

The APHELEIA Conference Series 2025



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Speaker: Piero Dominici

“No Error. The epistemological and educational challenges of the Society-Mechanism”.**

The strong premise from which I start - and on which my studies and research are based (since the mid-1990s) - is that the challenges of the contemporary world are, first and foremost, epistemological and educational. The problems of modern civilization are related to the confusion between “*complicated systems*” (observable, measurable, manageable) and “*complex systems*” (characterized by “emergent properties” and non-manageable).

The challenges of the contemporary world are, consequently, epistemological and educational: healing the fractures* between fields of knowledge and rethinking “how we think” to inhabit the hypercomplexity.

As we all know very well, the transdisciplinarity that is the essential “tool” and strategy relatively to all our goals--at the micro and macro level--and in order to be able to deal with the complex and systemic dimension of problems, does not consist simply of “putting together” content and/or subjects from the humanities and the “hard sciences” area.

Which is what, generally, happens in our schools and universities, we mix the subjects of the two “fields” and think that this is “transdisciplinarity.”. **We need a “strong” project and strategy** because this unification and sharing of all sciences implies epistemological and methodological problems. **It implies a focus on “how” we teach more than on “what” we teach.** And I believe that in addition to being aware of this, we should make it explicit in our actions and projects.

Within the hypertechnological civilization, culturally burdened by increasing asymmetry and the weakening of social bonds, the hypertrophic dimensions of technical control have diminished individual responsibility, emptying citizenship of its true meaning. It thus becomes urgent to recentralize the human factor and radically rethink educational processes, which cannot merely adapt to technological changes or serve as extensions of technology.

Inhabiting complexity should become the aim of educators, students and citizens.

The instruments, which include critical thinking and philosophical discourse, for teaching new generations how to recognize and comprehend this complexity, depend on the capacity to integrate unpredictability, change, and error into educational processes, and to regard risk and opportunity as two aspects of the same phenomenon.

Of equal relevance is the purpose of changing the trajectory of those experts, educators, and policy-makers who persist in the belief that through advancements in technology, it will soon be possible to control, manage, and predict the evolution of complex human systems and to eliminate error and uncertainty from our lives.

Prof. Piero Dominici is a sociologist, philosopher, educator and systems thinker. Founder and scientific Director of the International Research and Education Programme CHAOS: Complex Human Adaptive Organizations & Systems, he also collaborates as expert with the *European Commission JRC Group* and is Fellow of the World Academy of Art & Science and of the International Engineering and Technology Institute (IETI), member of the International Political Science Association (IPSA), Vice President of the World Complexity Science Academy LatAm, and UNESCO IPL & UN Expert and invited speaker, as well as Official UNESCO Delegate.



He holds an international PhD in “Social Theory and Research” from Sapienza University of Rome, and is Associate Professor at the University of Perugia, where he teaches *Education Towards Complexity and Unpredictability, Sociology of Social Complexity, Public Communication, Sociology of Culture and Communication and Intelligence, Networks, and Complex Systems*.

As scientific researcher, educator, author and international speaker, his main areas of expertise and interest encompass (Hyper)complexity, Transforming Education, Transdisciplinarity, Complex Systems and Knowledge Sharing. For almost thirty years, in addition to teaching and striving to rethink and reinvent education, he has been conducting scientific research in the fields of Education, Systems Theory, Technology, Innovation, Intelligence, Human Security, Citizenship and Communication.

To date, he has written eight scientific monographs, including the 2014 work: *Dentro la Società Interconnessa. Prospettive etiche per un nuovo ecosistema della comunicazione* [Inside the Interconnected Society. Ethical prospects for a new ecosystem of communication], winner of the 2018 Elisa Frauenfelder International Scientific Award, section “Culture and Innovation”, and the recently released *Oltre I Cigni Neri. L'urgenza di aprirsi all'indeterminato*, Franco Angeli, Milan 2023, with foreword by Edgar Morin, for which an English translation is set to be titled *Beyond Black Swans. The Urgency of Opening Up to Indeterminacy*. His latest book is *Emergent Properties. Qualitative Social Dimensions and New Epistemological Challenges in the AI Era* (FrancoAngeli, Theory Method Epistemology - Scientific Series, 2024)..

Member of the MIUR Register of Revisers (Italian Ministry of Higher Education and Research) and Fellow of the *New England Complex Systems Institute* and of *European Complex Systems Society*, he is also standing member of several of the most prestigious national and international scientific committees.

He has taught and carried out research at a number of national and international universities. He currently performs activities of research, education and consulting for public and private organizations, and has coordinated projects of national and international renown. For almost thirty years, Piero Dominici has continued to teach, in his University courses in Sociology and Philosophy, the approach to complexity and systems theory - with a focus on the epistemological and methodological dimensions of scientific research, of education and democracy - and organizes academic seminars and systems thinking workshops.

He is a regular speaker at international conferences and has also been a referee of prestigious scientific journals worldwide for many years. Author of numerous essays, scientific articles and books.

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