

X International Ontology Congress

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United Nations
Educational, Scientific and
Cultural Organization

International Scientific Committee: A. Aspect (Paris); P. Aubenque (Paris) F.J. Ayala (California); J. Bouveresse (Paris); †E. Chillida (San Sebastián); A. Grünbaum (Pittsburgh); †W. Lamb (Arizona); T. Marco (Madrid); U. Moulines (München); †I. Prigogine (Bruxelles); H. Putnam (Harvard). **Coordinator:** V. Gómez Pin (Barcelona). **Organizers:** University of the Basque Country, Autonomous University of Barcelona, Fundación Paideia, Chillida Leku Museum

PHYSIS

FROM ELEMENTARY PARTICLES TO HUMAN NATURE

Under the Honorary Presidency of Daniel Dennett

San Sebastian 1-6 October 2012 / Barcelona 8-9 October 2012

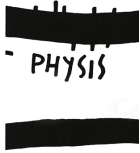
Some confirmed speakers

Arsuaga, J. L. (Co-director of Archaeological Site of Atapuerca - UNESCO World Heritage Centre, Spain).
Ayala F. J. (Geneticist - Irvine, California) National Medal of Sciences USA 2001. Templeton Prize 2010.
Bermúdez de Castro J. M. (Co-director of Archaeological Site of Atapuerca - UNESCO World Heritage Centre).
Calvo, T. (Président de l'Institut International de Philosophie).
Dennett D. (Philosopher - Austin, USA) Co-Director of the Center for Cognitive Studies.
Echenique P. M. (Donostia International Physics Center). Prize Max Planck in Physics. Príncipe de Asturias Prize.
Giere, Ronald N. (Center for Philosophy of Science University of Minnesota-Twin Cities).
Kochen, S. (Princeton University). Frank Nelson Cole Prize.
Mittelstaedt, P. (Köln University) Founding member of the International Quantum Structures Association.
Moulines, U. (Philosopher - München University) Former President of Gesellschaft für Analytische Philosophie.
Moya, A. (President of the SSBE. Spanish Society of Evolutionary Biology).
Rovelli, C. (Centre de Physique Théorique de Luminy, Marseille).
Ruse M. (Philosopher of Biology - Florida University / John Templeton Book Prize, 1999).
Wilczek, Frank (Nobel Prize of Physics, 2004).
Zeilinger A. (Isaac Newton Medal 2007, Wolf-Prize in Physics 2010).

Call for papers: Registrations including a one page paper proposal may be sent through the website until 30 June 2012. All papers will be read in San Sebastian from 1st to 6 October. See details in this link www.ontologia.net.

Advisory Council for the X Edition: Jordi Agustí (Universitat Rovira i Virgili, Tarragona), Giovanni Boniolo (IFOM-IEO, Milan), Francesc Casadesús (Universitat de les Illes Balears, Mallorca), Barbara Cassin (École Normal Supérieure-CNRS, Paris), Alberto Cordero (Queen's College, New York), Joseph Dauben (Graduate Center, CUNY, New York), Javier Echeverría (Iberbasque, San Sebastián), Miguel Ferrero (Universidad de Oviedo), Francis Wolff (École Normal Supérieure), Gerhard Vollmer (Braunschweig Universität).

Organizing Committee: Gotzon Arrizabalaga (UPV-EHU, San Sebastián), Albert Comas (Universitat Autònoma de Barcelona), Iñaki Ceberio (Universidad Austral de Chile), Josep Montserrat (Universitat de Barcelona), Iñaki Ceberio (Santiago de Chile), José Ignacio Galparsoro (UPV-EHU, San Sebastián), Víctor Gómez Pin (Universitat Autònoma de Barcelona), Juan Ramón Makuso (San Sebastián), Julian Pacho (UPV-EHU, San Sebastián), Àngel Puyol (Universitat Autònoma de Barcelona), Nicanor Ursúa (UPV-EHU, San Sebastián).



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About the subject matter proposed:

Since its first edition in 1993, the aim of the International Ontology Congress has been to establish the contemporary sciences and art, together with philosophers. Most editions of this Congress have been held under the auspices of UNESCO.

It is obvious that the philosophical and ontological reflection about nature, what was known in other times as *natural philosophy*, cannot happen without the support of the “natural science of our times”, using Heisenberg's words. Thus, we may apply to quantum mechanics, genetics or paleontology what the mathematician Hilbert said about the Cantorian infinite, that is, that the contemplation of the issues arising out of it “far from concerning just the interests of a specialized discipline, affect the dignity of the human spirit”.

This concern about laying the foundations of a *natural philosophy* can be read as an essential component in the project of the International Ontology Congress of giving new life to the great topics of Greek philosophy, looking at them from a contemporary perspective. The problems keep being brought up constantly, either because of the appearance of new scientific data or because of attempts of new philosophic perspectives. And obviously, nature is one of the main topics. The *Physis* that Aristotle wondered so much about, using that single term to refer both to what explains the apparent behavior of inanimate matter as well as to the traits that characterize living species. Men, that singular animal species, are not an exception, having a *nature*, as Aristotle tells us, that makes them inclined toward knowledge. From this perspective, the problem of the *Physis* turns straight into the central problem of Philosophic Anthropology.

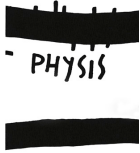
1.A) From Anaximander to the Aristotle's physics: *Physis* and the Greeks. 1.B) From Aristotle to contemporary Thought: On the different conceptions of Nature.

Philosophy is a discipline that can never have an abstract conception of its own becoming. That is why the congress expects a broad number of communications and presentations with a historiographic and philological approach. Contributions on the use of the term *Physis* in Greek texts will be highly welcomed, and a special attention will also be paid to works on the evolution of the conceptions of nature (broadly understood), both due to scientific findings as well as to new ideological or religious stances.

Beyond the historiographic approach, the Congress will tackle aspects corresponding roughly to the sequence *physis* (in a restricted sense, as the subject of the science now known as *physics*), *bios* (maybe the initial subject of genetics) and *lógos* (subject of anthropology, linguistics). We will question ourselves about the change that contemporary sciences has meant in our representations of *Physis*, and we will do so with the help of scientists themselves.

2) Natural Philosophy and Contemporary Physics.

The intrinsic link between contemporary physics and the attempts (sometimes made by physicists apart than philosophers) of updating a *natural philosophy*. The great philosophical interest in quantum



mechanics, and specifically in its ontological dimension, will be stressed. We will try to make it clearly noticeable that some of the discipline's claims clash with reason, since they challenge our ideas on the mechanisms that govern the elementary nature, and in consequence, subvert the general concept of it that we have.

3) The problem of the Human Nature on the basis of Genetics, Paleontology and Linguistics.

The intrinsic link between contemporary genetics and the efforts (also made by scientists themselves apart than by philosophers) of elaborating a *Philosophical Anthropology* in line with the demands of our times. Although based in the genetic consideration, the reflection lies inevitably in the findings of paleontology (that in fact now depends on genetics) about the origins of humans. And it is undeniable that linguistics also play a crucial role, being sometimes linked to genetics, as it was made clear some years back with all the interest arouse by the discovery of a possible implication in the emergence of language of a specific mutation in gene *foxp2* (short for *forkheadbox p2*).

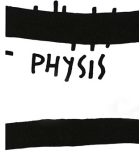
4) Technics and the Human Nature.

An unavoidable aspect is that of technique, and more specifically nanotechnologies, that are linked to nanosciences but not limited to it. The ontological question and natural philosophy overall are obviously affected by the possibility -now effective- of generating new materials (nanomaterials) nonexistent in nature, operating at a nanometric scale on preexisting materials and transforming them. Sophisticated technological devices and tridimensional simulations (virtual reality) of atoms and molecules, that make it possible to transform the atomic structure affecting its electrons, show great importance when it comes to questioning if general physis and the being reflecting on it really have universally applicable and permanent traits. Indeed, the anthropological relevance of the problem of technique (the Greek *techné* that can also be translated as art) takes huge proportions in a moment when the alliance between technology and genetics make it possible for a species to exert decisive influence on the traits that configure it. This perspective has profound ethical connotations and is disturbing for some, although the positive role of technique has been recognized, e.g. for the advances made possible in the medical field thanks to virtual modeling.

Precedents of the subject matter proposed in previous editions of the International Ontology Congress:

Out of the nine previous editions of the Congress, four of them are partially related to the subject matter of the current edition:

On the one hand, the third and fourth congresses, entitled *Physis From Greek Thought to Quantum Mechanics* and *Meta tà Physika: A Tribute to John Bell*. They were both organized under the auspices of UNESCO, and relevant personalities of philosophy and physics took part in them, among others the French Alain Aspect



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and the American Nobel Prize winner Willis Lamb (both members of the Permanent Scientific Committee).

On the other hand, the V International Ontology Congress, under the auspices of UNESCO and with the geneticist Francisco Ayala as an honorary president, was entitled *Genetic Homology and Human Singularity*. Outstanding philosophers and biologists participated, among which we can mention the Nobel Prize winner Christian de Duve. The reflections were extended, once language was explicitly considered as the core of the problem, in the sixth congress. The latter was also organized with the support of UNESCO; with Hilary Putnam as honorary president, and the presence of researchers in language formation like Steven Pinker.