

Fondazione Centesimus Annus Pro Pontifice
2021 International Convention

Solidarity, Cooperation and Responsibility: *the antidotes to fight injustices, inequalities, and exclusions*

Session 1

Solidarity joins the fray to fight old and new emergencies and achieve global integral development

Joachim von Braun

President, Pontifical Academy of Sciences; Director, Center for Development Research,
University of Bonn

The role of solidarity in pursuing the sustained improvement of people's living conditions and nature

Dr. von Braun addressed the paradox of solidarity by exploring the *solidarity of the micro* and the *solidarity of the macro*. The former considers the individual and is based on the application of the corporal works of mercy. This is mostly well practiced, as exemplified by solidarity and families and frontline care givers in the Covid-19 crisis.

Macro solidarity requires a broad view of sustained impacts on people's living conditions and includes the concept of "relative deprivation", necessitated by the growing wealth disparity.

Dr. von Braun suggested some specific, comprehensive initiatives addressing:

1. Hunger:

- a. Science must be put in service to those living at the margins.
- b. Disarmament - enhancing peace – will free up resources for food.

2. The health impacts of climate change.

- a. Here carbon pricing must be considered.
- b. As well as a focus on changing consumption behaviors.

Education and targeted regulations are called for.

3. Solidarity with nature. Here, efforts have not been sufficient - especially as pertains to:

- a. Protection of our habitat.
- b. Bio-diversity protection and sustainability.

4. COVID pandemic outcomes have not been equal. 'Long-COVID's' impact must be considered:

- a. Economically.
- b. Medically (both physical and mental health).

5. Artificial intelligence and robotics must be appropriately managed and put at the service of all humanity.

Dr. von Braun pointed out that Catholic social teaching gives us guidance in the pursuit of these:
Science and faith together

See the full presentation here:

http://www.pas.va/content/accademia/en/academicians/ordinary/von_braun/address_centesimusannus.html

Gerard Mourou

Professor, Haut-College - Ecole Polytechnique; A. D. Moore Distinguished University Professor Emeritus, University of Michigan, Nobel Prize, Physics, 2018

Science's contribution to the pursuit of an integral human development model

Building on his Nobel Prize winning work on Chirped Pulses Amplification technique or CPA, Dr. Mourou proposed how pulsed protons or electrons may contribute to humanity by helping solve some of our planet's need for clean, abundant, and safe energy.

Indicating that this goal requires reliance on nuclear energy Dr. Mourou proposed transitioning from uranium to thorium* reactors which have the potential to produce nuclear energy that is relatively safe and cheap, while also generating a much smaller amount of very long-lived radioactive waste. Additionally, thorium waste products have less chance of being weaponized. Such technology is critical to achieve zero carbon emission goals by 2050.

Dr. Mourou proposed developing an accelerator-driven subcritical reactor (a design formed by coupling a substantially subcritical nuclear reactor core with a high-energy proton or electron accelerator). The neutrons needed for sustaining the fission process would be provided by a particle accelerator. These would then activate the thorium, enabling fission without needing to make the reactor critical.

The 'bottom line': thorium can provide power for 10B people for over 10K years. "Science will help"!

*Thorium is a weakly radioactive metal found naturally in rocks, and currently has little industrial use. Additionally, thorium is much more plentiful than uranium. It is, however, more expensive to extract than uranium and, unlike some naturally occurring isotopes of uranium, needs to be converted into a fissile material.

Maryanne Wolf

Professor in Residence and Director of the Center for Dyslexia Diverse Learners and Social Justice, UCLA and member of the Pontifical Academy of Sciences

Education for People with disabilities as a factor of social justice and practice

Dr. Wolf established how education is the platform for building up all of humanity. Those lacking an education represent the most vulnerable - who fail to even recognize, let alone reflect on, the most basic questions: what do we hope? what do we know? what do we do next?

Dr. Wolf demonstrated that education was crucial to ethical and moral development – a key part of 'integral development'.

She pointed out how education influences and changes brain organization and development and that literacy begins at birth – creating/establishing one’s lifetime ability! The building blocks for economic productivity, health, strong communities, and even successful parenting are imparted from birth.

Dr. Wolf called for a **global initiative** that would focus on:

1. A campaign for ages 0 -5 years to ensure children are routinely talked, read and sung to. Why? Cognitive, emotional, and social capacities are highly interrelated, and the circuitry that affects learning and behavior is interconnected with physiological systems that affect physical and mental health. These three ‘practices’, grounded in decades of behavioral and social sciences and recent discoveries in neuroscience, molecular biology, and epigenetics, prove to build the requisite brain architecture needed for “success”.

2. Age 5 assessment of each child’s capabilities so remedial actions can guide future, formal learning.

3. Focus on the “undiagnosed”. Why? With a significant portion of our prison and homeless population composed of people with undiagnosed learning disabilities, a focus on identifying such individuals would both lessen the social costs of incarceration but greatly add to societies’ productivity.

Bottom Line: Education creates one’s lifetime ability. For successful, global, integral development we must focus on this.

Dr Gundo Weiler

Director for Country Support and Emergencies at the WHO Regional Office for Europe
(On behalf of Dr. Hans Henri P. Kluge, WHO Regional Director for Europe).

How can solidarity be put into practice: some concrete cases

Pointing out that solidarity forms the essence of the World Health Organization’s constitution Dr. Weiler stated: “There is both the scientific imperative and the ethical responsibility to work together for the public good. Solidarity comes from both the head and the heart. And it is a conscious choice to take decisive action with others for a common cause.”

Reflecting the talk’s title, Dr. Weiler cited three examples of solidarity for health:

1. The 10-year effort spearheaded by WHO to **eradicate smallpox** saving untold human misery and over US\$1 billion per year since 1980.

2. **Road safety**. Road trauma kills more people aged 5-29 in the 53 countries of the WHO European Region than any other cause. Working cross borders at local and state levels deaths at all ages have fallen by 42% since 2000 with the many serious injuries also prevented.

3. In August 2020 WHO’s Dr Kluge requested Mario Monti (President of Bocconi University, former Prime Minister of Italy and a former European Commissioner) help form and lead the “Pan-European Commission on Health and Sustainable Development” to reflect on the lessons of the COVID pandemic and make recommendations on investments and reforms to improve the resilience of health and social care systems for when we face the next.

One of the Commission's key proposals is to implement the concept of "One Health", which has solidarity at its core by offering a whole-of-society approach to health and well-being, where all policies take the health of all living things and their shared environment into account.

This 'one health' approach acknowledges our well-being as inextricably linked to the health of the planet and the natural environment and a focus on climate and its health impact is integrated into every WHO policy.

Closing, Dr. Weiler reminded us: "Solidarity is not charity or altruism. It is the only way we can tackle the borderless challenges that affect us all."