World Conference on Science and Art for Sustainability

September 22–24, 2025, Belgrade, Serbia

I N T E R V I E W S

International Decade of Sciences for Sustainable Development

2024–2033

Science and Art for Sustainability

On August 25, 2023, the United Nations (UN) General Assembly proclaimed *the International Decade of Sciences for Sustainable Development*, from 2024 to 2033 – proposed by Serbia. The idea of *the Decade* was launched by the International Union of Pure and Applied Physics (IUPAP), the World Academy of Art and Science (WAAS), and The Club of Rome (CoR) in September 2022 in Belgrade, Serbia, during *the World Conference on Basic Sciences for Sustainable Development*, as the flagship event for Europe within *the International Year of Basic Sciences for Sustainable Development*. The UN General Assembly assigned the task to prepare and implement the overall program of *the Decade* to the UN Educational, Scientific and Cultural Organization (UNESCO).

On April 16, 2024, The Earth-Humanity Coalition (EHC) was founded as an association of global, regional, and national scientific organizations tasked with preparing and implementing various initiatives within the overall program of *the Decade*, in close cooperation with UNESCO. IUPAP, WAAS, CoR, and the UNESCO-MOST-BRIDGES Coalition (BRIDGES) were among the founding Members of EHC. The first of these initiatives was the EHC-WAAS Program of Sciences for Sustainable Development, whose outline had been prepared by WAAS.

On September 22–24, 2025 in Belgrade, Serbia, *the World Conference on Science and Art for Sustainability* was held, as a flagship event with the Decade. The Host of the event was the Serbian Academy of Sciences and Arts (SASA), and its Co-Hosts were the Alliance of National and International Science Organizations for the Belt and Road Regions (ANSO), and UNESCO. Additional organizing institutions of *the Conference* were EHC, WAAS, CoR, and BRIDGES. The program of *the Conference* comprised 12 sessions including 42 talks and eight moderated discussions – at SASA; the moderators and speakers came from 20 countries from the Global North and the Global South. Besides, the program included a musical performance in the National Museum, an exhibition of paintings in the Zepter Museum, and a musical performance and an exhibition of paintings in the Ethnographic Museum.

CONTENTS

This book contains the interviews of **Vesna de Vinča*** with 11 speakers at *the Conference*. These speakers and the initial pages of their interviews are the following:

*She is an internationally recognized journalist, writer, and producer from Belgrade, Serbia, known for her series of television interviews *Top Encounters*, made with distinguished personalities including Nelson Mandela, Elisabeth Murdoch, Muammar Gaddafi, Arthur C. Clarke, Paco Rabanne, Yassar Arafat, Simon Wiesenthal, Sirimavo Bandaranaike, Pablo Raptis, and Gina Lollobrigida. Besides, she has written the book *Mandela's code*.

Borko Furht
Florida Atlantic University (FAU), Boca Raton, USA; Director, National Science Foundation (NSF) Industry-University Cooperative Research Center for Advanced Knowledge Enablement, FAU

1. Innovation and Collaborative Research

Question: In your work, you emphasize the importance of collaboration between universities and industry in the development of Artificial Intelligence (AI) and data science technologies. What are the most effective models of cooperation that can accelerate innovation while ensuring ethical responsibility in AI applications?

Answer: To accelerate **AI innovation** while maintaining **ethical responsibility**, the most effective cooperation models share a few core features: structured collaboration, mutual benefit, governance transparency, and societal accountability.

Our model is based on the NSF Industry-University Cooperative Research Center, which I lead. Such a center provides a proven framework where industry members pool resources to fund precompetitive research driven by shared needs. Faculty and students work closely with industry scientists to develop prototypes, standards contributions, and patents. Industry partners gain early access to emerging technologies while universities retain academic freedom and publication rights. The ethical dimension is implemented via an **ethics advisory board**, which guide data governance, bias auditing, and societal impact assessments for all projects.

Complementary approaches include **AI testbeds and living labs** for real-world validation, **public-private consortia** for standards and policy alignment, and **dual-track funding models** that pair technical progress with ethics research.

2. Artificial Intelligence and Transformation of Education

Question: How do you envision the future of higher education under the influence of AI – can AI become a true partner in learning and research, rather than merely a tool?

Answer: The potential for robots and AI to replace professors in the future is a topic of debate and speculation. It is difficult to predict the exact trajectory of technological advancements. Robots and AI have already made significant advancements in various fields, including education. There are AI-based systems that can assist in grading assignments, deliver personalized learning experiences, and provide tutoring or support for students. However, completely replacing professors with robots or AI is a complex proposition. Teaching involves more than just delivering information. Professors play crucial roles in facilitating discussions, fostering critical thinking, providing mentorship, and offering a human connection to students. Building rapport, understanding individual needs, and tailoring instructions based on students' abilities and learning styles are areas where professors excel. Furthermore, many educational institutions value the expertise, experience, and deep understanding that professors bring to their fields. Professors often engage in research, publish scholarly work, and contribute to the intellectual discourse of their respective disciplines. Their knowledge, creativity, and ability to inspire students through personal experiences and insights are not easily replicated by robots or AI systems.

That being said, technology can certainly complement and enhance the role of professors in education. It can assist in automating administrative tasks, providing data-driven insights, offering supplemental materials, or enabling remote learning. The use of AI-powered tools and platforms in education is likely to increase, but it is more probable that they will augment the role of professors rather than fully replace them. Ultimately, the future of education will depend on a careful balance between the benefits of technological advancements and the unique qualities and contributions of professors.

3. Limits of Intelligence: Can Artificial Intelligence Surpass Humanity?

Questions: There is a growing concern among scientists – could AI eventually surpass human intelligence and, potentially, become a force that controls or subjugates us? What are your views on this possibility, and where do you see the boundary between human control and loss of control over AI systems?

Answers: That's an important and deeply philosophical question. I believe the real issue is not whether AI will *surpass* human intelligence, but whether it might one day act **without human direction or moral constraint**. AI already outperforms us in specific tasks – playing chess, diagnosing images, or optimizing logistics – but it lacks what makes human intelligence unique: **consciousness, empathy, creativity, and ethical reasoning.** The danger arises when we give these systems too much **autonomy** without maintaining **accountability**.

The boundary between control and loss of control is crossed when AI systems begin making decisions **beyond our understanding or oversight** – when humans are no longer "in the loop". As we integrate AI into defense, healthcare, finance, and policymaking, that risk grows. To preserve human sovereignty, we must design AI with **transparency, explainability, and built-in ethical safeguards**. But equally important is the human side: cultivating a culture of responsibility, humility, and global collaboration. We may need an international framework – much like those governing nuclear or genetic research – to ensure that AI development remains aligned with human values.

Ultimately, I don't fear that machines will control us. What concerns me more is that **humans might surrender control,** driven by convenience or commercial pressure. The challenge before us is to ensure that AI remains a tool that **amplifies human wisdom**, not replaces it. In short, the real question is not whether AI will become more like humans – but whether we will remain fully human as we build it.

Gian Francesco Giudice

Head, Theoretical Physics Department, European Organization for Nuclear Research (CERN), Geneva, Switzerland

1. Societal Impacts of Big Science

Question: In your opinion, what are the most important social, technological, and ethical contributions that have resulted from CERN's Big Science?

Answer: Large scientific projects create a fertile ground for innovation, often exceeding their planned objectives. While it is difficult to predict the practical applications of the ultimate goals of these large projects, their true technological significance lies in the research undertaken to achieve these goals. These projects require cutting-edge technologies that may not even exist at the project's inception, leading to inevitable practical applications.

A prime example is the CERN Large Hadron Collider (LHC), which is the most powerful particle accelerator in the world. No one can say with certainty today if the discovery of the Higgs boson or any other exotic particle will lead to practical applications. However, the research that contributed to the construction of the LHC has already resulted in many valuable spin-offs. For instance, advancements in accelerator technology have led to hadron therapy for cancer treatment and the development of synchrotron light, which serves various purposes, including functioning as an "X-ray microscope". Innovations in particle detector technology have produced various medical diagnostic techniques and real-time analysis systems. Furthermore, advancements in information technology contributed to the creation of the World Wide Web and grid computing. From a technological standpoint, large projects serve as unique drivers of progress, which would be impossible without the motivation provided by fundamental science.

From an ethical perspective, large scientific projects provide a unique environment for collaboration. Basic research, due to its universal nature and independence from economic or military interests, is particularly suited for international partnerships, and large projects serve as the best platforms for such collaboration. These initiatives allow countries, especially those lacking resources, to engage in significant scientific challenges.

Moreover, large scientific endeavors can strengthen peaceful international ties and foster cooperation between hostile nations, potentially leading to political rapprochement. A notable contemporary example is SESAME (Synchrotron Light for Experimental Science and Applications in the Middle East), a research project based in Jordan. This initiative involves a scientific collaboration that includes Israel, Iran, and other Middle Eastern countries, as well as the Palestinian National Authority.

Large scientific projects also create significant opportunities for educating and training students and young researchers. These young scientists and engineers develop skills in solving complex problems, mastering advanced technologies and working within interdisciplinary teams. While not all scientists will continue in academic research, they will carry their valuable skills and experiences into various sectors of society. Therefore, investments in large scientific projects are investments in the future generations of skilled and competent members of society.

2. The Future of Public Funding and CERN's Role

Questions: In an era when Artificial Intelligence and the private sector are increasingly taking the lead in research initiatives, how do you see the future of public funding for scientific institutions such as CERN, and what do you envision for CERN's long-term mission?

Answers: Research in the private sector has always been a crucial element for societal progress, and this is increasingly evident today with advances in Artificial Intelligence and nuclear fusion. However, private research is ultimately driven by profit, highlighting the importance of public research. A well-balanced society needs the public sector to fund independent research whose goals are not limited by profit motivations.

CERN serves as a successful example of the interplay between publicly and privately funded research. While CERN's research primarily aims for fundamental knowledge, it maintains a close relationship with private companies. The requirements for cutting-edge prototypes push industries to explore new manufacturing techniques that would be too risky to pursue in a purely market-driven environment.

CERN has an ambitious long-term vision with the Future Circular Collider (FCC), which, if approved, will eventually replace the LHC. The FCC requires a 91 km tunnel and the development of new technologies, opening up new frontiers in research.

3. Ethics and Responsibility in Scientific Experimentation

Question: Some critics, such as Otto Rössler, have voiced concerns that microscopic black holes created in the LHC could be stable and potentially endanger the planet. How do you balance scientific curiosity with moral responsibility toward society when dealing with such speculative but potentially risky experiments?

Answer: Ethical responsibility is essential in fundamental research. While exploring the frontiers of knowledge can be fascinating, it also involves certain risks. I believe the particle physics community is well aware of these risks and considers them carefully.

Before the LHC began its operations, some media outlets and pseudoscientists claimed that running the Collider could produce microscopic black holes that might destroy the Earth. In 2003, CERN issued a report that addressed this concern scientifically, demonstrating that the claim was unfounded, as it contradicted astronomical observations.

The high level of ethical responsibility among particle physicists is also evident in the recently published feasibility study for the FCC. This study not only covers scientific and technological aspects but also thoroughly examines the project's environmental and societal impacts in all dimensions.

4. Security and Transparency in Research

Question: Although CERN maintains high safety standards, there have been concerns about potential vulnerabilities – including earlier incidents such as the hacking of the CERN's systems by the 2600 group. How does CERN ensure that its experiments remain secure and protected, given the immense complexity and value of its research infrastructure?

Answer: CERN is aware that it could be a potential target for attacks from terrorists, hackers, or other malicious individuals. The facility is protected by security guards and various electronic alarm systems. The most sensitive areas are continually monitored by CCTV cameras for video surveillance.

Arguably, the most critical component is the computing and information system. The CERN Computing Security team has established an effective network of control systems and is constantly thwarting cyberattacks. However, there is no solution that is 100% secure. As hackers develop new methods to breach security, the team must continuously create new protective measures. This presents a significant challenge for our IT Department.

5. Boundaries of Scientific Power

Questions: As scientific capabilities expand beyond what previous generations could even imagine, where should we draw the ethical boundaries of exploration? Should there be areas of inquiry that science deliberately chooses not to pursue – and if so, who should make those decisions?

Answers: Ethical issues play a crucial role in fields such as biophysics and Artificial Intelligence, while they are less prominent in particle physics because of the more abstract nature of our discipline. However, every scientist should be engaged with aspects that affect society as a whole.

The ethical boundaries of scientific exploration are a delicate matter that cannot be left solely to scientists. Legal, economic, and social experts must also participate in the discussion. It is important to ensure that different areas of expertise are not conflated. In scientific matters, the opinions of scientists should carry more weight than those of lawyers, while the reverse should hold true in legal matters. Although this principle may seem obvious, the importance of expert knowledge is often overlooked in public debates.

Ugo Bardi
National Interuniversity Consortium of Materials Science and Technology, University of Florence, Italy; The Club of Rome (CoR); World Academy of Art and Science (WAAS)

1. The Seneca Effect and the Global System

Questions: In your interpretation of the Seneca Effect, you show that civilizations do not disappear gradually – they collapse suddenly, as if their internal axis of energy and purpose has been exhausted. Do you believe that our global system has already entered this silent process of self-destruction? And in your view, can the Seneca Effect be applied to the current situation in the USA and Western world politics, with the rapid and unexpected changes occurring there right now? Could this sudden collapse lead us to the Third World War and shared global ruin? Or is there still the possibility of an internal rebirth – a transformation that comes not from technology, but from a shift in consciousness?

Answers: The Seneca Effect applied to societal collapses is so common in history that it is remarkable how leaders and rulers go down the cliff while swearing that their kingdom will never fall. The Western Roman Empire went down to the dustbin of history while emperors were still convinced that "Rome is Eternal". And there are many more recent examples: think of the Soviet Union! So, it is reasonable to say that the modern American Empire will not be an exception. Indeed, we can see some evident signs of impending collapse in the Western system: internal struggles, power grabs, economic decline, including one of the most typical symptoms: the militarization of society. That doesn't mean the collapse will start immediately, just that it is moving in that direction. About wars and global ruin, societal collapses often involve internal conflicts, which may be intense and destructive. But collapse usually removes the capability of a society to engage in military expansion, so a third world war can only happen while the system is still relatively healthy. If it doesn't happen in the near future, we may never enter WW III. About a rebirth, it is not just possible: it is a feature of collapses. It is a feature of the universe that involves getting rid of the old and the unsustainable to create the new and the better adapted. It happened with the Roman Empire, which eliminated the old and parasitic imperial structure and generated the sophisticated and beautiful civilization we call the "Middle Ages". It will happen for us, too. However, we can't say yet what will come after us.

2. Science, Technology, and the Illusion of Salvation

Questions: Humanity believes that science and Artificial Intelligence will save us from the limits it has imposed on itself. Can technology – which created this hyper-complex world – really be a path toward balance? Or is, as you often suggest, the real challenge to relearn how to live in accordance with the laws of nature – simpler, humbler, and wiser?

Answers: Technologies are not instruments to create balance; they tend to do the opposite. The present predicament of our society, its "hyper-complexity", is the result of the fossil fuel technologies introduced during the past few centuries. That source of energy is now winding down because of the double challenge of depletion and pollution. It remains to be seen what kind of flow new technologies will be able to provide, while at the same time generating little pollution. A post-fossil society may be much different from the one we live in right now; rather, it may have points of contact with the European Middle Ages. Our society is ugly, wasteful, and materialistic. The Middle Ages were elegant, efficient, and spiritually oriented. The future may be similar, provided we can maintain a certain degree of energy supply to the societal structure. No energy, no society.

3. A New Narrative for Human Civilization

Questions: If, as Seneca says, "everything grows slowly, but decays quickly", perhaps the only choice we have is to find out how to live between those two moments. In your opinion, what could be the new narrative for humanity – one in which growth is no longer a measure of power, but a measure of

consciousness? And what role do art, philosophy, and what we call spiritual maturity play in this transition?

Answers: The Romans reacted to the perception of the decline of their society by developing the philosophical school called "Stoicism". It was a view of life that took into account how fleeting human life is. It was Emperor Marcus Verus Aurelius, also a Stoic, who lived about one century after Seneca, who noted that it doesn't count whether one lives a long life or a short one. What one owns is only the fleeting moment of "now", which must be used to live as a human being is supposed to live: according to duty and responsibility. Later, Christianity added charity as a virtue and Islam codified it as a duty. God is said to be benevolent and merciful, and we can try to imitate Him the best we can in that fleeting moment we call "life".

4. Truths and Misconceptions about CO_2 – between Science and Dogma

Questions: In today's public discourse, CO_2 has almost become a mythological symbol – for some, a "poison that destroys the planet", and for others, an innocent molecule unfairly demonized. You point out that the truth is much more complex: CO_2 affects not only the climate, but also the metabolism of the biosphere and even human cognitive abilities. How can we distinguish scientific truth from ideological dogma amid such conflicting narratives? And do you believe that, in this whole climate story, it might be even more important to understand the internal biological and psychological effects of CO_2 on life, rather than only its external impact on the planet's temperature?

Answers: I do believe that some important effects of CO_2 have been neglected in the debate on climate change. In particular, its direct poisoning effects on living beings and their environments have been completely missed. These effects might do more damage to us and to the whole ecosystem than the temperature rise caused by the warming effect of CO_2. But that's nothing more than a confirmation that Earth's ecosystem, the entity in which we live and that makes us live, is one of those systems that we call "complex". That has a specific meaning: it doesn't just mean it is complicated; no, it means that it reacts to perturbations in ways that are difficult or impossible to predict before they happen – typically by collapsing: think of a house of cards. That's one of the features of the Seneca Effect: it occurs only in complex systems, and its sudden effects are often caused by small perturbations whose effect was impossible to predict.

So, the current ongoing collapse has multiple causes, both physical and social. We will go through it in order to find a new social, technological, and human equilibrium. But it doesn't have to be sudden and brutal. There is no hurry to collapse! We have to go with the flow. If we do, everything will be well.

Klaus Mainzer

Senior Excellence Faculty, Technical University of Munich, Germany; Carl Friedrich von Weizsäcker Center, Eberhard Karls University of Tübingen, Germany; President, European Academy of Sciences and Arts (EASA)

1. Technology and the Future of Artificial Intelligence

Questions: How do you see the potential of Artificial Intelligence (AI) to transform key societal systems over the next 10–20 years? Which fields of research and applications do you consider most promising for creating real impact on the economy, education and people's everyday lives?

Answers: In order to assess the potential of AI, one must first understand its fundamentals and know what AI actually is. Today's AI is machine learning. It is based on the application of learning algorithms to large amounts of data in order to recognise and generate patterns and structures. Mathematically, this was already known and proven in the 1980s and 1990s. Today, we have the computing and storage capacities to implement it in virtually all technical, economic and everyday applications (*e.g.*, ChatGPT). This has led to global competition for the energy required to power ever larger data and computer centres and for materials ("rare earths") for ever more powerful chips.

In contrast, the human brain, with all its amazing capabilities, requires only about 20 watts, or the energy of a small lamp. Today's machine learning cannot therefore be the last word on the subject. We have to consider the energy problem on our Earth in close connection with increasing digitalization. Energy production is closely connected with the environmental problems on our Earth. Therefore, we have to aim on sustainable AI. That is why I have been working for years on more energy-efficient neuromorphic (brain-oriented) computer structures. They use smart materials for chips that are by no means rare or expensive and have properties similar to living tissue (*e.g.*, "memory"). Human intelligence is not just about processing large amounts of data. In science and art, it often comes down to a new, original idea. How is that possible? We still know too little about the connection between neuroscience and algorithms.

Another major topic for the future is quantum computing. Properties of the quantum world such as superpositions and entanglements not only open up enormous increases in computing speed, but also new possibilities for global communication (quantum internet). Ultimately, it will be important to integrate all these approaches into a "hybrid AI". That is why we need technological openness in research, development and education.

2. Transhumanist Plans for Life Extension

Questions: Ray Kurzweil has said: "If we survive the next five years, we could live another 500 years". Considering this vision of radical life extension through transhumanist technologies, which are already partially realized through projects like Neuralink and B-CIP, how do you assess the feasibility and ethical implications of these ideas and plans? Do you believe that the AI technologies can truly enable such significant life extension, or should we approach them with caution?

Answers: I don't think much of transhumanist fantasies. They are not goal-oriented to integrating AI into technology, the economy and society in order to increase a country's welfare and prosperity. A medium-sized entrepreneur must calculate very precisely when and where which AI infrastructure will pay off in global competition. The same applies to AI in healthcare and global infrastructures. Ultimately, this will be decisive for breakthroughs in AI.

Of course, as humans, we change over the long term under the influence of nutrition, medicine and technology. AI is only the current spearhead of a symbiosis between nature and technology. However, we must not leave this to blind evolution and random. Evolution has had millions of years to develop

and has by no means always aimed for optimal solutions. We should think very carefully about where the journey will take us in the future. This should by no means be left to a few tech giants and the fantasies of their CEOs.

3. Intelligence and Wisdom in the Age of Artificial Intelligence

Questions: In your book *Artificial Intelligence – When do Machines Take Over?* you often emphasize that intelligence without wisdom can lead to entropy and chaos. How do you see the relationship between human intelligence and AI in light of this philosophical lesson? On what should this wisdom be based, and which mechanisms or principles should we implement in AI systems to ensure that they contribute to the common good and avoid the risk of AI becoming autonomous? Considering the warnings of Jeffrey Hinton, the godfather of AI, about the unrestrained and accelerated development of AI without adequate control, how do you see the ethical responsibility of scientists and society in managing the development of AI?

Answers: As I mentioned before, I do not follow transhumanist phantasies. But, on the other hand, I also do not believe in the Cassandra-like warnings about the supposed apocalyptic dangers of AI. I understand too much about the mathematical foundations of AI technologies to believe that they are anything more than ordinary. In the case of machine learning, there are advanced algorithms of statistics and stochastics, but combined with powerful technology. The danger is societal misuse, which must be carefully studied.

Once again, it is important to study the fundamentals of the respective AI technologies in detail and to derive their potential, but also their limits for responsible application. But actually, that is not new. We know that already from the discussion on nuclear energy and weapons. This "wisdom" in dealing with technology is above all a question of education and training, which I have been concerned with throughout my life. Of course, we in Europe also need enthusiasm for technology, especially among young people, in order to compete globally. Today, I sense this enthusiasm above all in Asia. Even now, at my age, I still enjoy coming up with new ideas and studying new ideas from others. Curiosity and creativity are what make up the potential of the human species. The ancient philosophers already knew that. As long as this remains the case, I am not afraid of AI, but look forward to new innovations.

Žiga Turk
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1. Sustainable Development, Growth, and Regenerative Economy

Question: In your work, you often emphasize that sustainability does not mean stagnation, but continuity and adaptation. Yet, Ugo Bardi and Jason Hickel warn that the concept of sustainable development is inherently contradictory – because development implies growth and growth consumes resources. In your opinion, is the concept of sustainable development under Agenda 2030 still realistic, or is it time to consider a new model – perhaps degrowth or regenerative society?

Answer: I respect the passion of people like Ugo Bardi and Jason Hickel, but their reasoning assumes that the world is static – that technology, knowledge, and human ambition stay the same. That is not the world we live in. We need to rethink what "sustainable" means. For me, it means "that which can be sustained", something that can continue to evolve and adapt over time.

There is no contradiction between sustainability and development if we understand development as the process of improving people's lives. The standard of living can continue to rise simply because what we don't know is infinite, so we have infinite opportunities to learn and innovate. We have never "run out" of anything important because human creativity expands the frontiers of what is possible. Coal replaced wood; oil and gas replaced coal; renewables and nuclear are gradually replacing both. Scarcity drives innovation; it is not a terminal condition. So far, we have been meeting these challenges. There is no reason to think we will all of a sudden stop to do so.

That is why I find the "degrowth" narrative misguided. The degrowth vision presumes that someone – an authority, a planner, or a global institution – knows what kind of life people should live, how much they should consume, and what their aspirations ought to be. Assuming that anyone possesses such knowledge is false, and it inevitably leads to autocracy.

We should therefore not aim for "less growth" but for growth that can go on and sustains itself through learning and innovation. That is what I call regenerative economics: an economy that creates value while renewing natural and social capital. Sustainability should not be about limiting what is possible; it should be about expanding what is viable. Agenda 2030 can still be realized – not by suppressing progress, but by trusting in human ingenuity.

2. Technology, Corporations, and Ecological Ethics

Questions: Vandana Shiva, known for her fight against production of genetically modified organisms (GMOs) and corporate pressure that threatens the sovereignty of nations through patents on seeds and food, points out that global green policies often serve capital interests rather than communities. How do you perceive the relationship between technological advancement, market interests, and true ecological ethics? Can technology be a genuinely liberating force, or does it become an instrument of centralized control?

Answers: Vandana Shiva is right to warn against the misuse of power, but I think her critique overlooks how innovation actually happens. If we want innovation to occur, innovation must pay. Someone must be willing to invest years of research and development, and risk into developing new seeds, materials, or processes. That investment only happens if there is a promise of return. Patents serve precisely that purpose.

Nature itself can be patented. One cannot patent a wild seed or a naturally occurring gene. What can be protected are genetically modified or hybrid varieties that result from someone's work. The terms of use

must be agreed upon between sellers and buyers. The problem arises not from patents themselves, but when markets are distorted by monopolies, subsidies, or regulatory capture. In a genuinely competitive market, capital earns returns when addressing the needs of the customers.

I also think the dilemma between technology and ecological ethics is overstated. The best way to protect ecological values is not through moral appeals but through proper pricing. As long as some environmental resources and services are treated as free, they will be overused. Once they have a proper price, even profit-driven actors have an incentive to conserve them. This is why I think a general and equal CO_2 tax is a better solution than any other administrative measures to reduce its emissions.

Technology does not have to be "liberating" in some ideological sense. Its purpose is to solve problems. Liberation, progress, or equality are social choices, not technological goals. Some societies may prefer material improvement over personal liberty, and that is their choice. What matters is that technology remains a tool, not an ideology. And in the case of GMOs, I would add that they have already proved to be a powerful tool against hunger and malnutrition. Denying such innovations in the name of ideological purity is neither ethical nor ecological.

3. Morality, Profit, and Regenerative Economy

Questions: Serge Latouche argues that Agenda 2030 is essentially a "cosmetic version of capitalism" – an attempt to save the system under a new moral framework. In your vision of regenerative economy, is it possible to reconcile the logic of profit with the moral obligation to nature and humanity? Do we need an evolution of capitalism, or a civilizational shift toward a new social model?

Answers: The questions remind me of an old quip about the American radical movement: *"The issue is never the issue – the issue is always the revolution".* In other words, environmentalism and sustainability are too often used as pretexts for political change, not as genuine concerns for the planet. Serge Latouche's idea that Agenda 2030 is a "cosmetic version of capitalism" reflects this tendency. The goal for some is not cleaner air or wiser resource use, but the replacement of capitalism itself with some imagined "better" alternative. Unfortunately, the alternatives happen to be utopian and only work when backed by an authoritarian regime. The more impossible the ideas the more violence is needed to implement them, as we have seen in Stalin's Soviet Union.

At times, environmentalism also serves to disguise the sin of envy as virtue: the impulse that says: *If I cannot have something, then nobody should have it – for the sake of the environment*. It transforms resentment into moral posturing, turning envy into ecological righteousness. Such thinking is neither moral nor sustainable; I have no respect for it; it corrodes prosperity and distracts from the true task of improving human and environmental wellbeing through innovation, not prohibition.

History shows that it was capitalism that cleaned the environment. The profit motive and competition produced the clean technologies, efficient engines, modern sanitation, and energy systems that lifted billions out of poverty. Capitalism's strength lies in its decentralized intelligence, as Friedrich Hayek described it: the spontaneous coordination of countless individuals, each pursuing their own goals, yet collectively generating knowledge and progress that no planner could design.

Profit is not a moral failure. It is a signal that value has been created – that someone provided a product or service which another person *voluntarily* found more valuable than the resources it took to make it. Profit is how society tells entrepreneurs they are solving real problems. To demonize profit is to punish problem-solving.

Yes, we have a moral obligation to sustain – but not some abstract "humanity" or "nature". As Roger Scruton warned, abstractions like these are too easily hijacked by would be authoritarians. We have a moral obligation to sustain the world that we have inherited from our parents and should pass it on,

hopefully a little better, to our children. So far, humanity has been able to do so. Our duty is to preserve the institutions that make cooperation, freedom, and creativity possible, and to venture confidently into the future, even to the stars.

A *regenerative economy* is not an alternative to capitalism but its element – an economy that rewards ingenuity and risk-taking, while accounting more fully for environmental and social features as valued by people.

New "social models" cannot simply be designed by a few intellectuals. History's great successes – democracy, science, the market economy – evolved spontaneously and refined through trial and error. Systems that tried to replace them by decree, like socialism or fascism, collapsed under their own weight. The regenerative future will emerge from free people having new needs and entrepreneurs listening to them.

4. Sustainable Development and the Concept of Post-Private Society

Questions: For decades, the concept of sustainable development has been promoted globally as a universal model for humanity's future. Yet, in parallel, criticism of this concept has steadily grown – from ecological and philosophical circles to socio-political debates – and today, it seems to culminate in a serious of discussions that can no longer be ignored. One of the most controversial examples is the World Economic Forum (WEF) slogan "you will own nothing and be happy", which has led many to question whether under the guise of sustainability and digital transformation, the models are being developed that could lead to: erosion of private property; centralized control of resources; control through digital identifications and digital currency; a system where individuals become dependent on global institutions for basic needs. Some of these concepts – such as collective ownership, platform economies, tokenization of assets, and sharing economy – suggest a shift toward a post-private society, where individuals no longer own but only access goods. In your opinion, do real strategies exist moving in this direction, and are WEF and other global initiatives truly connected to them? And finally, could such a model lead to a new form of control and dependency, rather than the freedom and equality nominally promoted by the concept of sustainable development?

Answers: It is true that the language around sustainability and digital transformation can sometimes sound ominous, especially when slogans like "you will own nothing and be happy" are taken out of context. That phrase, which appeared in a speculative WEF essay, was never an official policy proposal but a thought experiment about how access-based consumption might evolve in certain urban settings. The idea was an extension of a well-known business concept: shifting from capital expenditure (capex) – owning physical assets – to operational expenditure (opex) – paying only for their use. The same model, applied to private life, imagines citizens subscribing to mobility, housing, or appliances rather than owning them outright. The unease it caused is legitimate, because it touches something fundamental: property as the foundation of liberty. From Aristotle to Locke and Hayek, thinkers have recognized that those who own nothing ultimately depend on those who own everything.

There is no global conspiracy to abolish private property, but there are real cultural and technological trends that lean in that direction, often under the banner of sustainability. For some, "owning nothing" is imagined as a path to virtue – a way to reduce consumption, lower one's "footprint", and accept a diminished standard of living while being told to be happy about it. It is a vision uncomfortably close to Aldous Huxley's *Brave New World*, where comfort replaces freedom and consent is engineered rather than chosen. However, as Xi Jinping rightly reminded us: *"People will always want to live better lives*" – and any ideology that demands they stop wanting these risks becoming inhuman.

The rise of platform economies, subscription models, and digital services already turns ownership into temporary access. Add tokenization, digital IDs, and blockchain currencies, and it becomes easy to imagine a digital dystopia in which every transaction and permission is centrally monitored.

Technology itself is neutral; what matters is the institutional and moral framework around it – whether it empowers free people or makes them subjects of systems they no longer control. The moral of the story is not to reject technology, but to govern it with the principles of freedom and responsibility. Innovation can liberate, but only in a framework of open markets, rule of law, and private ownership. Capitalism's genius lies in aligning self-interest with service to others, not in making people dependent on systems they do not control.

We should be cautious of models that promise equality. As Milton Friedman warned: *"A society that puts equality before freedom will get neither. A society that puts freedom before equality will get a high degree of both".* True sustainability grows from the bottom up – from free people solving problems, creating value, and taking responsibility for what they own and build.

Nemanja Mrđić
Institute of Archaeology, Belgrade, Serbia

1. Viminacium and Serbia's Historical Heritage

Questions: Serbia is the country where 18 Roman emperors were born, making it one of the rare territories with such a profound influence on the history of the Roman Empire. In Sirmium, Marcus Aurelius, one of the most notable emperors, not only reflected on philosophy and principles of governance but also wrote his masterpiece "Meditations", leaving a lasting mark on the historical, philosophical, and cultural landscape of the region. How would you assess the journey of Viminacium from a Roman military-civil center to a modern archaeological park? What were the key factors that enabled this site to become the most complex and advanced archaeological park in Serbia, clearly preserving its connection to this historical and cultural heritage?

Answers: Viminacium was built as the Roman Empire was reaching its peak in military expansion as well as economic prosperity. The city was placed on a strategic location to become industrial, trade, and administrative center of the province and the stronghold for the main provincial defense force – Legio VII Claudia. The urban planning and military infrastructure were built accordingly for the maximum functionality. But what was an advantage during the expansion became a handicap in the late empire and the time of crisis. The huge city in an open plain with a need of large force for garrison was a problem. The economic crisis led to a reduced garrison. A small number of soldiers could not defend the huge city. The city was easily accessible, what made it vulnerable during invasions. The richness of the city attracted barbarians to come and plunder, take slaves across the Danube, and eventually conquer the lands. A sense of helplessness remained. After the ultimate fall, the city was never rebuilt. It was never forgotten, but the empire was never so powerful to take a chance with the city so easy to come and plunder. They moved to the hills and set up smaller fortifications easy to defend with a small force. Viminacium was abandoned – its buildings were used as a source of free building materials. Winds brought dust millimeter after millimeter and after millennia millimeters turned into meters.

But the curse of the city was a blessing for archaeologists. With no later settlement, what remained from antiquity became the enormous potential to excavate and present the ancient city. The ruins became the special almost untouched time capsule for us to research. Belgrade spread over Singidunum, London over Londinium, Wien over Vindobona, Sremska Mitrovica over Sirmium, *etc*. Viminacium therefore can be a field of dreams for archaeologists. Until today, 20 years of remote sensing and systematic surveys have made a virtual plan of the ancient urban zone. The temples, public baths, legionary headquarters, amphitheater, *etc*. You could pick what to excavate, how to present. The development of tourism was essential for protecting the cultural heritage and economic development for the local population. Creating a sustainable Archaeological Park was the only chance in order to provide the past to become an attraction in the present and hope for the future. The Roman heritage, so easily accessible and recognizable in the whole Europe and Mediterranean, is the link to connect us with remote populations and demonstrate the importance of presentation in order to have enormous benefits for the local communities in the future of Kostolac and the Braničevo region. The fact that the ancient city and legionary fortress can be presented comprehensively in all their segments is the opportunity that very few sites can have.

2. Contemporary Relevance of Archaeological Sites

Questions: Today, Viminacium transcends the boundaries of archaeology and becomes a hub of cultural diplomacy, education, and tourism. In what ways can archaeological projects like Viminacium contribute to positioning Serbia as a bridge between ancient tradition and contemporary European identity? Can cultural heritage become a foundation for a new form of sustainable development – based on spiritual rather than purely material values?

Answers: Viminacium as the central site, you might also refer a hub in Serbia, of the UNESCO nomination of the cultural heritage property Frontiers of the Roman Empire – the Danube Limes and Itinerarium Romanum Serbiae project – merges different aspects of approach in cultural routes and serial UNESCO nominations. The exhibitions that toured over the world, supported by the Ministries of Culture and Foreign Affairs of Serbia, covered all three aspects – cultural diplomacy, education, and tourism. New projects in education are the spearheaded programs specially developed for schools and universities, both domestic and international, as well as for worldwide enthusiasts who wish to taste the excavations and archaeology.

Viminacium as the project is the seed for multiple archaeological parks in Serbia and abroad that are based on our experience. With, at the moment, more than 20 years of existence and being the first and largest formal Archaeological Park in Serbia, we are setting levels and values in approach, models, and exploitation of cultural heritage, especially in complicated, contaminated, and constantly changing industrial environments.

Viminacium proved to be a strong foundation for sustainable development and exploitation of cultural heritage, but also demonstrated vulnerability to circumstances that are beyond human control, like pandemics, long-term protests, and climate changes, which all have effect on the number of visitors and can interfere with long-term planning. But when operating under normal conditions, it has proved to be an engine for development for local communities – for their strong involvement and huge benefits in many aspects of their public and private lives. An especially raised awareness of huge importance is that local communities are the first line of defense against all dangers that can affect cultural heritage.

The attractive and active presentation is the core of international visibility that places Viminacium among the sites equal to others in the world and especially in the EU. Roman heritage, mutual to all of us, is recognized and understood as a general link and ice breaker in cultural tourism, overcoming modern cultural and political differences.

3. Technology and Archaeology

Questions: The use of digital technologies, 3D mapping, and virtual reconstruction transforms how we understand the past. How important is it for archaeology to remain faithful to authenticity and the spirit of the times in an era when technology can create nearly perfect yet too modern depictions of history? How do you achieve balance between scientific accuracy and artistic interpretation when presenting Viminacium?

Answers: The new digital world is something new to archaeology, which had almost traditional approach in presentation until a few years ago. Positioning cultural heritage in the brave new digital world is the challenge that we have been facing and battling since our foundation, in 2006. Ruins are hard to understand to everyone except professionals and requirements in virtual reconstructions are crucial for visitors' perceptions of a site. Completely digitalized forms of documentation gave us a cutting edge to proceed almost immediately after excavations into 3D reconstructions and visualizations with the quantity of details and the possibility to add and build up with small finds, interactive human and virtual guides, *etc*. Adding tastes and smells to a presentation of the cultural heritage through drinks and revival of Roman cuisine, we changed the visitor's perception of common ruins into a true and complete life valued experience. A range of replicas and souvenirs changes from full virtual to touchable and experiential interaction that you can take home and enjoy any time.

4. A Message for the Future

Question: Just as Rome once symbolized civilization, law, and order, Viminacium today can stand as a symbol of Serbia's cultural continuity and identity. In your opinion, what is the most important

message that Viminacium conveys to future generations – in a world increasingly prone to forgetting its roots and the values that shaped human civilization?

Answer: Nothing like archaeology testifies constant changes in human lives and culture. Like forensics, it brings you beyond stories and myths into to real experiential world. This makes a strong impact on stability and continuity as desirable foci of human existence, but also emphasizes that changes transform humans individually as well as empires and can lead into something unstable, changeable, and destructive in our nature. Today, we value legacies of the Roman Empire and Viminacium much differently, not just as the mutual routes but also through knowledge that if we do not stick to these values, their constant changes can break traditions and disintegrate into fogs of wars and crises. Maintaining strong connections to the past and bringing back to life lost traditions make us better persons – humans that maybe, but only maybe, can overcome differences and unite on the best bases of culture and economy instead of weapons and conquests.

Feng Jiang
Chairman, Shanghai Area Studies Association, China; Chairman of the Council, Shanghai Academy of Global Governance and Area Studies, China

1. Global Threats to Human Survival

Question: In your work, you emphasize that geopolitics, climate change, and artificial intelligence represent three interlinked global threats to human survival. How do you envision multilateralism becoming an effective mechanism in a world dominated by national interests and growing great-power rivalries?

Answer: Yes, I believe these three threats are truly global in nature. Traditional geopolitical theory has so far only explained the competition for interests and power between nations, often rationalizing and justifying its inevitability. Historically, geopolitical competition has repeatedly plunged the world into conflict and war. Today, the world once again stands on the brink of war due to geopolitical rivalries, with Europe potentially facing the outbreak of another world war. Therefore, I believe a new doctrine is needed – one focused on the interdependence of nations, collaborative development, and shared peace.

The threat of climate change to humanity is fundamentally paradoxical, as it is intrinsically linked to both population growth and the continuous advancement of modern lifestyles. It is impossible to halt population growth or stop the process of modernization. Compounding this, nations exhibit a self-interested understanding of their responsibilities in addressing climate change, with Washington not even acknowledging the existence of the climate crisis. Environmental degradation will increasingly erode the foundations of human existence.

While Artificial Intelligence (AI) brings convenience, it is fundamentally altering human ways of living and being. The "human nature" we are familiar with is being deconstructed. Our economies are undergoing a historical process of "de-humanization," even a physical "de-manning", where human labor is no longer required for production, rendering people superfluous. Furthermore, AI technology not only homogenizes global thought structures but also risks having this homogeneity monopolized by high-tech entities. This poses a severe threat to the vitality of human civilizational diversity, which is the very foundation of democracy and freedom.

Historically, Europe has seen repeated theories of "Western decline", but the three threats we face today are no longer metaphysical concepts; they are tangible dangers. Glaciers are melting, sea levels are rising, and species are dying. High-tech developments like AI are not only monopolizing the realm of human spirit but have also become weapons of mass destruction that can be used recklessly. Humanity faces threats of extinction in both material and spiritual dimensions.

2. Global Governance System

Question: You underline the need to strengthen the UN-centered global governance system. How can the UN simultaneously respect national sovereignty while fostering a global citizenship consciousness that transcends national boundaries?

Answer: I am for breaking free from the constraints of the geopolitical doctrines concerning national interest and power competition that nations have been accustomed to for centuries, and instead establish a philosophy of harmonious co-existence for humanity. Academic circles worldwide must intensify reflection and discussion on "moving beyond geopolitical doctrine", forming an influential international voice. The modern world is too complex and specialized; politicians often lack the requisite intellect, knowledge, and strategic capacity to manage these highly intricate processes. We cannot rely solely on politicians to govern the world peacefully and effectively. The international academic community

should participate in global governance and educate those in power on how to view and shape the world from perspectives different from traditional geopolitical doctrines. Scholars should not be accomplices in geopolitical competition. We need to rethink the ancient idea of "philosophers governing the state", revive the doctrine of "perpetual peace", and build the concept of a shared future for humanity. We must reflect upon and cease the academic ridicule directed at the ideal of "perpetual peace".

3. Technological Advancement and Multilateralism

Question: In the context of digital transformation and the growing influence of AI on human behavior, do you believe that technological advancement can coexist with the principles of multilateralism, or does it, in fact, deepen inequalities and geopolitical divides?

Answer: The UN hosts many non-governmental and academic projects and activities. National academic communities should participate more actively in these, ensuring that the UN is not merely a platform for intergovernmental geopolitical struggle, but also a platform for humanity's harmonious co-existence and peaceful development. Scholars from all countries should raise a louder, collective voice. The critical realities of war and peace cannot be left solely to politicians and the military; the academic world must participate and shoulder its responsibility.

Technological development, especially in AI, has an inherent tendency towards monopoly, which runs counter to multilateralism. Furthermore, the fusion of technology and politics creates a techno-political oligarchy. Such oligarchs control the generation and dissemination of information and data, thereby controlling the raw materials, processes, and outcomes of human thought. This is profoundly undemocratic, anti-freedom, unequal, and dangerous.

4. China's role in shaping new global order

Question: As Chairman of the Council of the Shanghai Academy of Global Governance and Area Studies, how do you see China's role in strengthening multilateralism and shaping a new global order founded on cooperation rather than rivalry?

Answer: I firmly believe, China's strategy should be different. For instance, its development should no longer follow traditional geopolitical doctrines. The Chinese government has proposed concepts of common development for all nations, with shared enjoyment of development fruits, and is building a community with a shared future for mankind. I believe this draws lessons from the tragedies of geopolitical power struggles throughout world history. To translate this into concrete action, China has proposed the Global Development Initiative, Global Security Initiative, Global Civilization Initiative, and its stance on global governance. Development is fundamental. I expect, of course, the Chinese government to persist with these concepts and their implementation.

Furthermore, the academic community must shoulder its responsibility and recognize that we must provide ideas and concepts for the world. We need to establish a scientific multilateralism, resting on two main pillars. First, broad political multilateralism, meaning that international politics should not be left solely to national governments. We must guide societies among the countries to become actors in international political multilateralism. A new enlightenment is necessary. Second, broad academic multilateralism. The academic world must realize that science is becoming increasingly over-academicized, over-disciplinarized, and, in the Foucauldian sense, power-loaded for a limited elite-class of scholars. The general public can no longer understand it. Science must transcend unilateral academic discourse and become a multilateral, two-way discourse understandable to the public. Academic organizations should not be merely disciplinary circles; they must respond to public concerns and offer comprehensible responses to the existential problems facing humanity, for example, the three threats mentioned in the beginning. This is what I advocated as a "trans-lingual" approach at the Belgrade conference – it's not just translation between languages, but the conversion between different discourses,

building bridges between politics and science, and between scientists and the public. This is the Zeitgeist and the mission of international academic organizations.

I can imagine my answers may seem somewhat romantic. What I mean to say is that science and politics have become far too pragmatic nowadays, and a lack of imagination poses a tremendous danger. We convened at the Serbian Academy of Sciences and Arts, where the spirit of art proved exceedingly precious. The world requires aesthetics. The absence of aesthetics is humanity's misfortune. When I hear discussions about war in Europe, I feel particularly strongly that the world needs aesthetics, it needs a touch of romance.

Tibor Várady
Serbian Academy of Sciences and Arts (SASA)

1. Authenticity of Legal Language

Question: In your work, you emphasize the danger that the core principles of international law and human rights may turn into empty phrases, detached from reality. In your view, how can the international community restore the authenticity of legal language and prevent its ideological instrumentalization?

Answer: After World War II, and after the enactment of the 1945 United Nations Charter, principles reached a respectful level – but one has to keep in mind that reality is not automatically crafted by principles. The authenticity of legal language cannot be restored once and forever. Preventing ideological instrumentalization is an ongoing mission. It remains a continuous task – to find a way towards true understanding and true implementation of core principles in changing environments and among changing attitudes.

I will try to cite some examples. It is clear that no normal person can challenge antifascist and anti-nazi ideas and movements arising against Hitler. But positive swings may also take us beyond reality. Like in the court case in which, after Hitler's defeat, a Lutheran minister was convicted on the ground that he was "cynically smiling" when the Red Army and Tito's partisans were entering his town. He was sent to prison on the ground of "having committed an anti-people smile". Or, to give another example, no normal person can doubt that antisemitism is profoundly wrong. Yet if someone is accused today with reliance on the term "antisemitism", one should also identify what was he/she exactly accused for.

2. Modern Forms of Slavery and Inequality

Questions: You point out that threats to human rights are evolving, and that solutions can only be found by confronting contemporary dangers, including the phenomenon of modern forms of slavery. In your opinion, what are today's most dangerous forms of slavery and systemic inequality, and how can international law address them more effectively?

Answers: Several countries (the United Kingdom, Australia, and Canada) have adopted "modern slavery" acts – with the obvious purpose of standing up against modern slavery. These legislative titles may serve as a warning against social inequality. Several authors (like John Quigley) note that while communism was a true threat, worker's rights got more attention in Western countries, in order "to dampen the attraction of Bolshevism in Western Europe". It was at that time that the International Labor Organization was constituted. This organization – just as labor syndicates – are nowadays losing relevance. It is critically important to recognize, both in rules of international law and in national legislation, that worker's rights are not just a tool confronting Bolshevism, but a response to an essential human need.

It is a human task to devote distinct attention to worker's rights. Let me mention here a thought of Anatole France, the famous French writer. He raised the question whether we can really reach equality through a law that equally prohibits homeless people and billionaires to sleep under bridges.

3. Sustainability Between Law and Ethics

Question: You warn that even the concept of sustainability can become an empty phrase devoid of real content. How can legal scholarship and practice ensure that the notion of sustainable development does not remain merely a technical or economic framework, but retains its ethical dimension – respect for dignity, justice, and responsibility toward future generations?

Answer: Sustainability is a term that recently received wide recognition – and this is a well-deserved recognition. This designation may also be perceived as a thoughtful warning in the right direction. But it is also known that terms that breed appreciation will become popular terms. And popular terms are used not only by people who have a real understanding, but also by people who just seek applause. In public use, popular terms may get divorced from content. The same applies to terms that managed to formulate judicious criticism – like the term "populism". More and more people are using this term to add some emphasis to their condemnation – whatever they are trying to condemn.

If we want true sustainability between law and ethics, we need to be aware of the fact that environments and realities are changing. Sustainment of ethical standards is not guaranteed by way of re-applying an established conclusion or solution. What is needed is a thorough re-investigation of newly shaped realities. Steps towards true ethical solutions can only be taken if one uses the present environment as a starting point.

Fadwa El Guindi
Board of Trustees, World Academy of Art and Science (WAAS); University of California at Los Angeles, USA

1. Human Security and the Global South

Question: In your work, you emphasize that global events are largely focused on the Global North while significant events in the Global South are often overlooked. What concrete steps can international organizations, including the United Nations (UN), take to ensure that the concept of Human Security for All genuinely includes all regions and peoples, not just the powerful countries and institutions?

Answer: We need to pay attention to activities occurring by and in the Global South. Anthropologists are good at identifying such activities, using their perspective and gaze. Wide publication sharing of such observations, dedicated observers to pull out such publications, and perhaps an occasional workshop or panel organized by the UN to identify such activities by the Global South and attract our attention are also needed.

2. Visual Anthropology and Fieldwork

Questions: Your long-term fieldwork, including a year-long stay with the Nubian community, led to the development of a visual anthropology approach and the creation of world-class material. Where would you recommend a continuation of such research to take place with the results of comparable impact? What challenges and opportunities do you see in applying visual anthropology in contemporary contexts and diverse communities?

Answers: Field-based observations are very important in this regard. Developing a field-based visual ethnography adds a dimension that is needed to provide context and reality to other cultural traditions. Perhaps a Standing Committee with rotating membership consisting of anthropologists covering different cultural regions can provide relevant insights.

3. Anthropological Approach and Multidisciplinarity

Question: You emphasize that anthropology is not a conventional social or humanistic science, but a multidisciplinary field studying humanity in its uniqueness and diversity. How can anthropological approach contribute to a better understanding and management of global security challenges, especially in the context of power, resources, and cultural differences?

Answer: Anthropology is uniquely multidisciplinary covering all aspects of humankind. This is necessarily the perspective needed to approach global issues. How have our ancestors dealt with climate change? How do different populations approach nature? How have different cultural traditions provided the basis for priorities in life and for values.

The cross-cultural element is central to anthropology but also the various aspects of humankind: not just the cultural and the social; the biological, historical, evolutionary (in the scientific sense), cognitive, and linguistic capacities and manifestations must be taken into account too.

4. Artificial Intelligence and Human Security

Question: You have highlighted that Artificial Intelligence (AI) alone is not a solution to global challenges. How do you see the responsible role of AI in strengthening human security, while ensuring that local, cultural, and social contexts and the rights of marginalized communities are not neglected?

Answer: Technological developments always accompany the development of human life as its brain capacity becomes the basis of imagination, flexibility, and adaptive ability. Using technological developments to assist in human advancements, producing a balance and harmony that is constructive rather than destructive, is needed. "Taming" such advancements to reach security, dignity, balance, and harmony must be the goal. This requires careful and constant analysis of each assistive technology so that it remains assistive before it ends up robotizing humans. Economic advancements must be shared by the North and South in equivalent, not necessarily equal, ratios. The North must change its mindset of "superiority" to include the rising need by the South for liberation of its resources. Human security must be better defined and must be relativized to include what is considered security by non-dominant groups. It must prioritize the notion of "dignity". Other ways of life must be dignified. Other sources of knowledge must be taken seriously. There is science for every group and there is local knowledge for every group. The problem with AI is that it is neither artificial nor intelligence. It is assistive technology made possible only because of the flexible capacity of the human mind that covers north, south, east, and west.

Mario Petrucci
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1. The Unholy Trinity and Sustainability Challenges

Question: In your work, you identify three core systemic causes of the global inadequacy in responding to the ecological crisis, which you call the Unholy Trinity: Bad Memes, Framed Questions, and Radical Inertia. How do you see the role of these three obstacles in effectively blocking real societal and economic changes, and in what ways can art and poetry directly act to break them?

Answer: First, we need to make clear what the three parts of the Unholy Trinity actually represent. A meme is a self-replicating unit of culture, as coined by British evolutionary biologist Richard Dawkins. It describes the gene-like behaviour of interlinked cultural fragments; these travel from generation to generation, often mutating as they go. Examples might be a popular melody, a catchy TV advert, or a political slogan. The way in which assumptions and reactions concerning climate change are propagated and maintained, against the tsunami of evidence that demands urgent action, suggests that "Bad Memes" are a key player.

Next, "Framed Questions" are problems posed as though they invite open discussion, when in fact they have a tightly-constrained agenda lurking in their depths. "Are we aiming for 0.1% or 0.2% of GDP to be spent on sustainability?" is a Framed Question: it offers an immensely limited choice. Framed Questions are to be found throughout economics and politics, partly because many of our inherited assumptions are invisible to us – one example of a critically buried assumption might be that untrammelled economic growth is *necessarily* an uncontested good.

Finally, and perhaps most important of all: "Radical Inertia". This describes a deep-rooted resistance to change, encountered whenever an established way of doing things, or perceiving situations, holds us in a vice-like grip. This is not simply a rephrasing of the persistence of certain assumptions, ideologies, or accepted ideas; it includes such mammoths of intractability as the built environment, technical infrastructure, legal systems, national customs, and so on. It doesn't take a bucketload of imagination to predict the likely response to any attempt to, say, ban mobile phones or restrict TV. The point here isn't whether or not such things are ultimately useful or desirable, but whether or not we have lost the genuine freedom to be able to take them or abandon them. This type of inertia is extremely difficult to overcome, as it infiltrates all aspects of our lives, economies, and the many interwoven, interdependent systems that channel human activity and progress. It is a term I myself coined, furthering and adapting Ivan Illich's notion of "Radical Monopoly". Of course, any change requires that we overcome some degree of inertia; but Radical Inertia is different; it is "radical" because the implied or attempted change is practically impossible to imagine, address, pursue, or implement within existing systems.

For me, these three aspects of the Unholy Trinity are among the main reasons that our species (in post-industrial revolution) continues to be largely unable to generate a fully conscious and creative humanity in harmony (or even détente) with ecology. It's impossible to overestimate the impact and damage of denial and addiction here, of those hapless associates of Radical Inertia. Directly and indirectly, the Unholy Trinity contribute powerfully to addiction and denial, and they demote our attempts to respond to climate change, breeding international isolation and re-seeding global inequality.

So, given the scale and extent of these issues, what on Earth can art and poetry achieve? At the moment, the environmental "debate" can sometimes seem like a juggernaut rushing towards a cliff, whose occupants are vigorously contesting whether they are doing 105 or 95 miles per hour. I'd be a fool to claim that, somehow, at our current collective and political levels of unconsciousness, addiction, and neglect, great art can simply eliminate all resistance to pro-environmental change; it hasn't been able to

do so, so far, perhaps because for most people and institutions, it is not a central plank of their day-to-day activity or a major component of their guidance system, in the way that, say, profit or cash-flow is. To modern humanity, economy is the new ecology. Also, art cannot succeed in isolation; it has to be part of an integrated approach. That's not to say, though, that art cannot serve as a formidable ally in the struggle. There is a complete book needed to explore this question fully, so all I can do here is to briefly summarise the main routes through which art can help us.

First of all, good art heightens our awareness of the detailed texture of perception. It helps reveal entrenched or habitual thinking, exposing assumptions, making the automatic and familiar strange, through what Russian Formalism termed "Defamiliarisation". In this way, true (not consumerist) art can shatter the three legs on which denial and unsustainability squat. Second, art can transform us, and transformation is the one thing that can severely fracture Radical Inertia. As poet Rainer Maria Rilke wrote: "What is your most pressing injunction, if not for transformation?". We can all bring to mind a poem or painting, a film or sculpture, that revealed our selves to ourselves, that punctured a Framed Question, however obliquely. Third, great art challenges the dominant ideology simply by being what it is, plural and untamed, cracking the veneer of a Bad Meme or Framed Question, or splintering some shard of Radical Inertia with its forensic insights and empowering trajectories through mind and heart. Fourth, art generally nurtures empathy and sensitivity, both essential to eco-justice. Fifth, real art is meme-proof: it cannot be hemmed in to any one-eyed meaning, that Cyclopes' view of the herd. It operates on several levels at once, across apparent boundaries. Australian poet Les Murray said: "Only poetry recognises and maintains the centrality of absolutely everywhere". Sixth, art appeals to different parts of the brain than rhetoric and facts. For instance, art can be thought of as a kind of "what if?" that encourages us to re-engender ourselves and our world, to challenge (in a different manner than "reason") those patterns and habits in ourselves we might prefer initially not to look at. Great art, if we let it, deflates denial. Great art reboots consciousness.

Finally, positive poems or artwork could offer an antidote to the harrowing, brutal visions we're exposed to in more pessimistic scientific predictions, and many books and films, where we risk – or will surely lose – just about everything. Research suggests that we respond better to positive messages and encouragements than to fear and doom, and the former can actually foster intervention and involvement rather than the apathy and anxiety of the latter. Prophetic art can therefore serve to emphasise, as much as jeopardy, those eternal values we would hope to preserve, or even augment, in some future world, however compromised. That way, Eco-poems – and Eco-art more generally – can avoid becoming just another form of Framed Question whose predictions are solely, and paralysingly, bound up in futility, failure, and fear. I'm not saying that art is thus a substitute for lobbying or activism, or for practical and political endeavour; but it can help to mobilise and inform new forms of hands-on and ideological change in that webby totality of what society is. Even one poem or artwork in the classroom or in the public domain can re-channel many minds, or create the atomic starting point for an entire constellation of innovative activity. After all, isn't "ecology" fundamentally about starting points and subsequent relationship?

2. The Role of Art in Overcoming Eco-Lethargy

Question: You highlight that eco-lethargy stems from human slowness, denial, and habitual dependence, despite the clear urgency of ecological problems. Which forms of art, in your view, are most effective in raising awareness of urgency, motivating social action, and reversing the inertia of individuals and institutions?

Answer: Art can be part of the disease too. It can be blatantly commercial. It can be simply not very good. And remember all that god-awful jingoistic verse of the First World War? So, is my wish-list for helpful art met by the avant-garde? Perhaps, but not necessarily. What I'm really indicating, maybe, is art that possesses a radical but also authentic intent, or that observes so intimately and sensitively that we're profoundly changed by, made more fully awake, more completely connected. Any art that does

this (whether or not it is also avant-garde) becomes, by association, Eco-art – or at least a close cousin to it – because without these critiques, motivations, mobilisations, and re-awakenings in the human spirit, we stay trapped individually in ourselves as we are, blown along by the collectively enmeshed systems of unsustainability, oppression, and deadness that most societies have invested so much in for so long. That said, clearly, I'd include Aboriginal or Indigenous art as a potential candidate. Also, any artworks/practices that address ecology could assist; this is the more common understanding of what is meant by Eco-art; but the term can also apply, more technically, to art that immerses itself in the environment itself, as a site-specific contributor or integrated presence, a "collaboration" that preserves, remediates, "meets", or vitalises the environment it incorporates and is incorporated by.

You might ask: "Are these various manifestations of Eco-art on the rise? Do they work?". Well, it depends where you look, another huge and complex question I cannot go into here. For now, let me say that art and poetry can contribute something powerful and important to "being in an environment", perhaps a seed-crystal for a much greater identification with it: "Being *of* the environment". Meanwhile, a suggestion. When you come across a poem or artwork, ask yourself: "Is this part of the problem, or is it party to healing?". And that question is not just to do with content or what the art seems to be about, on its surface. It's about You gently but firmly interrogating, and growing, inside yourself, the taproots of perception.

3. Redefining Sustainability through Art

Question: You question the very concept of sustainability, suggesting that it too is often caught in the trap of the Unholy Trinity. How can art and poetry contribute to a genuine understanding and redefinition of sustainability, so that it ceases to be a mere phrase and becomes a practical guide for transforming society, ecology, and global policy?

Answer: I'm not sure that sustainability is merely to be "redefined" or made "more practical". I'm not convinced that it leads us to a sufficient solution. Certainly, the term sustainability is in need of an overhaul: too often, it is ill-defined; since (perhaps partly because of) Brundtland, it has become vague or co-opted, or a universally interpretable statement of generalised goodwill. Attempting to address it meaningfully can sometimes feel like shooting arrows at a multiple moving target. I'm not ignoring all of that; what I prefer to stress here is how emphatic the Unholy Trinity are in telling us that our ongoing crisis really begins with assumptions, habits, motivations, perceptions, and communications. What we actually do, and the systems we construct to do it, are almost certainly forced to follow suit. That is to say, the idea of sustainability itself, what we each individually understand it to be and how we each attempt to apprehend and visualise it, is what aggregates by various routes into our collective response to the eco-crisis. A lack of genuine insight and vision expressed individually therefore leaves you, collectively, with a vague and nebulous cypher. For existing vested interests, that uninspected ubiquitous cypher is far more manipulable than a series of individually held, vitally precise, and inter-negotiating visions. Unless we constantly interrogate and challenge our own particular imaginings of what sustainability means, or what it might evolve into if we fail to individually grasp what collectively we mean by it, our societies are most likely to simply repeat existing mistakes in new ways, perhaps even compounding and exacerbating them. In this sense, art can provide an invaluable tool in reassessing what sustainability incarnates as, beyond our academic arguments and papers, and what assumptions lie behind and beneath it that we first have to set right.

Going even further, it may be that we need to spend less time talking about (or from) this fuzzy place of "sustainability" and more time engaging with the actual and sharp environment, the precise and in-focus environment, the real, dirty, and silty environment, the slugs as well as the dolphins, the mould as well as the mountains, the sewage as well as Artificial Intelligence, immersing ourselves in it, listening to it, seeing ourselves as fellow travellers in ecology rather than managers and overseers, not being merely cerebral and cognitive but also visceral and instinctual. The environment is the greatest survivor, the complete teacher. Whether through art or any other means, we must re-learn how to learn

from her, as Indigenous peoples did. It may be that ecology herself is the only teacher who can truly convince us that observation/attention is a far deeper process than scientific measurement alone; that valuation is only fractionally interpreted via a price; that understanding sometimes needs but always goes way beyond data and statistics; that human response may require but can also be so much more creative than a policy or law. Indeed, I suspect that humanity will only overcome the vast Radical Inertia of its unsustainable systems by creating and then surrendering to approaches that *themselves* imitate how ecology operates. Perhaps this is what unsustainable institutions and cultures most need, at least initially: to embrace sustainable practices that are functional and negotiated; but also, to become capable of awarenesses and activities that have the quality of great art, that are open and sometimes mysterious, that are creatively, intelligently exploratory. How else can climate change be tackled inclusively?

One of the beauties of great art is that you can never be sure where it will take you. There is a great deal more I could say about the practical and aesthetic contributions art could make, and does make, to the ecological discussion currently underway. I believe, however, that the primary point is this: for all the urgency of our situation, we must find time – and, more crucially, clear space – as individuals and in our various groups, to engage with art, with ecology herself, and ultimately, within ourselves, to develop a meaningful receptivity to other-centred possibilities and the one-ness they engender. That is the ocean floor of Radical Inertia, where the deepest wrecks of resistance lie. Ultimately, sustainability is not an academic issue. How this receptivity, this consciousness, propagates through our systems and power structures is probably not entirely in our control, and it may even be that many of our existing systems simply cannot accommodate it. The first step, however, must be engagement; to realise the full, enriching diversity of each individual selfhood, the profound courage and humble drive that we each need in addressing corporate "reality", and the miracles that an involved Self is capable of. To extend our "best moments" into a way of life: that is one thing, for sure, that great art can inspire us to at least desire.

Garry Jacobs
President and Chief Executive Officer, World Academy of Art and Science (WAAS); Chairman of the Board of Directors and Chief Executive Officer, World University Consortium (WUC); The Club of Rome (CoR)

1. Integration of Art and Science in Addressing Global Challenges

Questions: In your work, you emphasize that science alone, although powerful, is not sufficient to solve complex social problems without the complement of art, values, and human consciousness. You have formulated a new concept of reliable knowledge, which aims to reconcile these seemingly separate categories of understanding. Could you define what reliable knowledge means to you and how it can be achieved? In your opinion, how can this integration be concretely applied to address critical global challenges such as climate change, inequality, and conflict?

You insist on a transdisciplinary and value-based approach to knowledge, connecting science, art, philosophy, ethics, and politics. How do you see the most effective path toward realizing and integrating this paradigm shift into the global system of institutions and development, so that reliable knowledge becomes a tool for a sustainable and just future for humanity?

Answers: Reliable knowledge, as I conceive it, represents an attempt to arrive at a concept of knowledge that is more effective than prevailing theoretical models that reflect only partial perceptions of reality. The true test of reliable knowledge is that it works when it is applied in life. It seeks to formulate comprehensive perspectives that encompass the totality and integrality of reality, not just a theoretical conceptual model of some relevant factors.

WAAS has identified a number of important dimensions of reliable knowledge absent from conventional theoretical thinking. One of them is what we term transdisciplinarity. This refers to connectivity and interdependence between different fields of knowledge, such as the relationship between climate change, energy, agriculture, migration, public opinion, politics, finance, international relations, and human health. When we consider the process of climate change, we keep in mind not only its impact on rising sea level, increasing cyclones, more frequent forest fires, and desertification. We also keep in mind that global warming is the single greatest threat to human health, according to the World Health Organization (WHO).

The relationship between objective and subjective forms of knowledge is another important dimension of reliable knowledge. It seeks to reconcile the observable and measurable facts that are the focal points of the natural sciences with the subjective factors that play a central role in the social sciences and humanities. It views Science and Art as two complementary ways of viewing reality, both of which are valid, but neither of which is complete in itself. Science, in its purest form, seeks precision, objectivity, and measurable and verifiable facts. Art, by contrast, embodies intuitive, value-laden, emotional, and imaginative dimensions of human consciousness that reflect the way human beings comprehend, respond, and react to the objective world around them. Neither provides us with all the knowledge needed for effective action in the real world. Reliable knowledge arises when these two ways of knowing – objective rational analysis and subjective creative intuition – are integrated into a single, living process of understanding the capability of guiding human action. It is the knowledge that is not only intellectually valid but also emotionally compelling, ethically grounded, and socially transformative.

WAAS was founded by eminent physicists such as Albert Einstein and Robert Oppenheimer, who led the Manhattan Project, which gave the first atomic bomb. He and other scientists created the bomb because they believed they were working to save humanity from the scourge of domination by Germany in World War II. They applied their knowledge of Physics to do so. By the time the first atomic bomb had been created, the war in Europe was over. So, they naturally assumed that the bomb would not have

to be used and they urged America's President Harry Truman to introduce an international treaty of all the warring nations prohibiting atomic energy to ever be used as a weapon of war, but Truman refused to give up the tremendous advantage of America in being the only nation possessing an atomic weapon. As a result, Russia developed its own versions of the atomic and hydrogen bombs, and the nuclear arms race was launched, leading to the onset of the Cold War and four decades of armed confrontation between the superpowers. Eight decades later, the threat of nuclear war and annihilation is still very much alive.

Within a few years, the scientists realized their huge error. They had applied their scientific knowledge of Physics, but were ignorant of the momentous political, social, economic, and psychological consequences that would result from their invention. For the first time in history, the power of natural science developed in the quest of knowledge threatened the very existence of global civilization. They realized that their scientific knowledge was incomplete if it did not take into account an understanding of the social and ethical responsibility of scientists to ensure that their knowledge serves the interests of all humanity, present and future. In 1956, the leading scientists convened a conference in Washington DC on the social responsibility of science. In 1958, a book entitled *Science and Human Values*, by a Polish mathematician, Jacob Bronowski, was published expressing the inherent dilemma generated when science is applied without a consideration for universal values. In 1960, WAAS was founded as an agency for human security, welfare, and well-being.

Science reveals the natural laws that govern the universe, but it cannot by itself determine the purpose for which those laws are to be applied. Art awakens our sense of meaning, values, beauty, harmony, and aspirations. Without art, science risks becoming mechanistic, value-neutral, or even destructive, as history has shown when nuclear technology, Artificial Intelligence (AI), plastics, pesticides, or any other invention is applied without adequate ethical reflection. Without science, art can lose touch with the material realities and constraints of the world. The reconciliation of the two – reason and imagination, analysis and values – creates a more complete, integrated, and reliable knowledge. which can better guide humanity toward a sustainable and humane future. As Bronowski wrote, "Truth in science is not different than truth in the arts. The facts of the heart, the bases of personality, are simply more difficult to communicate".

To address global challenges such as climate change, inequality, and conflict, we must transcend the limitations of specialized knowledge and disciplinary silos. The crises confronting us today are not merely environmental or economic; they are profoundly social, psychological, cultural, and spiritual. The failure of our collective responses is not due to the absence of information but to the absence of integration – to our inability to see the whole and to act in harmony with it. The development of AI and robotics can liberate human beings from ignorance, manual labor, and crime, or it can lead to spreading fake news and hallucinations, widespread unemployment, poverty, and drone warfare. It is not the technology that determines its application and consequences, but rather the knowledge of those who develop, disseminate, administer, and govern its usage.

Reliable knowledge demands that we link the rigor of scientific investigation with the moral sense of responsibility and empathy that art evokes. Science can measure the rate of global warming, but only art can move people to care deeply enough to change their behavior. The climate movement will not succeed through data alone; it requires the emotional power of narrative, music, and visual imagination to awaken the collective conscience of humanity. A report issued by thousands of scientists warning of the dangers of global warming may predict the dangerous, irreversible consequences of a rise in Earth's average temperature above 1.5 or 2 degrees, but go unnoticed or ignored by the public; whereas a video like Al Gore's *Inconvenient Truth* awakened millions of people to the existential threat posed by fossil fuel consumption by the following message: "Each one of us is a cause of global warming, but each one of us can make choices to change that with the things we buy, the electricity we use, the cars we drive; we can make choices to bring our individual carbon emissions to zero. The solutions are in our hands. We just have to have the determination to make it happen".

In order to be reliable, the development, deployment, and governance of knowledge must be managed by institutions that combine a **transdisciplinary and value-based approach** to research, education, policy-making, and application, like GESDA, the Geneva Science and Diplomacy Anticipator, which seeks to approach technological advances from an integrated perspective that takes into account all the dimensions and applications of emerging technologies.

Universities and academies must no longer confine knowledge within disciplinary boundaries, as Economics ignored the ecological consequences of unbridled economic growth for nearly two centuries. They must cultivate an ecosystem of learning that embraces the natural sciences, social sciences, humanities, and arts as complementary expressions of the same quest for truth. Policies for development must be judged not merely by their impact on economic growth, but equally by their contribution to human welfare, equity, and the sustainability of life on Earth. We must shift from an economy of profit to an economy of well-being; from governance by competition to governance through cooperation; from fragmented expertise to holistic insight.

Realizing this paradigm shift requires an intellectual, institutional, and cultural transformation. It begins with education that fosters curiosity, creativity, and conscience, rather than rote memorization and technical skills – education that teaches not only how to think but also how to care. It demands that scientific institutions internalize ethical responsibility, and that political systems become accountable to human values, not just material interests of the electorate. The arts, meanwhile, must reclaim their rightful role as catalysts for social imagination and instruments for awakening human empathy. Together, these form the foundation for a new synthesis of knowledge – one that is comprehensive, constructive, and life-affirming.

Art and Science are complementary creative pathways for understanding reality, not opposing or mutually exclusive approaches. As Einstein observed, "The greatest scientists are always artists as well". The goal is not the dominance of science by art, nor of art by science, but their conscious partnership in service of humanity. Buckminister Fuller said: "Art and science are tools for discovery and innovation, with science providing the systematic understanding of the universe and art offering the creative insight to apply that knowledge for the benefit of humanity". Reliable knowledge, so conceived, becomes the compass for navigating the complexity of our age – knowledge that is at once factual and value-based, analytical and creative, rational and humane. It is through such integration that we can hope to generate the insight, will, and wisdom needed to guide humanity through the polycrisis of our time toward a sustainable and just future. As Hugo Bokyo, the first Secretary General and second President of WAAS put it, "Let us create the scientific basis which is necessary to enable us to live and work together peacefully! Let us use all our imagination to make an art of living".

My comments illustrate the importance of two important dimensions of reliable knowledge – transdisciplinarity and the integration of objective and subjective perspectives. The marriage of art and science seeks to create reliable knowledge that is integrated with the wider reality. It should be constructive, creative, value-based, evolutionary, and capable of guiding humanity toward a sustainable and equitable future.

2. Contributions and Mission of the World Academy of Art and Science

Questions: WAAS, of which you are the President, has been promoting for decades a holistic approach to knowledge that combines science, art, ethics, and philosophy. In your view, what have been the most important concrete initiatives and achievements of WAAS so far, and how have they contributed to building reliable knowledge applicable to global issues? What are the plans for the future – which projects are currently underway, both from the side of science and from the side of art?

Answers: WAAS was founded in 1960 by a remarkable group of scientists and thinkers – among them Oppenheimer, Russell, and Einstein – who recognized that humanity stood at a decisive turning point. The scientific achievements of their time had revealed both the astonishing power and the profound danger of human creativity. They foresaw that the same knowledge which liberated human beings from ignorance and disease could also destroy civilization if divorced from values, ethics, and consciousness. The Academy was therefore conceived not merely as an association of distinguished scholars but as an **agency for human welfare** – a transnational body dedicated to promoting knowledge that serves humanity as a whole.

Over six decades, WAAS has sought to translate this founding vision into concrete initiatives that build bridges between disciplines, sectors, and cultures. It has served as a forum for integrating insights from science and the humanities to address the global challenges of our age – peace and security, environment and development, equity and education. Through international conferences, publications, and partnerships, the Academy has worked to promote the **transdisciplinary and value-based conception of knowledge**, which we refer to as *reliable knowledge* – knowledge that unites intellectual rigor with moral purpose.

Among its important achievements, the Academy's work on **human security** stands as a living application of this mission. The *Human Security for All* campaign, conducted with the United Nations, the Inter-Parliamentary Union, the Consumer Technology Association, and many leading civil society organizations, redefines security beyond its traditional military and geopolitical dimensions. It embraces the economic, environmental, social, and psychological foundations of human well-being. This initiative draws directly on the Academy's conviction that the greatest threats to humanity today – poverty, inequality, climate change, and the misuse of technology – are not isolated problems but interrelated manifestations of a single systemic crisis. They must therefore be addressed through an integrated and human-centered approach.

Similarly, our partnership with UNESCO, The Club of Rome, and The Earth-Humanity Coalition in the **International Decade of Sciences for Sustainable Development (2024–2033)** exemplifies WAAS's continuing commitment to uniting scientific and artistic inquiry for human advancement. The **World Conference on Science and Art for Sustainability**, held in Belgrade in September 2025, and the resulting *Belgrade Declaration on Science and Art for Sustainability* are important milestones in this journey. They call for a new synthesis between the analytic power of science and the creative insight of art, affirming that both are essential for generating the reliable knowledge humanity requires to navigate the polycrisis of our times.

From the side of science, WAAS continues to focus on the ethical implications and social responsibilities of emerging technologies – AI, biotechnology, and the digital revolution – through initiatives that promote *science diplomacy* and global governance based on human values. From the side of art and the humanities, the Academy supports projects exploring creativity, culture, and consciousness as forces for transformation – through its collaborations with artists, educators, and humanistic scholars within the *Science and Art for Sustainability* program and the UNESCO-MOST BRIDGES Coalition.

In the social sciences, WAAS has carefully examined the intellectual foundations of the science of Economics. After conducting five international conferences and publishing more than 100 articles drawing on expertise from a multitude of disciplines and professions, WAAS has identified critical elements of human-centered economic theory that is conceived to integrate economic growth with social development, environmental sustainability, and individual well-being.

In the field of peace and security, WAAS has recently launched the Global Peace Offensive, to promote an alternative to the prevailing approach to the national diplomacy that is presently applied to prevent and resolve military conflicts. The Offensive represents a dialogue-based, inclusive, and proactive

approach to establishing peace. It is rooted in citizen diplomacy, focused on the prevention and management of conflicts. The time has come to counter growing political polarization and violence with the tools of cultural, scientific, and educational diplomacy. Our approach is problem-specific, using simple, fast, and adaptable methods to address challenges. Our key target groups are youth and emerging leaders, with whom we aim to foster intergenerational and intercultural connections. In September 2025, WAAS joined with the European Academy of Sciences and Arts and the Alma Mater Europaea University to establish the Global Peace Offensive Center in Maribor, Slovenia.

In the field of education, WAAS has conducted seven international conference and published numerous articles calling of an AI-based system of global higher education that can provide world-class, accessible, and affordable learning to hundreds of millions of youths around the world and a life-long system of continuous learning for those who are already in the work force. The system can double the world's capacity at a fraction of the cost of existing systems. Looking ahead, the Academy envisions establishment of a transdisciplinary research project to evolve and validate a framework for conscious, global social evolution to serve as the curriculum for international leadership education in all fields, and to develop content for education in a diverse range of university disciplines. The project aims to prepare current and next-generation leaders, mentors, and policy-makers at the national and international level with an understanding of the stages, forces, and values needed for transition from a haphazard, subconscious process of development to a more rapid, smooth transformation of society based on integrated, transdisciplinary knowledge, values, and foresight needed for an equitable and sustainable transformation.

The mission of WAAS remains constant: to advance knowledge that is both intellectually sound and spiritually sustaining, capable of guiding human progress toward peace, security, and planetary sustainability. Its initiatives are all expressions of one central idea – that knowledge divorced from values is incomplete and values unguided by knowledge are impotent. Reliable knowledge emerges only when science and art, mind and heart, intellect and conscience work together in the service of humanity's higher evolution.

3. Reliable Knowledge and the Source of Creativity

Questions: You emphasize that reliable knowledge must be both intellectually valid and emotionally engaging, and also connected to universal human values and creativity. Deepak Chopra claims that creativity is not linked to external stimuli or motivational guidance, but arises solely through connection with the Source – the Divine. Within the concept of WAAS, is there a reflection on this aspect – on the Source, the Creator – and how is it integrated into the practice of reliable knowledge?

Answers: The relationship between knowledge, creativity, and the Source of all creation is one of the most profound questions in human thought. Throughout history, both science and art have sought to understand the mystery of creation – science by exploring its laws and processes, art by seeking to express its essence and meaning. In the work of WAAS, we recognize that knowledge, to be truly *reliable*, cannot be limited to the analysis of external phenomena. It must also embrace the inner dimension of consciousness from which creativity, intuition, and values arise.

The founders of WAAS were deeply aware that the human mind is not merely an instrument for observation but also a participant in creation. Einstein, one of our founders, famously remarked that "the most beautiful experience we can have is the mysterious – it is the fundamental emotion that stands at the cradle of true art and true science". The Academy's inclusion of *Art* in its very title was not an ornamental gesture but a declaration that creativity is integral to all forms of knowing. Creativity is the meeting point between the rational and the intuitive, the finite and the infinite, the human and the divine.

In this sense, what Deepak Chopra refers to as connection with the *Source* – the Divine – may be understood as the inward opening through which the mind aligns itself with the deeper currents of

universal consciousness. Whether one calls it the Divine, the creative principle of Nature, or the field of consciousness, it represents the wellspring from which all great discoveries and inspirations arise. Many of the most transformative moments in science and art have been born not of deliberate reasoning but of sudden illumination – Newton beneath the apple tree, Kekulé's dream of the benzene ring, Mozart composing entire symphonies in his mind, or Leonardo da Vinci uniting the laws of nature and the beauty of form. Each of these exemplifies a moment when human consciousness became transparent to a greater harmony that transcends ordinary thought.

Within the framework of *reliable knowledge*, this creative source is not viewed as separate from scientific inquiry but as its complement and completion. Science seeks external validation; creativity provides internal revelation. Reliable knowledge reconciles both – empirical fact and intuitive truth, observation and inspiration – by recognizing that all knowing arises within consciousness. The Academy's emphasis on transdisciplinarity includes this spiritual and psychological dimension, affirming that the human quest for understanding is at once intellectual, emotional, and existential.

In practice, this understanding finds expression in WAAS' approach to creativity and innovation. We regard creativity not merely as a cognitive process or technical skill, but as a manifestation of the deeper unity between the individual and the universe. In our educational and research programs, we encourage conditions that awaken this inner connection – learning environments that cultivate curiosity, wonder, empathy, and silence; research that values imagination as much as measurement; collaboration that seeks harmony rather than competition. The *Source*, in this sense, becomes accessible through the harmonization of thought, feeling, and will – a state in which the boundaries between self and world begin to dissolve.

Reliable knowledge, therefore, is not only about accuracy of perception but also about the purity of perception. It is the knowledge that flows from consciousness attuned to truth, harmony, and beauty. In this way, it is profoundly spiritual without being confined to any single theology. The Academy does not prescribe religious interpretation, but it acknowledges the inner dimension of human experience as essential to creativity and wisdom. We affirm that the highest knowledge – whether expressed through a scientific equation, a poem, or a work of art – arises when the human mind becomes a clear vessel for the creative intelligence that pervades the cosmos.

The ultimate aim of reliable knowledge is thus to reunite humanity with this living Source – to make our science luminous with meaning, our art radiant with truth, and our collective endeavor guided by the consciousness from which all creation emerges. Only when knowledge is rooted in that Source can it truly serve the evolution of life and the fulfillment of the human spirit.