

## Discussion\*

Henrietta Holsman Fore, Hans Petter Graver, Giorgio Parisi,  
and Wolfgang Plastino

Wolfgang Plastino: *How can we direct economic development to not only promote environmental sustainability, but also to promote young people's rights during an era of climate catastrophe?*

Hans Petter Graver: I think that you ask a most crucial question, and I would like to say that we may have the technology and knowledge on the natural science side – at least to define the problem and to describe the problem – and we have many of the technologies necessary to solve the problem, but I think where we are lacking in knowledge is on the social science and humanities part. That is: how do we actually go about reforming the economic system in a way that is more sustainable, and how do we reform our institutions so that we can combine the capacity to take the necessary decisions, both on a national and an international level, with democratic influence? I think that's a very pressing question. And also, thirdly, how do we ensure that the necessary changes that are implemented are both just and fair, in the way that responsibilities are allocated in a fair way; and also, given the costs and the negative impacts that will certainly affect (at the very least) the way that people are used to living their lives, how can we ensure that all this is also allocated in a fair way? We know that the disadvantages are – as Ms. Fore so eloquently described – shouldered by those that have not actually contributed to or benefited from the way of life that we have lived, which has led to these problems.

So these are profound and pressing questions, and I think that we need both a huge amount of research into these fields, into social science and economy and the humanities side. We need research, we need a concentrated effort at the international level to be able to cope with these issues. The alternative, of course, is

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that solutions will force themselves on society, but in a way that society won't be able to cope with, and that may lead to a breakdown of our democratic institutions. So these are important questions.

*Giorgio Parisi:* I appreciate, Wolfango, that in your question you used the words “economic development”, and not the words “economic growth”. As was noted long ago also by Robert Kennedy, among many other people, the gross national product is not a good measure of the economy. It captures the quantity of economics but it does not capture the quality of growth. Many different indices have been proposed, among them the Human Development Index and the Index of Sustainable Economic Welfare. If the gross national product remains the centre of political and media attention, our future is grim.

When politicians, journalists, and economists plan our future and monitor the progress that has been made, they should use an index that also considers human rights, along with young people's rights. It is not easy to quantify these, but it has to be done. Otherwise, we have in front of us, on the one hand, the thought that we have to defend human rights, that we have to defend young people's rights, that we have to defend our future and so on; and, on the other hand, we have the other representation that says that the gross national product has increased 2.5%, and the situation is perfect. We should have a different way of measuring what we are doing, not only in conferences and discussions, but in everyday life, from newspapers to the political arena.

Also, we have to realize an important point, in a concrete way: that people of different ages have different interests. This is particularly important in countries that are very near to being gerontocracies, like maybe in some ways Italy.

*Henrietta Holsman Fore:* I think President Graver's point about democracy, and President Parisi's comment about growth are pulled together by two things that the Y20 had asked us for. So Y20 said, number one, we want to be involved in the G20 negotiations, and that's the democracy point. And then they said, we want more investment, and that's the growth point. But our world is often segmented between humanitarian assistance versus development assistance, and as a result, we don't think long-term enough when we are addressing a crisis – let's say it's a cyclone that's coming through Mozambique. We often don't plant the seeds of economic development at that moment, and thus the growth that President Parisi talks about does not take place, because we're just addressing one problem at a time.

So one issue for our world is to try to weave together humanitarian and development response to the world's problems and challenges. And young people would like to help with this. So the second one that I would suggest is, as we've seen with Covid-19, how important public private partnerships are. We could not have addressed Covid-19 with vaccines without private businesses and their research and development. The more that our academic research and our commercial business research blend together and find good long-term solutions to many of our problems, the more will aid economic development. Those are my suggestions.

*Wolfgang Plastino: How can it be ensured that young girls are empowered to make a contribution to this sector?*

*Henrietta Holsman Fore:* I of course love the idea of girls getting an education, and it's something that we believe in so strongly. I have had the benefit of an education, so I know how much it means. We really have to involve the girls.

At the United Nations, as you know, there is a step-up pledge. This means that if you can "step up" to really connect with the rights of young people, this entails the right to an education for girls. We do not get this in every part of the world. But we have to make it seem something that girls can do, so that they have the confidence to do it, that they see other women who are doing it, so that they say, "I can study in the sciences and the maths and technology. This is going to be a brave new world, an exciting one, and I want to be a part of it." Part of it is just inspiring them, so they are curious and interested; and I know that both presidents today would agree with that.

But we're behind as a world. Women and girls do not use digital technology enough. We have half of the world which is not connected. I think of the digital-based education – what we're thinking of the ed-tech revolution; we're at the beginning of it in our world, and if by 2030 we can connect every school in the world, every teacher, every learner, I think it means that girls will get a chance.

*Hans Petter Graver:* I agree that education and role models are crucial. I think that when it comes to education, of course the challenges are different in different parts of the world. In some parts of the world, access to education as such is the main problem. In other parts of the world – in my part of the world, or in our part of the world – I think the challenge is to inspire young girls

to a greater extent to enter the natural sciences, education, science and technology, maths, physics and so on; because that's where girls are under-represented. And of course, those are important subjects when developing just solutions for the problem.

I also think that access to institutions is important, access to public ministries and agencies, to educational institutions, and ensuring that women are inspired to choose such careers, and to be given positions in them. And also of course, fairness in the relationship between the genders – that is also very important.

These are of course general issues when it comes to equality between men and women, and they are also of great importance in this field.

*Giorgio Parisi:* I definitely agree with both of you. I believe that the employment of young girls is very important for our future. It has been recognized by OECD that different socio-cultural constructions of the role of men and women can result in different vulnerabilities and different impacts of the environment on the two sexes. Women may have a more long-term vision than men, as an effect of their maternal role.

How to empower women? The first point will be to construct a real equality between the different genders, starting from school, and aiming to reach equality in power and influence in our society. We've just seen that in Iceland, women have gained a slight majority in the parliament, and this is the first time this has happened in a democracy. Unfortunately, most countries are far from this goal. Schools are crucial, because they give children the tools to understand the future and to construct their roles in society. Empowerment without understanding is meaningless. Giving different access to education for children depending on their sex should be considered a high crime, or at least an act of discrimination that has life-long consequences.

Wolfgango Plastino: *What do you see as the global gaps in climate change response, especially as regards children?*

*Giorgio Parisi:* One very important point is that knowledge is power. Children must be able to understand the general situation, and to form their own ideas. And education in school is crucial. We must give children a scientific education starting from kindergarten. Like all of us, children must lean on what others have discovered. They must learn to stand on the shoulders of giants. But that said, they must first learn the scientific method, to be able to

make deductions from their own experience. It was stressed long ago by the great Italian educator Maria Montessori that education is a natural process carried out by human individuals, and you acquire education, not by listening to others, but by having your own experience. The task of teachers becomes, in this vision, that of preparing serious motivations, and refraining from obtrusive interference.

Human teachers can only help the work that is done by the children. If people are going to unfold their human selves in such a way that they are able to have a particular vision, they will not be the victims of events, but they will have the planetary vision to direct and shape the future of humanity. This vision of education is particularly important if you are looking to empower children to listen to their, not to our, viewpoints.

*Henrietta Holsman Fore:* I certainly agree that knowledge is power, and the consistent suggestion from all of us who advise and guide children and young people needs to be that getting deep into a subject, to really understand the subject, is important. And I think that is part of the problem of climate change, because there is often a division between children that are following the letters and children that are following science, and as a result those who are advocating might not have as much depth in the subject matter.

So it's important to look at the educational systems to make sure that children and young people are getting an education in climate in all of its aspects, as President Graver mentioned. It's the number one issue. Then, from the the perspective of the United Nations, one of the things that we ask for is something called a "Nationally Determined Contribution," what we affectionately call NDCs. And in them, we see how a nation views its priorities. And right now, only 20% of these NDCs mention children and young people. So if we don't get governments to think of the world through their youngest citizens' eyes, and what they need as an investment, then we won't get the education systems, their involvement and engagement in science and in the solutions that we see on climate change, to the extent that they need to be. I'm hoping for that from a member-state perspective.

*Hans Petter Graver:* Yes, of course, it all comes back to knowledge and education, which we have been circling around, and which is of profound importance.

But when we talk about gaps, I think that the greatest gap is between knowledge and action – putting the knowledge that we

have into effective action to solve the problems. And I think that where we are really lacking on a global scale, and on a national scale, is in developing and implementing effective actions to solve the problems. We have some plans, of course; we have some international agreements, we have regional arrangements and we have policies at the national level. But they're not in any way sufficient. And they're not effectively implemented in the way that is necessary to solve the climate crisis, and also the crisis of biodiversity, I would say, which is of an equally profound importance.

I think one of the basic reasons for this – and this also applies particularly to children and to the coming generations – is that our democratic institutions are highly advanced when it comes to democratic influence by citizens on the decisions taken by national assemblies and governments; but when it comes to climate change and biodiversity, the effects of the policies are much wider than the electorate. So those who are mostly affected are not represented in our democratic decision-making processes. They're future generations, and very often also people who live in other parts of the world, since the consequences of policies that are pursued, particularly in the developed world, affect people in other countries. And of course people in other countries and children don't vote.

This leads to a mismatch between the interests and the incentives for our politicians and decision-makers, because the ones who are really affected are not the ones that they have to take into account when they're up for new elections. So I think that this is one reason for the gap, and then there's also the gap in our institutional build-up. And we need then to empower the young and children, not necessarily by lowering the voting age – that's not what I'm advocating for – but in some way, as Ms. Fore is also talking about, by including children and young people in the decision-making, in a way that is also important to decision-makers.

*Wolfgang Plastino: What do you see as the role for young people and how are you, UNICEF and Academies, championing their efforts, particularly to build green skills?*

*Hans Petter Graver:* We, as an academy, are quite a small institution in Norway. We don't have our own research institutions, as academies in many countries do. What we did a few years ago was to initiate the forming of a Young Academy. So we have a Young Academy, which is developing also in many countries, and now there is developing also a network of young academies around the world. And I think this is one important step, because, by

their structure, academies are often institutions where the average age is quite high, because the qualification needed to become a member of the academy means that people normally don't qualify before they're beyond the peak of their life, so to speak. So it's important then to encourage and to cooperate with young, excellent researchers in the young academies.

I think that's one important contribution. And then of course in the outreach that we do and in our cooperation with the academic institutions and the political institutions. But I'm afraid most of our work in that field is directed toward the established institutions; so not that much toward the young as such, I'm afraid, on our side.

*Giorgio Parisi:* The Accademia Nazionale dei Lincei is looking for a better scientific understanding of climate change. Especially as Professor Antonelli has already stressed, these months we have organized an international conference of current issues on climate change; its proceedings are already available.

The most important action in this respect happens through our foundation, the *Lincei per la scuola*, the "Lincei for Schooling", which is devoted to training teachers on many issues, including climate change.

Recently, we have started a new project in this direction. In the last two years, we have realized a course aimed at teachers, but also at high-school students, entitled the "Lincei for Climate". Over four days, each comprising four half-hour talks, followed by real-time discussions, about a dozen students from Italian schools were connected via live streaming, and were involved in this way, asking many questions at the end of the talks, in addition to a small number of students and teachers, who were physically present. The lessons were recorded and broadcast periodically by state television channels, and we also record these lessons, making them available two days after the discussion on the Lincei website. In response to the questions that were posed in the meetings, we received answers in writing, which are also available on the Lincei website. Finally, in this action we are providing an award to the school which submits the best paper, and it will consist in a small sum of money as well as a prize trip for a small group of students to come to a discussion event.

These events, as I have said, have been organized by the Lincei for Schooling, with financial support that was offered by the Foundation Compagnia di San Paolo of Turin. In a nutshell, we are trying to act both in an indirect way on teachers, by training teachers – which is very important because this gives us very big leverage

– and also directly on students, both in person and connected remotely. We are reflecting on whether we can somehow extend these kinds of actions in the future.

*Henrietta Holsman Fore:* Given the interesting comments from both President Graver and President Parisi, two thoughts come to mind. UNICEF has a platform called U-Report; we have millions of children in a number of countries who respond to questions or could do research or could do observations of nature. So let us assume that all of us feel that in climate change, we want climate change addressed, we want nature and biodiversity loss addressed, and we want waste and the recycling economy addressed. And young people would love to be part of that research. So may I just say that it's a platform that's available; if either of you could possibly use it, and ask them to measure or to observe something, I think they would love to do it.

And then the second thought is this. President Parisi, you mentioned your groups of young people; we have a number of countries now in the climate risk index, where we know what the risks are, and we are trying to focus on prevention and on resilience. Perhaps some of those young people could come help us talk about what the solutions might be in those countries. It will be, to President Graver's earlier point, a very different environment than what they are seeing in Italy, but it will teach them both something about the world. So may I just put those two out there as possibilities that we can engage on after this discussion.

And then I would just point out that UNICEF has a number of programmes in countries that I think could be useful models for others: in Bangladesh, a children's climate declaration, which raises visibility within the country; in India, a world children's day, and thus you get to talk about everything that's on your mind; in China, they've been developing new modules to put into classes about environmental education; in Zimbabwe, there are now programmes for innovation and entrepreneurs in waste management, sustainable energy, sustainable agriculture, everything you could wish. We're looking at water services, and how water can affect these, since UNICEF works often in water; so if anyone would like to pair with us, and work with water, we're open globally for that.