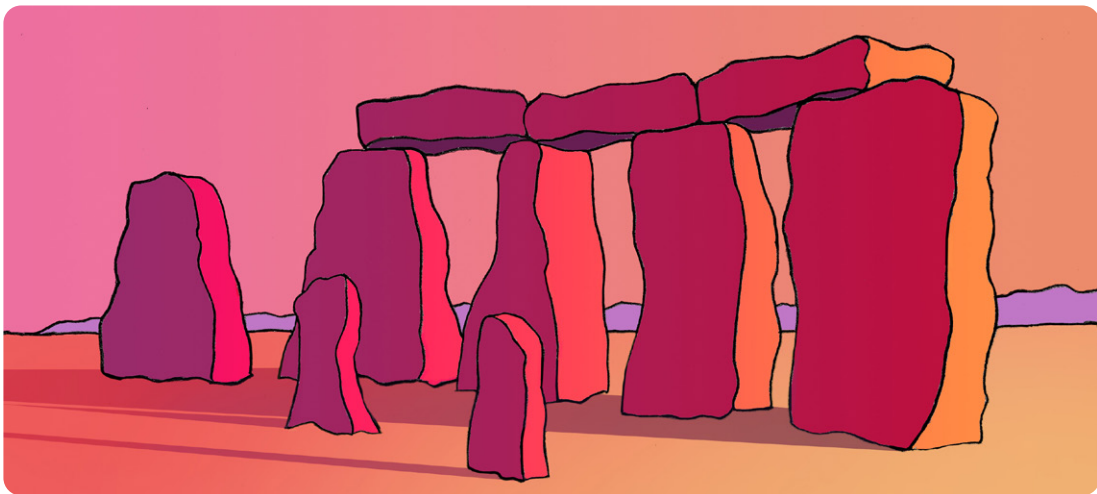




THE PONTIFICAL ACADEMY OF SCIENCES

Workshop on

SYMBOLS, MYTHS AND RELIGIOUS SENSE IN HUMANS SINCE THE FIRST



27-28 October 2021 | Casina Pio IV | Vatican City



As for man, however, there is a change and a novelty. When, on the sixth day in the account of Genesis, comes the moment of the creation of man, God gives the human being another autonomy, an autonomy different from that of nature, which is freedom. And he tells man to give a name to all things and to go forth through history. He makes him the steward of Creation, even that he rule over Creation, that he develop it until the end of time. Therefore the scientist, and especially the approach of the Christian scientist is that of investigating the future of humanity and the earth, and, as a free and responsible being, to contribute to preparing it, to preserve it, and to eliminate any risks to the environment, both natural and manmade. But, at the same time, the scientist must be moved by the conviction that nature, in its evolutionary mechanisms, hides its potential which it leaves for intelligence and freedom to discover and actualize, in order to reach the development that is in the Creator's design. So then, no matter how limited, the action of man partakes in the power of God and is capable of building a world adapted to his two-fold physical and spiritual life; to build a humane world for all human beings and not only for one group or one privileged class. This hope and trust in God, the Creator of Nature, and in the capacity of the human spirit, are able to give the researcher a new impetus and profound peace. But it is also true that the action of man, when his freedom becomes autonomy — which is not freedom, but autonomy — destroys Creation and man takes the place of the Creator. And this is a grave sin against God the Creator.

Address of His Holiness Pope Francis on the occasion of the Plenary Session of the Pontifical Academy of Sciences on "Evolving Concepts of Nature", 24-28 October 2014.

Concept Note

This symposium aims to discuss the “neuronal” particularity of the human genus (the genus Homo) which allowed it to reach a higher level of consciousness than the rest of the beings that preceded it; Man knows that he knows, and this reflection, in the proper sense of the word, immediately goes hand in hand with the need to take a step back from the “natural” world that surrounds him and believe in a “supernatural” world. The first Man and the first “Homo religiosus” are one and the same.

The symposium will be divided into four sessions, preceded by an introduction on the systematic and chronological position of the genus Homo and its genesis as we know them today.

The first session, on Archaeology, will examine the objects and signs collected from prehistoric sites, demonstrating the reality and antiquity of the distance taken by the gaze and thought of humans. This material testifies to the birth of the Symbol and of the Sacred. Panelists in this session will be scientists involved in the search for these signs, a search made less challenging by the appearance of the first graves and with the explosion of art, sculpted, painted and engraved.

The second session, on Ethnology, will focus on the diversity of the myths of contemporary populations, but also on their limits, a pale reflection of the wealth of beliefs that have

flourished among the 100 billion humans who have populated the world since prehistoric times and during the 3 million years of their history. Anthropologists who have collected this information in the field and reflected on its meaning have been invited to talk in this second session. After examining the “People from before”, it seemed important to us to question the “People from here and elsewhere”, as time and space have been sources of great diversity.

The third session, on Biology, will look at the application to Man, a living being, of the knowledge of the evolutionary history of life and subsequent interpretation of the cognitive, technical, intellectual, spiritual, aesthetic and ethical aspects of the human genus, what we call Hominisation... The invited speakers in this session are of course scientists, naturalists, anatomists and physiologists...

The intention of fourth session, on Philosophy, is to define the meaning of ‘religious sense’ and what it represents and entails. The theologians gathered for the symposium will propose, on the basis of the conclusions of the first three sessions, a primarily rational definition of this characteristic of Man, as well as a spiritual conviction of his sense for religion. The final conclusions will come from them.

YVES COPPENS

Note conceptuelle

Ce Colloque se propose de débattre de cette particularité « neuronale » du genre humain (genre Homo) qui va lui permettre d'atteindre un niveau de conscience plus élevé que celui de tous les êtres qui l'ont précédé ; l'Homme sait qu'il sait, et cette réflexion, au sens propre du mot, s'accompagnera tout-de-suite de la nécessité de prendre du recul par rapport au « naturel » qui l'entoure et de croire en un « surnaturel ». Le premier Homme et le premier « Homo religiosus », c'est le même Homme.

Le plan proposé pour cet échange se divisera en 4 parties, précédées par une introduction sur la position systématique et chronologique du genre Homo et sur sa genèse telles qu'on les connaît aujourd'hui.

La première partie sera archéologique ; elle recensera les objets et signes recueillis sur les sites préhistoriques, démontrant la réalité et l'ancienneté de cette distance prise par le regard et la pensée des Humains. Ce sont les témoins de la naissance du symbole, de celle du Sacré. Nous avons souhaité inviter, pour ce discours, des scientifiques s'occupant de la recherche de ces signes, tenus d'abord, puis évidemment plus explicites quand apparaissent, par exemple, les sépultures ou quand explose l'Art, sculpté, peint ou gravé.

La deuxième partie, ethnologique, voudrait attirer l'attention sur la diversité des mythes de populations contemporaines,

mais aussi de ses limites, pale reflet de la richesse des croyances qui ont pu fleurir chez les 100 milliards d'humains qui ont peuplé le monde depuis les premiers et durant les 3 millions d'années de leur histoire. Ont alors été invités des Anthropologues qui ont recueilli ces informations sur le terrain et réfléchi à leur signification. Après l'examen des « Gens d'avant », il nous a ainsi semblé important d'interroger les « Gens d'ici et d'ailleurs », le temps et l'espace ayant été sources de diversité.

La troisième partie, biologique, se penchera sur l'application à l'Homme, être vivant, de la connaissance de l'histoire évolutive de la Vie et de l'interprétation consécutive des spécificités cognitives, techniques, intellectuelles, spirituelles, esthétiques, éthiques, du genre humain, ce que l'on nomme l'Hominisation... Les invités de cette partie sont bien sûr des Scientifiques, Naturalistes, Anatomistes, Physiologistes...

La quatrième partie, philosophique, devrait pouvoir circonscrire ce que l'on entend par sens religieux, ce qu'il représente et ce qu'il entraîne. Quelques théologiens seront ici réunis pour proposer, à partir des conclusions des trois premières parties, une définition d'abord rationnelle de ce propre de l'Homme, mais aussi une conviction spirituelle du sens religieux. La conclusion finale ès-qualité leur reviendra.

YVES COPPENS

Nota concettuale

Il simposio si propone di discutere questa particolarità “neuronal” del genere umano (*genus Homo*) che gli consentirà di raggiungere un livello di coscienza superiore a quello di tutti gli esseri che lo hanno preceduto. L'uomo sa di sapere, e questa riflessione, nel senso proprio del termine, sarà immediatamente accompagnata dalla necessità di prendere le distanze rispetto al “naturale” che lo circonda e di credere in un “soprannaturale”. Il primo Uomo e il primo “*Homo religiosus*” sono lo stesso Uomo.

Il programma del Simposio è suddiviso in quattro parti, precedute da un'introduzione sulla collocazione sistematica e cronologica del genere *Homo* e sulla sua genesi così come la conosciamo oggi.

La prima parte sarà archeologica; elencherà gli oggetti e i segni raccolti nei siti preistorici, dimostrando la realtà e l'antichità di questa distanza presa dallo sguardo e dal pensiero dell'uomo. Questo materiale testimonia della nascita del simbolo, del Sacro. Abbiamo voluto invitare, per questa parte, scienziati impegnati nella ricerca di questi segni, inizialmente tenui, poi sempre più espliciti quando, ad esempio, compaiono le prime tombe o quando l'Arte esplode, scolpita, dipinta o incisa.

La seconda parte, etnologica, vuole richiamare l'attenzione sulla diversità dei miti delle popolazioni contemporanee,

ma anche sui loro limiti, pallido riflesso della ricchezza delle credenze fiorite tra i 100 miliardi di esseri umani che da allora hanno popolato il mondo dopo i primi, e durante i 3 milioni di anni della loro storia. Gli antropologi sono stati quindi invitati a raccogliere queste informazioni sul campo e a riflettere sul loro significato. Dopo aver esaminato le “Persone di prima”, ci è sembrato importante interrogarci sulle “Persone di qui e di altrove”, essendo il tempo e lo spazio fonti di diversità.

La terza parte, biologica, verterà sull'applicazione all'Uomo, essere vivente, della conoscenza della storia evolutiva della vita e della conseguente interpretazione delle specificità cognitive, tecniche, intellettuali, spirituali, estetiche, ed etiche del genere umano, quella che noi chiamiamo Ominizzazione. Gli ospiti di questa parte sono ovviamente scienziati, naturalisti, anatomisti, fisiologi...

La quarta parte, filosofica, cercherà di definire cosa si intende per significato religioso, cosa rappresenta e cosa comporta. Alcuni teologi saranno qui riuniti per proporre, sulla base delle conclusioni delle prime tre parti, una definizione principalmente razionale di questa caratteristica dell'Uomo, ma anche una convinzione spirituale del significato religioso. La conclusione spetterà perciò a loro.

YVES COPPENS

Programme

WEDNESDAY 27 OCTOBER	
9:30	Overture Marcelo Sánchez Sorondo , Chancelier Joachim von Braun , Président Fiorenzo Facchini , Invité d'Honneur
10:00	Introduction <i>Etat de la connaissance sur l'origine de l'HUMAIN</i> Yves Coppens
Première partie ARCHÉOLOGIE	
10:30	<i>Préhistoire des Religions</i> Marcel Otte
11:00	Coffee break
11:30	<i>When, how and why did symbolic practices emerge and become more complex</i> Francesco d'Errico, Ivan Colagé, Larissa Straffon and Andrea Bender
12:00	<i>Les Néandertaliens face à la mort</i> Antoine Balzeau
12:30	<i>Le fourreau doré de la compassion, archéo-anthropologie de la prise en charge du handicap dans les populations anciennes</i> Philippe Charlier (online)
13:00	Discussion
13:30	Lunch
Deuxième partie ETHNOLOGIE	
15:00	<i>Aux origines des mythes d'origine</i> Jean-Loïc Le Quellec
15:30	<i>A propos de trois invariants qui traversent toutes les religions depuis l'aube de l'Histoire</i> Maurice Godelier (online)
16:00	Coffee break
16:30	<i>Anthropologie des incarnations</i> Philippe Descola (online)
17:00	<i>Le religieux chez les Pygmées Baka ; animisme persistant dans un contexte catholique changeant</i> Fernando V. Ramirez-Rozzi
17:30	Discussion
18:15	Dinner

THURSDAY 28 OCTOBER

Troisième partie
BIOLOGIE

9:30	<i>How and why did human brains grow so large?</i> Donald C. Johanson
10:00	<i>What the anatomy tell us about the origin of speech</i> Amélie Vialet
10:30	<i>Pourquoi et comment sont nées les religions</i> Marie d'Udekem-Gevers
11:00	Coffee break
11:30	<i>L'origine des symboles dans le cerveau humain</i> Stanislas Dehaene
12:00	<i>Connectomic hypothesis for the hominization of the brain</i> Claus Hilgetag
12:30	Discussion
13:00	Lunch

Quatrième partie
PHILOSOPHIE

14:30	<i>Did our early ancestors also pray?</i> Marcelo Sánchez Sorondo
15:00	<i>Relation symbolique, sacré et sens religieux chez l'Homme préhistorique : quelques considérations méthodologiques</i> Fiorenzo Facchini
15:30	<i>A naturalistic approach to the evolution of a spiritual dimension</i> Wolf J. Singer
16:00	<i>L'énigme de la relation religieuse</i> Silvano Petrosino
16:30	Coffee break
17:00	Synthèse et conclusions Marcelo Sánchez Sorondo Fiorenzo Facchini Yves Coppens
18:00	Dinner

List of Participants



JOACHIM VON BRAUN
President of the Pontifical Academy
of Sciences
(Vatican City)



PHILIPPE DESCOLA (online)
Professeur émérite et Laboratoire
Collège de France
Laboratoire d'anthropologie sociale
Paris (France)



ANTOINE BALZEAU
Paléoanthropologue
CNRS, UMR 7194, et MNHN
Paris (France)



MARIE D'UDEKEM-GEVERS
Department of Science, Philosophy
and Society
University of Namur, FUNDP
(Belgium)



PHILIPPE CHARLIER (online)
Direction, Département de la
Recherche et de l'Enseignement
Musée du quai Branly - Jacques Chirac
Paris (France)



FIorenzo FACCHINI
Professor Emeritus of Anthropology
University of Bologna
(Italy)



YVES COPPENS
Pontifical Academician
Professeur émérite
Collège de France
Chaire de Paléoanthropologie et
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MAURICE GODELIER (online)
Director of Studies
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STANISLAS DEHAENE
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CLAUS C. HILGETAG
Professor & Director,
Institute of Computational
Neuroscience
University Medical Center Eppendorf
Hamburg University (Germany)



FRANCESCO D'ERRICO
Directeur de recherche au CNRS
Université de Bordeaux
(France)



DONALD C. JOHANSON
Virginia M. Ullman Chair in Human
Origins
Professor, School of Human Evolution
and Social Change; Founding Director,
Institute of Human Origins
Arizona State University (USA)



JEAN-LOÏC LE QUELLEC

Director of Research Emeritus
Institute of African Worlds (IMAf),
CNRS UMR 8171, Campus Condorcet,
Aubervilliers (France)



MARCELO SÁNCHEZ SORONDO

Chancellor of the Pontifical Academy
of Sciences
(Vatican City)



MARCEL OTTE

Professeur émérite de Préhistoire,
Université de Liège
Conseil International de Philosophie et
des Sciences Humaines – CIPSH
Liège (Belgique)



WOLF J. SINGER

Pontifical Academician
Max-Planck-Institute for Brain Research
Frankfurt am Main
(Germany)



SILVANO PETROSINO

Full Professor of Theoretical Philosophy
and Communication Theories and
Religious and Media Anthropology
Catholic University of Milan
(Italy)



AMÉLIE VIALET

Paleo-Anthropologist
National Museum of Natural History
(France)



FERNANDO V. RAMIREZ-ROZZI

Centre National de la Recherche
Scientifique
(France)

Biographies of Participants

Antoine Balzeau Chercheur au CNRS et au Muséum national d'Histoire naturelle dans l'UMR 7194 "Histoire naturelle de l'Homme préhistorique", je travaille au Musée de l'Homme. Je suis aussi collaborateur scientifique au Musée Royal de l'Afrique Centrale de Tervuren, Belgique et président de la Société d'Anthropologie de Paris. Paléoanthropologue, j'étudie l'évolution des Humains préhistoriques. Je m'intéresse aux caractéristiques internes des fossiles, grâce aux méthodes d'imagerie. Je suis responsable du projet PaleoBRAIN, financé par l'ANR, qui ambitionne d'étudier dans le détail l'évolution du cerveau humain. Au-delà de mes travaux de recherche, j'aime contribuer à la diffusion des connaissances scientifiques.

Philippe Charlier is MD (forensic medicine and pathology), PhD (bioethics) and LittD (archaeo-anthropology). He is assistant professor at Paris-Saclay University (France), and medical practitioner at Assistance Publique des Hôpitaux de Paris (France). Since 2018, he is director of the Department of Research and High Education at the Musée du quai Branly – Jacques Chirac, and head of the Laboratory Anthropology, Archaeology, Biology (LAAB) at Paris-Saclay University. His specialties are medical anthropology, and paleopathology. Anthropologically, he works mainly on magico-religious rituals around the fight against the unknown (death, disease, tomorrow), and carries out ethnological fields and archaeological missions in Benin, Cameroon and Haiti.

Francesco d'Errico is Director of Research of Exceptional Class at the Centre National de la Recherche Scientifique, University of Bordeaux, France, and Professor at the Centre for Early Sapiens Behaviour, University of Bergen, Norway. Author of more than 200 research articles and monographs on the emergence and evolution of symbolic material culture, he has been listed as a Highly Cited Researcher in the Social Sciences since 2016. He currently leads with three other colleagues an ERC Synergy grant on the emergence of precise quantification and is the co-leader of the University of Bordeaux funded Grand Programme de Recherche 'Human Past'.

Philippe Descola is emeritus professor of anthropology at the Collège de France, Paris. He initially specialized in the ethnology of Amazonia, focussing on the relations of native societies with nonhumans. Besides his field research with the Achuar of Ecuador, he has published extensively on the comparative approach of the relations between humans and non-humans. He has written or edited over twenty books translated in a dozen languages. Recipient of the CNRS Gold Medal in 2012, Philippe Descola is a foreign member of the British Academy and of the American Academy of Arts and Sciences.

Fiorenzo Facchini, full professor of Anthropology at the University of Bologna from 1976 to 2005, he is now professor emeritus (2007) at the same University. Member of several scientific Societies, among them Academy of Sciences of Bologna, Committee of the Prehistoric Anthropology of the Principality of Monaco, Academy of Natural Sciences of Kazakhstan. He is a Catholic priest (1952) and an Apostolic Protonotary (2005). He is the recipient of the "Nettuno d'oro" Prize, Città di Bologna (2020). His fields of research include: human growth, genetic polymorphism, human adaptation to high altitudes in central Asia populations, urbanization, prehistoric remains in Italy, paleocultural evolution and symbolism. His activity is documented by more than 400 papers in journals and in several books, including: *Il cammino dell'evoluzione umana*, Jaca Book, Milan 1984, 1995; *Antropologia*, Utet, Turin, 1988, 1995; *Evoluzione umana e Cultura, La Scuola*, 1999; *Le origini dell'uomo*, Jaca Book, Milan, 1990 (tr. in five languages); *Le origini dell'uomo e l'evoluzione culturale*, Jaca Book, Milan, 2006; *Le sfide dell'evoluzione*, Jaca Book, Milan, 2008 (tr. French); *Uomo, Natura, Cultura*, Itacalibri, Bologna, 2018; *"Fatti non foste..." Come siamo diventati uomini...*, Ed. S. Paolo, 2020 (tr. Spanish).

Marie d'Udekem-Gevers has an interdisciplinary profile and is passionate about long history. Anthropologist, zoologist and also computer scientist, she taught anthropology of religions and also anthropology of computer science at the University of Namur. Her current areas of research (production of unpublished documents or original synthetic compilations) are located in two distinct registers: on the one hand, the history of the techniques that led to computing and the history of computing in Belgium, and, on the other hand, the origin of man, of morality, of religions ... She is a member of the Espace philosophique de Namur Research Institute (ESPHIN) and of the Notre-Dame de la Paix University Center (cUNdp).

Maurice Godelier Born in 1934. Director of Studies at School of Advanced Studies in Social Sciences. Previously Scientific Director of Humanities and Social Sciences Department at CNRS (National Center for Scientific Research). Awarded the French Academy Prize. Awarded the Alexander Von Humbolt Prize in Social Sciences. Recipient of the CNRS Gold Medal.

Claus C. Hilgetag studied Biophysics in Berlin and Neuroscience in Edinburgh, Oxford, Newcastle, and Boston. He is a Professor and Director of the Institute of Computational Neuroscience at the University Medical Center Eppendorf of Hamburg University, Germany. Hilgetag has made pioneering contributions to the field of Network Neuroscience, investigating the characteristic, non-ran-

dom organization of brain networks. He is interested in all aspects of brain connectivity, from anatomy to function, in particular of the human brain.

Donald Johanson is Founding Director of the Institute of Human Origins located at Arizona State University. He has dedicated most of his professional life to understanding the fossil evidence for human evolution. Johanson is best known for his 1974 discovery of the 3.2 mya Lucy skeleton at Hadar, Ethiopia. Lucy and hundreds of other fossils led to the naming of the species *Australopithecus afarensis* and a redrawing of the human family tree. He is a distinguished member of the Siena Academy of Sciences in Italy, and a fellow of the Royal Geographical Society. His numerous honors include medals from the Explorers Club and the California Academy of Sciences.

Jean-Loïc Le Quellec is Director of Research Emeritus at the Institute of African Worlds (IMAf), CNRS UMR 8171, Campus Condorcet, Aubervilliers, and Honorary Fellow of the School of Geography, Archaeology and Environmental Studies, University of the Witwatersrand, Johannesburg 2050. He is a specialist in African rock art, particularly from the Sahara, and his current research focuses on the links between images and myths. His publications include *Rock Art in Africa, Mythology and Legend* (2004) and his most recent publication is a *Dictionnaire critique de mythologie*, co-authored with Bernard Sergent and published by the CNRS (2017).

Marcel Otte Emeritus Professor at Liège University, Belgium. Specialist in the Paleolithic Civilizations, especially in their spiritual activities and questioning. My point of view is that humankind has been evolving only by the development of its mind and faith. Our Species has been created and has evolved against the natural forces, including its own body. Our specificity is our own evolutionary process: spirit is the specific power of human evolution.

Silvano Petrosino (Milan, 1955) is Full Professor of Theoretical Philosophy at the Catholic University of Milan. At

this same University he currently teaches Communication Theories and Religious and Media Anthropology. He is also the holder of the Anthropology of the Sacred course at the Higher Institute of Religious Sciences in Milan and is director of the 'Julien Ries Archive for Symbolic Anthropology' at the Catholic University of Milan. Among his latest publications: *Lo stare degli uomini. Sul senso dell'abitare e sul suo dramma* (Marietti 1820 2012); *L'idolo. Teoria di una tentazione. Dalla Bibbia a Lacan* (Mimesis 2015); *Emmanuel Levinas. Le due sapienze* (Feltrinelli 2017), *Contro la cultura. La letteratura, per fortuna* (Vita e Pensiero 2017); *Il desiderio. Non siamo figli delle stelle* (Vita e Pensiero 2019); *Lo spirito della casa. Ospitalità, intimità e giustizia* (il Melangolo, Genova 2019); *Dove abita l'Infinito. Trascendenza, potere e giustizia* (Vita e Pensiero 2020).

Fernando V. Ramirez-Rozzi, docteur en paléanthropologie, est directeur de recherches au Centre National de la Recherche Scientifique, France. Ses travaux portent sur les modifications des traits de vie (life history) au cours de l'évolution des hominins ainsi que sur leurs diversité entre les populations de l'homme moderne, notamment chez les groupes Pygmées et Nilotiques. Il dirige de nombreux projets internationaux avec l'Espagne, l'Argentine, le Cameroun et le Soudan. Lauréat de la Wenner-Green Foundation et de la National Geographic, ses travaux de recherche en Afrique ont reçu le label 'Expédition du Muséum National d'histoire Naturelle'.

Amélie Vialet is paleo-anthropologist at the National Museum of Natural History in France. She studies the evolution of the first hominins discovered outside of Africa as well as the emergence of Neanderthals, mainly in Western Europe. She coordinates a multidisciplinary research program entitled "Origins of Speech" hosted at Sorbonne-University (ISCD), linking anatomy, tissue reconstruction and vocalization capacity in humans, both present and fossil, and in non-human primates.

For the biographies of PAS Academicians, please see www.pas.va.

Memorandum

- The Academy will provide transportation to and from the Casina Pio IV, the Academy's Headquarters for those staying at the Domus Sanctae Marthae. A bus will leave the hotel at 9.15 a.m. to accompany participants to the Casina Pio IV. The same bus will take participants back to the Domus after dinner at about 19/19.30.
- Lunch and dinner for the Speakers will be served at the Academy on 27 and 28 October 2021.
- WI-FI credentials
Network: **academy-guest**
Password: **G@rdens1936**

Symboles, Mythes et Sens religieux chez les Humains depuis les Premiers

Colloque, Académie pontificale des Sciences, 27-28 Octobre 2021

Déclaration finale

Ce Colloque, qui a réuni, sous l'autorité de Monseigneur Marcelo Sánchez Sorondo, Chancelier de la PAS, 19 Orateurs, de 6 nationalités et de nombreuses disciplines, s'est tenu au Vatican, au siège de l'Académie Pontificale des Sciences, Casina Pio IV, en présentiel pour 14 d'entre nous et en visioconférence pour 4 — dont le Président Joachim von Braun —. Il était dédié à la personnalité et à l'œuvre de Fiorenzo Facchini, Professeur émérite d'Anthropologie à l'Université de Bologne, d'ailleurs présent et orateur lui-même à ce Colloque.

Le propos de cette réunion était de faire se rencontrer Scientifiques et Philosophes sur la question essentielle et délicate du Sens Religieux chez les Humains et de tenter de lui trouver une réponse partagée.

La réunion a été scindée en 4 sessions, respectivement consacrées aux Archéologues, aux Ethnologues, aux Biologistes et aux Philosophes.

Les Archéologues ont d'abord montré la très grande ancienneté des preuves matérielles d'une pensée symbolique chez les Humains fossiles, de l'objet recueilli pour rien à celui que l'on transforme, de celui dont on apprécie de mieux en mieux la forme à celui dont on s'approprie celle-ci, de celui encore sur lequel on griffonne à la paroi sur laquelle on grave ou on peint un grand récit ; mais ces collègues archéologues nous ont aussi décrit des rituels de protection (marquages à l'ocre), des pratiques d'inhumation (fosse puis sépultures), de probables cérémonies d'initiations (musique, danses), d'incontestables actes de compassion (assistance de personnes handicapées, débuts de la médecine).

Les Ethnologues nous ont raconté à leur tour les croyances, dites animistes et leurs pratiques dites chamaniques, de petites populations actuelles, où nature et culture se mêlent, où esprit animal, esprit végétal et âme humaine veulent dire la même chose, où des mythes apaisent les angoisses et lient les membres d'une même communauté. On peut imaginer que ces formes de perception du sens religieux précèdent les grands polythéismes antiques aux panthéons compliqués et les brillants monothéismes contemporains, où un Dieu omniscient, tout puissant, acteur et juge, peut protéger comme punir. Certains participants nomment les premières Sociétés, horizontales (équité entre Esprits), les secondes, verticales (hiérarchie entre Hommes et Dieux).

Pour les Biologistes, c'est la complexité croissante du cerveau, née de l'adaptation de celui-ci à des changements de leur environnement, qui va déboucher sur un niveau plus élevé de la conscience et son produit, la réflexion. L'Humain va savoir qu'il sait, pouvoir anticiper, apprendre la mort, ressentir l'anxiété qui en découle et inventer son recours, la « croyance », simple produit pirate — appelé *exaptation* — de la sélection naturelle. Le moteur qui a fait « évoluer » tout le système vivant est celui qui fait émerger le phénomène religieux. La nature, dit-on, avait horreur du vide, la nature humaine a horreur du vide de sens ! Si l'on s'arrête à ce constat incontestable et que l'on convienne qu'il n'est pas réducteur, il faut reconnaître que, pour un naturaliste, il est cohérent avec l'ensemble des connaissances du Vivant et, par suite, suffisant et tout-à-fait rassurant.

Mais les Philosophes, même s'ils écoutent et respectent les conclusions des Biologistes, et que par suite, ils en enregistrent les données et en tiennent compte dans leurs réflexions, « ne l'entendent pas de la même oreille » et, par suite, ne s'en contentent pas. Si la matière inerte peut, en effet, se définir comme ayant une histoire « de mieux en mieux organisée mais de plus en plus compliquée » et si la matière vivante qui en descend, peut se résumer en un récit « de plus en plus diversifié mais de mieux en mieux contrôlé — par la génétique — » l'être pensant, quant à lui, surprend par son caractère « de plus en plus Libre mais de plus en plus Responsable » ! Et cette Liberté incontestable, mais sous bonne garde, fait que l'Humain se trouve soudain, pour la première fois dans ce long parcours, en charge — au moins en partie et peut-être de plus en plus — de sa propre destinée. La sélection naturelle « s'efforçait » de sauver l'espèce ; mais, enrichie de la dimension spirituelle inhérente à l'esprit, elle s'attache désormais à « sauver » la Personne.

Et nous sommes ainsi parvenus au terme de cet élégant tableau, aux étapes complémentaires et aux marches successives. L'Humain, aux profondes racines biologiques, émerge, devant nos yeux, chargé « naturellement » de ce fameux sens religieux.

La Personne et l'Âme s'y confondent alors, la Réflexion, la Méditation et la Prière souvent également. La réponse partagée recherchée entre Scientifiques et Philosophes est peut-être celle-là.

Reste à délimiter l'Humain, sans que ce bornage change désormais quoi que ce soit à notre conclusion, mais nous sommes dans une Académie des Sciences et nous nous devons de rechercher cette frontière, si tant est qu'elle existe.

Comme les Chimpanzés, nos parents les plus proches, semblent — au moins aujourd'hui — avoir inventé des rituels et se préoccuper de la mort, et comme les Préhumains, nos ancêtres les plus proches, semblent avoir fabriqué, dès 3.300.000 ans, des outils, réalisant donc création d'une forme et symbole à la fois, certains d'entre nous auraient tendance à faire remonter la notion de sens « religieux » à 10 millions d'années, l'âge des ancêtres communs des Chimpanzés et des Hommes ; d'autres attendraient au contraire les preuves biologiques (niveau de complexité cérébrale) ou archéologiques (objets fabriqués, sépultures, rupestres) pour oser attacher « sens religieux » à un Préhumain (Lucy, par exemple) ou à un Humain. Mais que ce sens ait 10 millions d'années, 3 millions d'années ou 500.000 ans, il ne s'en dégage pas moins, « un beau jour » (*qui peut être d'une certaine durée, progressive*), d'une longue histoire de 14 milliards d'années de Matière, de 4 milliards d'années de Vie, une « âme (ἡ ψυχή τὰ ὄντα πῶς ἐστὶ πάντα) » (Aristote, *De anima*, 431 b 20) qui donne une unité à la famille des Hominidés que l'on pourrait par suite appeler, malgré son ancienneté jusque-là insoupçonnée, humaine.

Yves Coppens et Marcelo Sánchez Sorondo

Final Statement

This workshop, which brought together, under the authority of Monsignor Marcelo Sánchez Sorondo, Chancellor of the PAS, nineteen speakers of many disciplines and six nationalities, was held at the Casina Pio IV in the Vatican, headquarters of the Pontifical Academy of Sciences. Fourteen of us were present in person, and four – including President Joachim von Braun – joined remotely. The workshop was dedicated to the personality and work of Fiorenzo Facchini, Emeritus Professor of Anthropology at the University of Bologna, who was present in person and gave a talk.

The purpose of the workshop was to bring together Scientists and Philosophers to reflect on the essential, delicate question of Religious Sense in Humans and to try to find a shared answer to it.

The meeting was split into 4 sessions, devoted respectively to Archaeologists, Ethnologists, Biologists and Philosophers.

The Archaeologists first of all brought some very ancient material evidence of symbolic thought in human fossils, starting from objects collected randomly to objects that were transformed, and then objects whose form is more and more appreciated and objects whose form is appropriated, to objects with which one scribbles on a wall on which one engraves or paints a great story; but these archaeologist colleagues also described protective rituals (ochre markings), burial practices (graves first, then burials), probable initiation ceremonies (music, dances), and undeniable acts of compassion (care for the disabled, beginnings of medicine).

The Ethnologists in turn told us about the beliefs, called animist, and so-called shamanic practices of small contemporary populations, where nature and culture mingle, where animal spirit, plant spirit and human soul mean the same thing, where myths appease anxieties and bind the members of the same community. We can imagine that these forms of perception of the religious sense precede the great ancient polytheisms with their complicated pantheons and the brilliant contemporary monotheisms, where an omniscient, omnipotent God, agent and judge, is able to protect as well as punish. Some participants call the first societies horizontal (all Spirits are equal), and the second, vertical (with a hierarchy between Humans and Gods).

For Biologists, it is the increasing complexity of the brain, born of its adaptation to changes in the environment, that will eventually lead to a higher level of consciousness and to its product, reflection. Humans will know that they know, will be able to anticipate and apprehend death, will feel the resulting anxiety and will invent a remedy, “belief”, a simple by-product – called *exaptation* – of natural selection. The motor which drives the “evolution” of the whole living system is the one which causes the emergence of the religious phenomenon. Nature, they say, abhors a vacuum, whereas human nature hates emptiness of meaning! If we stop at this indisputable observation and we agree that it is not reductive, we must recognize that, for a naturalist, it is consistent with all the knowledge of the living and, therefore, it is sufficient and completely reassuring.

But the Philosophers, even if they listen to and respect the conclusions of the Biologists, and consequently, record their data and take it into account in their reflections, do not interpret it in the same way and, consequently, are not satisfied with it. If inert matter can, in fact, be defined as having a history “better and better organized but more and more complicated” and if the living matter which descends from it can be summed up in a story “more and more diversified but better and better controlled – by genetics”, the thinking being itself is surprising because of his or her “ever Freer but ever more Responsible” character! And this indisputable, but well-guarded, Freedom means that Humans suddenly find themselves, for the first time in this long journey, in charge of their own destiny – at least in part, but perhaps more and more so. Natural selection “strove” to save the species; but, enriched with the spiritual dimension inherent in the spirit, it now focuses on “saving” the Person.

And we have thus reached the end of this elegant tableau, with its complementary stages and successive steps. Humans, with their deep biological roots, emerge before our eyes “naturally” equipped with this famed religious sense. The Person and the Soul merge into it, and often so do Reflection, Meditation and Prayer. Perhaps this is the shared answer that Scientists and Philosophers were looking for.

What now remains to define is the Human Being, even though this demarcation will not change our conclusion. Nevertheless, we are in an Academy of Sciences and we owe it to ourselves to examine whether this frontier exists at all. Like the Chimpanzees, our closest relatives, seem to have invented rituals and to be concerned with death (at least today), and like the Prehumans, our closest ancestors, seem to have manufactured tools as early as 3,300,000 years ago, thus

achieving the creation of form and symbol at the same time, some of us would tend to trace the notion of “religious” sense back to 10 million years ago, to the age of the common ancestors of Chimpanzees and Humans; others would, on the contrary, wait for biological evidence (level of cerebral complexity) or archaeological evidence (manufactured objects, burials, rock art) before daring to attach “religious sense” to a Prehuman (Lucy, for example) or to a Human. But whether this sense is 10 million years old, 3 million years old or 500,000 years old, “one fine day” (which can be of a certain, progressive, duration), a “soul (ἡ ψυχὴ τὰ ὄντα πῶς ἐστὶ πάντα)” (Aristotle, *De anima*, 431 b 20) does emerge from a long history of 14 billion years of Matter and 4 billion years of Life, giving unity to the Hominidae family whom, despite its hitherto unsuspected antiquity, we can thus call Human.

Yves Coppens and Marcelo Sánchez Sorondo

Chiesa di Santo Stefano degli Abissini
St Stephen of the Abyssinians Church

Sede della Pontificia Accademia delle Scienze
Seat of the Pontifical Academy of Sciences
(Casina Pio IV)

Ingresso del Perugino
The 'Perugino' gate

Ingresso Musei Vaticani
Entrance gate to the Vatican Museum

Domus Sanctae Marthae

Altare Tomba S. Pietro
Altar of St Peter's Tomb

Ingresso Sant'Uffizio
The 'Sant'Uffizio' gate

Ingresso Sant'Anna
The 'Sant'Anna' gate



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