convene a conversation without constraints?

The discussions ranged from the Big Bang to the latest atrocities in Syria; from a discussion of languages to the dynamics of innovation and creativity; from the end of the Westphalian global political order to visual literacy. What they had in common was virologist Erling Norrby’s assertion: “Nothing makes sense except in the context of evolution.”

TW@C was chaotic by design. “The underlying idea was to bring together people who rarely are in the same conversation and try to provoke some new thinking in order to understand, at least a bit better, how the world works,” said Tom Cummings, a Tällberg Foundation director.

Most of the discussion clustered around five topics – evolution, thinking, technology, science and art, and interests versus values. In each case,

experts made brief interventions, followed by open conversations. “Focus on the patterns, not the ideas,” insisted Hideshi Hameguchi.

## Evolution

In 1859 Charles Darwin described evolution as an inherently slow process. Fast forward to the early 21st century: “Evolution isn’t this random genetic event occurring over eons,” declared Steve Gullens. “Humans increasingly determine what lives and dies on this planet, and we have increasing capacity to change our own species,” as well as everything else that lives on earth.

One common thread running through many presentations and conversations was that everything is accelerating; we – homo sapiens – our biosphere, our planet, the universe are all evolving and changing ever faster.

“We know our universe is accelerating,” said physicist Priya Natarajan. “It is also becoming more desolate, with greater distances between galaxies.” But still, we only understand 4% of what comprises the universe; 96% is dark energy or dark matter. And, there could be other universes, added Luis Alvarez-Gaume, a CERN physicist.

Are we alone? “There are several thousand planets, but none that seem to have conditions to support life or evolution as we know it,” said Natarajan.

For Anders Ynermann, that might be the wrong question: maybe the world we see around us isn’t what it appears to be. “The probability that we live in a simulated world is pretty high.”

## Thinking

Why do people think the way they think? What is the role of language, of culture, of morality and ethics, of education? What makes us human?

For “big history” pioneer David Christian, it is man’s capacity for collective learning and the ability to accumulate information over generations. Christian argued that mankind has succeeded in dominating earth by exploiting energy in ways that no other species has: first, through agriculture by domesticating the photosynthesis process and, second, by burning hydrocarbons. Next, perhaps, comes information

For others, it’s about language “We are language beings,” said Imelda McCarthy, “we come into our fullness through language. But there are many different languages. “For me, mathematics is a language; it’s how I think,” said Professor Jim Gates. Stephen Nachmonovitch, an accomplished violinist, talked about the “many languages of music,” while artist Diana Cooper and others explained how they interact with the world, now they communicate through their art.

“We are talking about that hope, that dream, that ambition to find a story that comes together fully that somehow makes sense of our lives; we achieve it in conversation,” concluded Susan Hockfield.

## Technology

Technology defines not only who we are, but what we are,” said Anders Ynermann. He insisted that children growing up playing video games have fundamentally different brains, that they are much more visual than adults and are “wildly better at interacting in ways than we can ever be” because of their more intimate relationship to technology.

Profound and rapid technological changes are creating endless new opportunities for humans, improving the quality of life for most people on the planet. “Technology is both an organic system that is expanding and creates its own ecosystem,” according to Brian Arthur.

This technology explosion coincides – perhaps is causing – a population explosion from today’s 7 billion to a newly forecast 10 to 12 billion people by 2100, as reported recently in *Science*. But, as Geoffrey West pointed out, “It’s as if we are on an accelerating treadmill and, at some point, we have to jump to another even more rapidly accelerating treadmill.” And, if we don’t jump or if we jump and miss? “Unbridled growth requires accelerating cycles of innovation to avoid collapse,” says West.

But many of the participants spoke optimistically about the likelihood that creativity and innovation would solve the challenges created by growing populations, climate change, and the ever-increasing demands for more and more prosperity. “You can’t stop technology. People are going to continue to create and to innovate,” said AJ Moon, a student of robot-ethics.

## Science and Art

“As an artist, my driving force is to explore the unknown, what some here have called the dark space. That is also the driving force of science,” according to Palle Dahlstedt.

In a room with many scientists and artists – and a programme punctuated with incredible artistic performances – it was inevitable that the relationship between science and art generated hours of conversation.

Is creativity and innovation conscious or not? Do scientists and artists think alike when they explore the unknown? “To my mind,” Ekelöf put it, “experimental science and practicing art...show how on earth we can live together.” But they are different in a fundamental way for Alvarez-Gaume: “If Einstein had not lived, we would have still discovered quantum physics. But if Beethoven had not lived, we would never have had his Ninth Symphony.”

In that spirit, Malte Boecker, Director of Beethoven House in Germany, declared “Art delivers facts; science delivers meaning” but insisted that it is the combination that moves humanity. Stephen Nachmonovitch echoed this, and brought the conversation back to the meta level: “Through the intersection of art, science and technology we are able to attain more and more complete experiences of the universe.”



Inside the Globe of Science and Innovation.  
PHOTO: MICHAEL JUNGBLUT. © CERN GENEVA



## In the pursuit of results, compromise

“There can be no truth without beauty,” Ekman insisted and contrasted the worlds of art and science, which exist without corruption, to the rest of our experience where compromise is inevitable.

Arguably, in our era interests seem to trump values with increasing frequency. Participants explored this dynamic through a series of case studies about ebola, the crisis in Syria and Iraq, and what Mark Abdollahian calls “complex interactive systems” when “everything is going to be connected to everything else.”

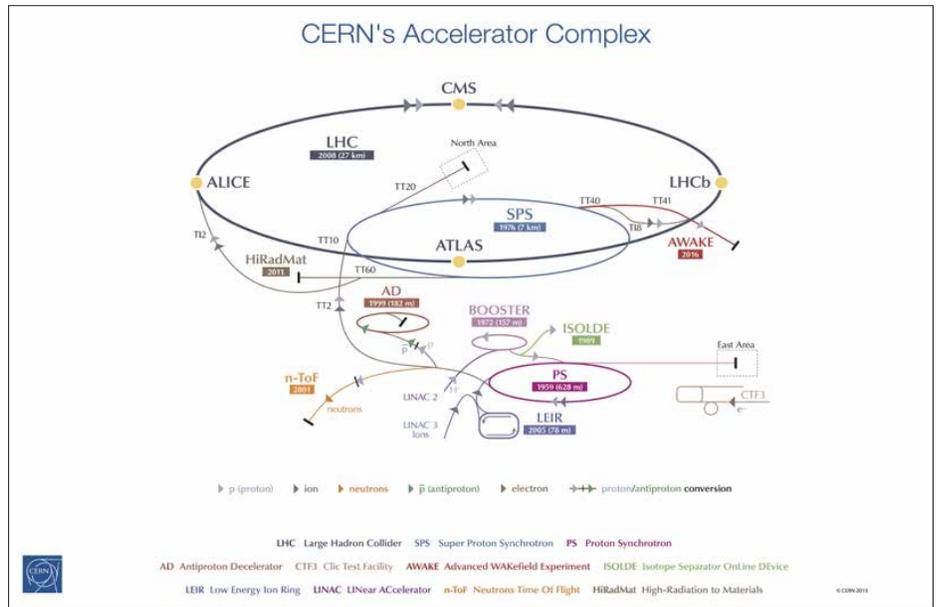
“We are looking for patterns,” urged Nora Bateson. One clear pattern is the break-down of the post-war paradigm that produced sustained prosperity and (relative) peace for almost 70 years. “We know the global system is unstable; we know that we can’t go back; but we have no idea what comes next,” argued Stoga.

Nonetheless, not all was bleak. “You will always find something in humanity that will bring us together,” Gianni Picco concluded. “You need to unearth people’s personal narratives, and not be content with understanding only their institutional narratives.”

## What next?

Workshops like TW@C finish, but don’t end, in the sense that they are designed to provoke new relationships, new conversations, new thinking and even new acting. In order to jumpstart that process, the Tällberg Foundation is editing many of the conversations and performances into 20 short films that will be available at [www.tallbergfoundation.org](http://www.tallbergfoundation.org), as well as through the Foundation’s knowledge partners around the world.

There was no last word at TW@C, but many final questions. Perhaps the best was posed by Vesna Petresin-Robert: “What happens if what we see is actually not what we are looking at? What happens if what you hear is actually not what the other person is saying?” ■



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Tällberg Workshop at CERN (aka TW@C).

## TÄLLBERG WORKSHOP@CERN

### Participants

Mark Abdollahian  
 Undraa Agvaanluvsan  
 Luis Alvarez-Gaume  
 W. Brian Arthur  
 Pio Barone Lumaga  
 Nora Bateson  
 Lasse Berg  
 Tomas Björkman  
 Malte C. Boecker  
 Robert Cailliau  
 Göran Carstedt  
 David Christian  
 Diana Cooper  
 Tom Cummings

Dorthe Dahl-Jensen  
 Palle Dahlstedt  
 Tord Ekelöf  
 Bo Ekman  
 Sylvester James Gates, Jr.  
 Steve Gullans  
 Hideshi Hamaguchi  
 Susan Hockfield  
 Berth Jönsson  
 Maarten Koets  
 Imelda McCarthy  
 Arthur I Miller  
 Ashok Kumar Mirpuri  
 AJung Moon  
 Juzar Motiwalla

Stephen Nachmanovitch  
 Priyamvada Natarajan  
 Erling Norrby  
 Vesna Petresin Robert  
 Giandomenico Picco  
 Cynthia Schneider  
 Hans Sollerman  
 Alan Stoga  
 Stelios Vasilakis  
 Geoffrey B. West  
 Wendy Wheeler  
 Anders Wijkman  
 James Wine  
 Anders Ynnerman