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THE HUMBLE APPROACH INITIATIVE



What Is Our Knowledge of the Human Being?

A SYMPOSIUM SPONSORED BY

4, 5, and 6 MAY 2006

Contact: Mary Ann Meyers, Ph.D., Senior Fellow

Purpose

Habeo conscientiam. ergo humanus sum (I have a conscience, therefore I am a human being.) Stoic maxim In a world ever more conditioned by science, the purpose of this symposium is to reconsider the perennial guestion formulated by David when he asked, "Yahweh, what is man, that you care for him?" (Ps. 144:3) Not that science provides the sole answer to the question, but we believe that an interdisciplinary dialogue is necessary for its deepest exploration. In the interest of a balanced quest, which can lead to a fuller understanding of critical issues currently confronting us that call upon our knowledge of the human being, we need to re-examine the background of the relationship between philosophy and science, that is, between the humanistic tradition (which has its roots in philosophy) and the scientific tradition. Today, it seems, there is a great need for reconciliation between these two domains. Indeed, since Galileo launched the modern scientific revolution, science and the humanities have become progressively detached from one another and appear, as science has grown ever more specialized and complex, to have reached the point of mutual incomprehension. It is useful, therefore, to revisit the thought of Greek (Plato and Aristotle) and medieval (St. Thomas Aquinas) philosophers of science as well as the thought of modern philosophers (Hume, Kant, Hegel) on the one hand, and, on the other, the thought of modern scientists, for the light this philosophic and scientific background sheds upon the identity of humans who share their bodies with nature but also emerge from nature. We will then turn attention to a few central problems presented by contemporary science, as well as the opportunities science provides for rethinking philosophical and theological views of human beings and their place within the creation. The issues being probed by cognitive science with its new language of neurons and synapses in relation to the classical language of intellect, desire, and emotion are central to our topic. So, too, are ongoing discoveries about the genetic heritage of people, which pose questions about free will and the link between evolution and creation. Finally, there are anthropological (and moral) considerations centred upon the time before a person's birth (when embryonic stem cells are available) and the time of his/her death (when there is a ceasing of brain or heart function). It is our hope to forge greater

understanding of these three clusters of issues even as we use them to clarify our central question: What *is* our knowledge of the human being?

Under the aegis of the John Templeton Foundation, in partnership with the Pontifical Academy of Sciences, sixteen scholars and scientists come together at the Academy's headquarters—Casina Pio IV in the Vatican gardens. The venue is reflective of our hope for a reconciliation of the scientific and humanistic traditions—and prompts us to ponder what role religion can play in the effort. In 1922, the villa, once a summer residence of Pope Pius IV and the meeting place of great scholars, became the seat of the Pontifical Academy of Sciences, whose origins date to the founding of the Academy of the Lincei, the world's first scientific academy, by Prince Federico Cesi in 1603. Galileo was a founding member and its acknowledged leader.

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^{The} Humble Approach Initiative



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The symposium is part of the Templeton Foundation's Humble Approach Initiative. The goal of the initiative is to bring about the discovery of new spiritual information by furthering high-quality scientific research. The "humble approach" is inherently interdisciplinary, sensitive to nuance, and biased in favor of building linkages and connections. It assumes an openness to new ideas and a willingness to experiment. Placing high value upon patience and perseverance, it retains a sense of wondering expectation because it recognizes, in Loren Eisley's haunting phrase, "a constant emergent novelty in nature that does not lie totally behind us, or we would not be where we are." A fundamental principle of the Foundation, in the words of its founder, is that "humility is a gateway to greater understanding and open[s] the doors to progress" in all endeavors. Sir John Templeton believes that in their quest to comprehend foundational realities, scientists, philosophers, and theologians have much to learn about and from one another. The humble approach is intended as a corrective to parochialism. It encourages discovery and seeks to accelerate its pace.

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Antonio M. Battro Enrico Berti Jürgen Mittelstrass Marcelo Sánchez Sorondo





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Antonio M. Battro, the founder and first president of the Centro de Investigaciones Filosóficas (a private research center) in Buenos Aires, is a partner in the Buenos Aries-based educational consulting firm of Battro and Denham, which specializes in the use of computers to spur cognitive development in children and people with brain injuries. A native of Argentina, he earned a medical degree at the University of Buenos Aries and, after working as a hospital clinician for several years, a Ph.D. in experimental psychology from the Sorbonne in 1961. He went on to do postgraduate work in mathematical logic at the University of Fribourg, and later he became of member of the International Center of Genetic Epistemology directed by Jean Piaget at the University of Geneva. He also took a doctorate in medicine at the University of Buenos Aires. Dr. Battro began his research career as a staff scientist at Argentina's National Center for Science and Technology, and in 1972, as a Fulbright Fellow working with city planner Kevin Lynch at the Massachusetts Institute of Technology, he served as co-director of a UNESCO project in Salta, Argentina, that studied the capacity of children and young people to document and analyze resources and risks in an urban environment. In 1979, he was appointed an associate director at the École Pratique des Hautes Études in the Laboratory of Experimental and Comparative Psychology in Paris. He has been a visiting professor at Brazilian universities in Araraquara, Rio de Janeiro, Porto Alegre, and Curitiba, a visiting research fellow at the World Center for Computing in Paris, a visiting scholar at the Harvard Graduate School of Education, a scholar-in-residence at the Ross School, a private elementary and secondary school in East Hampton, New York, and the Robert F. Kennedy Visiting Professor of Latin American Studies at Harvard University. The recipient of a Leonard Nelson Foundation grant, a Guggenheim Fellowship for neuroscience research at New York Medical College, and an Eisenhower Fellowship for research in human cognition at the University of California, San Diego, Dr. Battro has been awarded prizes for his work by the Argentinean Ministry of Education and various private foundations and organizations. He is a former director of the National Foundation of the

Arts in Argentina and a member of the Argentinean National Academy of Education and the Pontifical Academy of Sciences. The author of some seventy articles published in academic journals, he is the co-author of three books, including (with P.J. Denham) *La Educación Digital* (1997), and the author of six others. His most recent book, *Half a Brain Is Enough: The Story of Nico*, was published in 2001 by Cambridge University Press. It is at once the case history of a boy who had the right half of his brain surgically removed to control intractable epilepsy and a meditation on consciousness.

Professor of the history of philosophy at the University of Padua, Enrico Berti specializes in Greek philosophy and has traced the influence of Aristotelian thought on the development of Western philosophy from Plato's metaphysics to, in particular, the work of Jacques Maritain. He is a graduate of Padua, where he did both his undergraduate and graduate studies, earning a Ph.D. in philosophy in 1963. Dr. Berti began his teaching career at his alma mater, and in 1964, he accepted a professorship in the history of ancient philosophy at the University of Perugia. Named to the chair in ancient philosophy in 1969, he accepted his current post at Padua in 1971. Dr. Berti has been a visiting professor at the University of Geneva and the Free University of Brussels. A recipient of the Nietzsche Prize for Philosophy, he is a past president of the Italian Philosophical Society and currently serves as vice president of the International Federation of Philosophy Societies. He is a member of the Pontifical Academy of Sciences. In addition to numerous articles in academic journals, he is the co-author (with Franco Volpi) of a three-volume History of Philosophy (1991) and the author of fourteen other books, including several widely-respected studies of Aristotle in addition to Scientific Reason and Philosophic Reason in Modern Thought (1977), Introduction to Metaphysics (1993), and, most recently, *Practical Philosophy*, which was Philosophy published by Guida in 2004.

Jürgen Mittelstrass is a professor of philosophy at the University of Konstanz where he has directed the Center for the Philosophy of Science for the past sixteen years. A graduate of the Friedrich-Alexander University at Erlangen-Nürnberg, where he earned his baccalaureate degree with first class honors and took a Ph.D. in philosophy summa cum laude in 1961, he also studied at the universities of Hamburg and Bonn and did postgraduate work at Oxford University. Dr. Mittelstrass began his teaching career as an assistant professor at Erlangen in 1962 and eight years later accepted his present professorship at Konstanz. He has been a visiting professor at the University of Kiel, Temple University in Philadelphia, and the University of Salzburg, as well as a visiting fellow at the Center for the Philosophy of Science at the University of Pittsburgh. His wide-ranging research interests include epistemology, the philosophy and the history of science, ethics in science, and the philosophy of language and of culture. The recipient of the Leibniz Prize of the German Research Society, the Arthur Burkhardt Prize given by the Arthur Burkhardt Foundation, the Lorenz Oken Medal of the Society of German Scientists and Physicians, the Margrit Engér- Foundation Prize, the Werner Heisenberg Medal of the Alexander von Humboldt Foundation, the Order of Merit of the State of Berlin, and the Officer's Cross of the Order of Merit of the Federal Republic of

Germany, he has been awarded honorary degrees from the University of Pittsburgh, Humboldt University of Berlin, the University of Iasi in Romania, the University of Tartu in Estonia, and the Technical University of Berlin. Dr. Mittelstrass currently serves as chairman of the Austrian Science Council and president of the Academie Europaea. Formerly the president of the German Philosophical Association and a member of the senate of the German Research Society, he has been a member of the German Chancellor's Council for Research, Technology, and Innovation and is a founding member of the German-American Academic Council, as well as a member of the Berlin-Brandenburg Academy of Sciences, the German Academy of Sciences Leopoldina, and the Pontifical Academy of Sciences. He is a corresponding member of the Académie Internationale d'Historie des Sciences and the Austrian Academy of Sciences. In addition to numerous articles published in academic journals, he is the editor of a four volume encyclopedia of science, the co-author of four books, and the author of nineteen others published in German. His Mind, Brain, Behavior: The Mind-Body Problem and the Philosophy of Psychology (Walter De Gruyter, 1989), which was co-authored with Martin Carrier, was published in English in 1991 to widespread acclaim.

The chancellor of the Pontifical Academy of Sciences and of the Pontifical Academy of Social Sciences, Marcelo Sánchez Sorondo is also a professor of the history of philosophy at the Libera Università Maria SS. Assunta in Rome. He was consecrated titular bishop of Forum Novum in 2001 and appointed an official of the Roman Curia the same year. A native of Argentina, where he was ordained a Roman Catholic priest in 1968, Msgr. Sánchez Sorondo received his undergraduate degree with highest honors from the University of Perugia and a Ph.D. in sacred theology *summa cum laude* from St. Thomas Aquinas University of Rome in 1974. He was a lecturer in the history of philosophy at Rome's Lateran University from 1976 to 1982 when he was named a full professor. He also served as dean of the Faculty of Philosophy at the Lateran for nearly a decade. Named chancellor of the two pontifical academies by Pope John Paul II in 1998, the same year he received his current academic appointment, the late pope appointed him secretary prelate of the Pontifical Academy of St. Thomas Aquinas in 1999. Msgr. Sánchez Sorondo's early research centered on questions related to the participation of human beings in the divine nature in the work of Aquinas. Later his studies concentrated on Aristotle and on the interpretation of Aristotle's thought by St. Thomas, Hegel, and Paul Ricoeur, especially focusing on "realized freedom" as a hermeneutical criterion for studying history, religion, and culture. A Cavaliere di Gran Croce, his many honors include the Francesco Vito Prize awarded by the Catholic University of the Sacred Heart, the Ordre National de la Légion d'Honneur, Chili's Neruda Award, and Brazil's Decoration Grão Mestre da Ordem de Rio Branco. In addition to articles published in academic journals and essays in volumes of collected works, he is the editor or co-editor of six volumes and the author of six books on theology and philosophy, including La gracia como partisipación de la naturaleza divina (Salamanca, 1980) and Aristóteles y *Hegel* (Herder, 1987).

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Evandro Agazzi

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Evandro Agazzi is a professor of philosophy at the University of Genoa. His extensive contributions to his field have included studies in philosophy of science, the ethics of science and technology, logic, systems theory, philosophy of language, metaphysics, and philosophical anthropology. His current research has two foci: an attempt, on the one hand, to characterize scientific objectivity and defend "scientific realism" based upon deepening notions of reference and truth and, on the other hand, an effort to analyze the concept of person and its implications, particularly in the field of bioethics. A graduate of the University of Milan where he studied physics and the Catholic University of Milan where he took a Ph.D. in philosophy in 1957, Dr. Agazzi did post graduate work at Oxford and the universities of Marburg and Münster. He taught mathematics at Genoa, symbolic logic at the Higher Normal School of Pisa, and the philosophy of science and mathematical logic at the Catholic University of Milan before being named professor of the philosophy of science at Genoa in 1970. Nine years later he accepted the chair of philosophical anthropology, philosophy of nature and philosophy of science at the University of Fribourg, a post he held until being named to his present position in 1998. Dr. Agazzi has been a visiting professor at the University of Düsseldorf, the University of Berne, the University of Pittsburgh, Stanford University, and the University of Geneva among other institutions. He has been awarded honorary degrees from the University of Cordoba, the National University of Santiago del Estero in Argentina, and Ricardo Palma University of Lima in Peru. Currently president of the International Academy of Philosophy of Science and honorary president of the International Federation of the Philosophical Societies and of the International Institute of Philosophy, he formerly served as president of the Italian Society of Logic and Philosophy of Science, of the Italian Philosophical Society, and of the Swiss Society of Logic and Philosophy of Science and as treasurer of the International Council for Philosophy and Humanities of UNESCO. He also has been a member of the Italian National Committee for Bioethics. The editor of *Epistemologia*, an Italian journal for the philosophy of science, and of Nuova Secondaria, an Italian journal for high

school teachers, Dr. Agazzi serves as consulting editor of the international journals Erkenntnis, Revue Internationale de Philosophie, Zeitschrift für allgemeine Wissenschaftstheorie, Medicina e Morale, Modern Logic, Kos, and Sandhan. In addition to some seven hundred articles published in scholarly journals and essays in volumes of collected works, he is the author of nineteen books, including Philosophie, Science, Métaphysique (1987) and, most recently, Right, Wrong and Science: The Ethical Dimensions of the Techno-Scientific Enterprise (Rodopi, Amsterdam-New York, 2004), the English version of a book published originally in Italian and then translated into German, French, Spanish, Russian, Polish, and Hungarian. Among the latest of the more than thirty volumes he has edited are: (with György Darvas) Philosophy of Mathematics Today (1997); Realism and Quantum Physics (1998); (with Hans Lenk) Advances in the Philosophy of Technology (1999); (with Massimo Pauri) The Reality of the Unobservable (2000); (with A.T.Tymieniecka) Life-Interpretation and the Sense of Illness within the Human Condition: Medicine and Philosophy in a Dialogue (2001); (with Jan Faye) The Problem of the Unity of Science (2001), (with Luisa Montecucco) Complexity and Emergence (2002); and Valori e limiti del senso comune (2004).

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A paleoanthropologist by training, **Berhane Asfaw** is the manager of the private Rift Valley Research Service in Addis Ababa and co-director of the Middle Awash Research Project in the desert of Ethiopia's Afar state, part of Africa's Great Rift Valley that extends south through Kenya as far as Mozambigue. He and his colleagues discovered the world's oldest human remains—two 160,000-year-old near complete fossilized skulls—that support the long-held view, strengthened in the early 1990s by genetic evidence, that Africa is the cradle of humanity. Although unearthed in 1997, research and verification of the skulls was not completed until 2003 when Dr. Asfaw and his teammates first published their findings in the leading science journal *Nature*. They theorized that their fossil discoveries bridged the gap between more archaic human forms and fully modern humans. A native of Ethiopia, he had earlier completed extensive survey work in the Awash depression and played a major role in unearthing many fossils thought to be among the earliest hominids, some now dated at more than four million years of age. Dr. Asfaw received his undergraduate degree from Addis Ababa University and, as the recipient of a Leakey Foundation Baldwin Fellowship, went on to study at the University of California, Berkeley, where he earned a Ph.D. in physical anthropology in 1988. He was then named paleoanthroplogy coordinator of his country's Center for Research and Conservation of Cultural Heritage in the Ethiopian Ministry of Culture and director of the National Museum of Ethiopia, a post he held until 1992. After serving as a visiting professor of anthropology at Rutgers University, he accepted appointment to his present position in 1997. Dr. Asfaw has lectured widely and is the co-author of some thirty papers published in scientific journals.

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Alison Brooks, professor and chair of anthropology at George Washington University, has argued that the fundamental behavioral repertoire and underlying cognitive abilities characteristic of our species developed gradually in Africa much earlier than once believed. In support of her research, she helped to develop a new dating technique for materials too old for dating by radioactive carbon techniques. It uses rates of protein decay in fragmentary shells of ostrich eggs found in archaeological sites throughout arid regions of Africa and Asia. Her research and field work has taken her to the Middle East, Sweden, China, and the Dordogne region of France, as well as to Ethiopia, Kenya, the Democratic Republic of the Congo, South Africa, Tanzania, and Botswana. A magna cum laude graduate of Radcliffe College/Harvard University, Dr. Brooks went on to earn a Ph.D. in anthropology at Harvard in 1979. She had begun her teaching career as an assistant professor at George Washington seven years earlier and was promoted to associate professor in 1980 and to her present professorship in 1988. She is also a research associate in anthropology at The Smithsonian Institution. A fellow of the American Academy of Arts and Sciences, Dr. Brooks has held fellowships awarded by the American Scandinavian Foundation, the Leakey Foundation, the American Council of Learned Societies, the Bunting Institute, and the Japan Foundation. Her research has been supported by grants from the Ford Foundation, the National Science Foundation, the American Anthropological Association, the Federal Republic of Germany, the National Geographic Society, the Smithsonian, the Carnegie Institution of Washington, the Wenner Gren Foundation, and the National Center for Science Education. She has delivered invited lectures at Harvard, New York University, and the universities of Pennsylvania, New Mexico, Utah, Wyoming, Florida, Connecticut, Calgary, Toronto, Bordeaux, and Tübingen, as well as at numerous institutes and museums throughout the world. She is the recipient of an honorary degree from the Russian Academy of Sciences and the Trachtenberg Award for Scholarship from George Washington where she also was named a Distinguished Columbian Professor. A former president and a former member

of the board of managers of the Anthropological Society of Washington, she has been associate editor of the *Journal of Human Evolution, American Anthropologist,* and *Geoarchaeology*. Dr. Brooks is the author of some fifty papers published in academic journals and the co-editor of two books: (with Ruth Landman, Linda Bennett, and Phyllis Chock) *Anthropological Careers, Perspectives, Employment and Training* (1981) and, most recently, (with Eric Delson, Ian Tattersall, and John A. Van Couvering) *Encyclopedia of Human Evolution and Prehistory* (2nd Edition), which was published by Garland Press in 2000. As editor of *AnthroNotes*, she has written extensively on anthropology for secondary school teachers and students, including *People, Places and Change*, a textbook for middle school students that has been published in multiple editions.

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Professor of theoretical philosophy at the University of Padua, Franco **Chiereghin** has devoted his scholarly career to studies of the works of Plato, St. Augustine, Spinoza, and the philosophers associated with German Idealism, particularly Kant and Hegel, as well as the thought of the modern philosophers Friedrich Nietzsche and Martin Heidegger. The thematic focus of his writing has been on concepts of being and truth and of space and timeand, in particular, the relationship of these concepts, both scientifically and philosophically, to the link between time and history, to human possibilities and human limitations, and to the connection between perception and thought. A graduate of Padua, where he earned a Ph.D. in philosophy summa cum laude in 1959, he joined the faculty of his alma mater after taking his degree and in 1965 was appointed a professor of the philosophy of religion. He was named a professor of the history of philosophy in 1973, a post he held until he was appointed to his present position twenty years later. Dr. Chiereghin has led an international research group that focuses on the influence of German classical philosophy on contemporary issues. In addition to publishing numerous articles in academic journals, he directed the translation of Hegel's Encyclopedia of Philosophical Sciences into Italian and is the author of ten books, including: *Possibilità e limiti dell'agire umano* (1990); Il problema della libertà in Kant (1991); La "Fenomenologia dello spirito" di Hegel: Introduzione alla lettura (1994), a work translated into Portuguese; and Dall'antropologia all'etica: All'origine della domanda sull'uomo (1997). His latest study, Tempo e storia: Aristotele, Hegel, Heidegger, was published by Il Poligrafo in 2000.

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Felipe Fernández-Armesto is a historian of astounding breadth whose work spans epochs and moves from specialized studies to sweeping re-examinations of humankind's relation to the planet. He has written on European exploration and conquest, the way people respond to the ecological world around them, cultures and rulers that flourished in a thousand year tide of history, the future of religion, methods for determining truth that exist together in every culture, food and how the way we obtain it has shaped societies, ideas that changed the world, the intricate and common forces that molded the western hemisphere, and new challenges from science and philosophy that are shaking our understanding of what it means to be human. Named last year as the Prince of Asturias Professor of Spanish Culture and Civilization at Tufts University, Dr. Fernández-Armesto is concurrently professor of global environmental history, as well as professor of history and geography, at Queen Mary College, London, where he directs the global history program of the Institute of Historical Research. For many years, he was also a member of the Faculty of Modern History at Oxford University. He studied at Magdalen College, Oxford, where he took first-class honors in modern history, and St. John's College, Oxford, where he was a senior scholar for two years before receiving his D.Phil. in history in 1977. He served five years as assistant master of the Charterhouse School, and in 1981, he returned to Oxford as a fellow of St. Antony's College. He joined the faculty of Queen Mary College in 2000. Dr. Fernández-Armesto has been a visiting senior lecturer and a visiting professor at the University of Warwick, the Andrew W. Mellon Senior Visiting Research Fellow at the John Carter Brown Library at Brown University, a fellow at the Netherlands Institute for Advanced Study in the Humanities and Social Sciences, and Union Pacific Visiting Professor at the University of Minnesota. A fellow of the Royal Historical Society, the Society of Antiquarians of London, and the Royal Society of Arts, as well as a professorial fellow of Queen Mary College and an associate fellow of the University of London's Institute for the Study of the Americas, he has been the recipient of a Leverhulme Research Fellowship, the Caird Medal of the National Maritime Museum, the John Carter

Brown Medal, and the Premio de Investigación of the Spanish Geographical Society. He was awarded an honorary degree by La Trobe University in Melbourne. He has given invited lectures at the John Carter Brown Library, Harvard, the University of Minnesota, the University of Pennsylvania, the University of Cape Town, Leiden University, the Netherlands Institute for Advanced Study, the University of Edinburgh, and Trinity College, Dublin, among other places. He currently serves as chairman of the trustees of the PEN Literary Foundation and a member of Helen Wallis Memorial Fellowship Panel, the Council of the Hakluyt Society, the International Slow Foods Award Jury, and the AXA-Art Newspaper Prize Jury. Joint editor-in-chief of The Malaspina Projects of the Hakluyt Society, he serves on the editorial committee for a Leiden University series, Studies in Overseas History, and on the editorial boards of the Center for Early Modern History at the University of Minnesota, the Journal of Global History, Journeys, and of volume III of the University of Chicago Press's History of Cartography. Dr. Fernández-Armesto has published numerous articles in scholarly journals and is the joint editor (with James Muldoon) of An Expanding World: The Medieval Background, which will be published next year by Background Ashgate Press, as well as the editor or co-editor of ten other books. He is the co-author of two books and the author of sixteen others, which have been translated into twenty-two languages. Among the most recent are: Columbus (1991), Millennium: A History of the Last Thousand Years (1995), Religion (1998), Truth: A History (1999), Civilizations (2001), Food: A History (2001), Ideas (2003), and The Americas: A Hemispheric History (2003). His latest study, Humankind: A Brief History, was published in 2004 by Oxford University Press.

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The eminent neuropsychologist **Malcolm A. Jeeves**, a past president of the Royal Society of Edinburgh, Scotland's National Academy of Science and Letters, is professor emeritus of psychology at St. Andrews University. He was Foundation Professor of Psychology there from 1969 to 1993 and established the university's acclaimed psychology department. His own research has focused on brain mechanisms and neuroplasticity. Educated at the Stamford School in Lincolnshire, he went up to Cambridge University after serving as an acting company commander with the 1st Battalion Sherwood Foresters in Germany following World War II. st He studied natural sciences at St. John's College, received his Ph.D. in psychology from Cambridge in 1956, and also did graduate work at Harvard University. Before joining the St. Andrews faculty, he was a lecturer at Leeds University and Foundation Professor of Psychology at Adelaide University in South Australia. He served as vice principal of St. Andrews from 1981 to 1985 and as director of the Medical Research Council's Cognitive Neuroscience Research Group at St. Andrews from 1981 to 1986. A past member of three of Britain's most active research bodies, the Science and Engineering Research Council, the Neuroscience and Mental Health Board of the Medical Research Council, and the Manpower Sub-Committee of the Advisory Board for the Research Councils, Dr. Jeeves was formerly chairman of the International Neuropsychology Symposium and editor-in-chief of *Neuropsychologia*. He is a fellow of the Academy of Medical Sciences, the British Psychological Society, and the Australian Psychological Society, as well as the recipient of South Australia's Abbie Medal and the Cairns Medal given by the Society of Neurologists and Neurosurgeons of South Australia. Queen Elizabeth II made him a Commander of the British Empire in 1992. He has received honorary doctoral degrees from the universities of Edinburgh, St. Andrews, and Stirling. Dr. Jeeves is currently a member of the board of advisors of the John Templeton Foundation. The author of more than one hundred scientific papers and eleven books, including six related to science and faith, his most recent studies are Human Nature at the Millennium (1997), (with R.J. Berry) Science, Life and Christian Belief (1998), and a

volume of essays he edited for Wm. B. Eerdmans, *From Cells to Souls—and Beyond: Changing Portraits of Human Nature*, which was published in 2004. Dr. Jeeves is honorary sheriff of Fife and Tayside in Scotland.

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Hideaki Koizumi is a fellow, the highest ranking technical position, of Hitachi, Ltd. The honor, which was accorded him in 2004, recognizes his groundbreaking contributions to medical imaging and environmental measurement. Dr. Koizumi is known for his work in the early 1990s on functional MRI (magnetic resonance imaging), a technique for directly observing brain activity, and his subsequent development of optical topography, a non-invasive imaging method using near infrared light to measure higher order brain function. He joined Hitachi in 1971 upon graduation from the University of Tokyo, and his first major achievement was the development of the basic principles for polarized Zeeman-effect atomic absorption spectrometry, which can analyze trace metals, including those in living organisms and the environment, with a high degree of accuracy. On the basis of this work, he was awarded a Ph.D. in physics from the University of Tokyo in 1976. In addition to his Hitachi position, he currently serves as a director of the Brain Science and Society Division of the Research Institute of Science and Technology for Society of the Japan Science and Technology Agency and as auditor of the National Institute of Environmental Studies, as well as in various other government or semi-government positions. Dr. Koizumi is also a visiting professor of the Research Centre for Advanced Technology of the University of Tokyo. Earlier in his career, he spent several years in the United States, first as a visiting scientist at the National Bureau of Standards in Washington, D.C. and then as a guest research physicist at the Lawrence Berkeley National Laboratory. He was appointed chief scientist of the Medical Electronics Research Department of Hitachi's Central Research Laboratory in 1992, and seven years later, he became general manager of its Advanced Research Laboratory. In 2003, he was named senior chief scientistcorporate technology, a post he held until being chosen as a fellow in 2004. His research has been recognized by numerous awards, among them: three Okochi Memorial Prizes, including the Grand Prize; the Grand Prize of the Nikkei BP Technology Award; a commendation as a Person of Scientific and Technological Merit by the Japanese Minister of State for Science and

Technology; various patent awards; and two R&D 100 Awards given by *R&D Magazine.* Currently serving as president of the Japan Society for Analytical Chemistry and vice president of the Japanese Society for Baby Science, he also is a director of the Institute for Seizon and Life Sciences, the Global Association for the Welfare of Children, the Japan Neuroscience Society, the International Mind, Brain, and Education Society, and the Sony Foundation for Education, where he chairs the Preschool Education Program for Children. Dr. Koizumi also serves as a member of the governing board of Aprica Kassai, Inc. and on various national scientific and education committees. He has delivered numerous lectures, including one at the Pontifical Academy of Sciences on the occasion of the 400th anniversary of its founding, and published more th than 150 papers in leading scientific journals.

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University Professor and professor of philosophy and law at New York University, **Thomas Nagel** has played a major role in the philosophical and biological debate on subjectivity and consciousness for a quarter century. He is also widely respected for his work in political philosophy, ethics, and epistemology. His argument has consistently been that science, which seeks an objective description of nature, cannot plumb the subjective experience of consciousness because consciousness cannot be reduced to either physical brain activity or behavior. In recent works, he has explored the tension between reason's universality and evolution's local explanations and shown how deeply embedded morality is in reason. Born in Belgrade, Yugoslavia, Dr. Nagel came to the United States with his family before World War II, received his first baccalaureate degree from Cornell University, and continued his studies at Corpus Christi College, Oxford, taking a B.Phil. in 1960. He was awarded a Ph.D. in philosophy by Harvard University in 1963. He began his teaching career at the University of California, Berkeley, went on to Princeton as an assistant professor of philosophy in 1966, and was named a professor in 1972, a post he held for eight years until he joined the philosophy faculty at NYU and subsequently became a member of the law faculty as well. Dr. Nagel chaired the university's philosophy department for nearly twenty years. He has been a visiting professor at Rockefeller University, the University of Pittsburgh, Universidad Nacional Autónoma de México, the University of Witwatersand, the University of California, Los Angeles, All Souls College, Oxford, and Berkeley. He has delivered named lectures at Stanford, Oxford, Berkeley, The Johns Hopkins University, Princeton, Harvard, and Yale. The recipient of a Guggenheim Fellowship, a National Science Foundation Fellowship, and fellowships from National Endowment for the Humanities, he is a fellow of the American Academy of Arts and Sciences, a corresponding fellow of the British Academy, and an honorary fellow of Corpus Christi. Dr. Nagel previously served as associate editor of Philosophy & Public Affairs, and he has published some sixty-five articles in scholarly journals, including his famous 1974 essay in the *Philosophical Review*, "What is it like to be a bat?," in which he asserts

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that what we can't know about the consciousness of other forms of life reveals the irreducibly subjective character of experience. He has published ten books, which have been translated into twenty-four languages. Among them are *The Possibility of Altruism* (1970), *Mortal Questions* (1979), *The View from Nowhere* (1986), *Equality and Partiality* (1991), *The Last Word* (1997), and, most recently, *Concealment and Exposure and Other Essays*, which was published in 2002 by Oxford University Press.

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Janet Martin Soskice is a reader in philosophical theology at Cambridge University. She has written on metaphor as integral to religious understanding and about the mysterious reality of the absolute otherness of God combined with God's total presence in the world. Her interest in religious language also has led her to investigate the gender symbolism in the Bible and historical theology—and its implications for the role of women in the Church. A native of western Canada, she earned a B.A. at Cornell University, went on to Sheffield University in England for an M.A. in biblical studies and then to Oxford, where she pursued linguistic philosophy and took a D.Phil. in philosophy of religion 1982. While the Gordon Milburn Junior Research Fellow and subsequently as a lecturer at Ripon College, Cuddesdon, she taught philosophy at Oxford and at Heythrop College, London. Dr. Soskice moved on to Cambridge in 1998 as a university lecturer in modern theology and as fellow of Jesus College, where she is currently director of studies in theology. The recipient of a Canadian Commonwealth Research Fellowship and a British Academy Senior Research Fellowship, she has been a visiting professor at the universities of Uppsala and Calgary and was the first woman to be a Eugene McCarthy Visiting Professor at the Gregorian University in Rome. She delivered the Stanton Lectures at Cambridge in 1998-99 and last year was the Woods-Gumbel Lecturer at the Tantur Ecumenical Institute in Jerusalem. A past president of the Catholic Theological Association of Great Britain and the Theological Society of Cambridge, as well as a former ecumenical advisor to the Archbishop of Canterbury and member of the English Anglican-Roman Catholic Commission, she has acted for the Catholic bishops of England and Wales in consultations on Europe, on matters of faith and reason, and on Jewish-Catholic relations. Until this year she was chair of the board of the Margaret Beaufort Institute of Theology of the Cambridge Theological Federation, a Catholic college she was instrumental in founding. Dr. Soskice has been a member of the board of the Center for Theology and the Natural Sciences in Berkeley. She is a director with responsibility for fundamental theology of the international journal Concilium and serves on the editorial panel for the SCM Press series in Studies

in Philosophical Theology, the academic advisory board of Reviews in Religion and Theology, the editorial advisory board of Ars Disputandi: the Online Journal for Philosophy of Religion, and the editorial boards of Studies in Christian Ethics and Modern Theology. In addition to more than sixty articles in scholarly journals and essays in volumes of collected works, she is the editor or co-editor of three books, including (with Grant Gillett and K.W.M. Fulford) Medicine and Moral Reasoning (1994) and, more recently, (with Diana Lipton) Feminism and Theology, which was published by Oxford University Press in 2003, as well as four special issues of *Concilium*. Her widely acclaimed Metaphor and Religious Language (1985), a book influential on the debate in science and religion for its defense of critical realism, has been published in three subsequent paperback editions and translated into Japanese. Dr. Soskice's latest book, The Last Gospels from Sinai, weaves together the story of the discovery of an early New Testament manuscript by two Victorian sisters and a discussion of the impact of modernity on nineteenth century belief. It will be published next January by Chatto (London), Knopf (New York), Edition Lattes (Paris), and Wahlstrom & Widstrand (Stockholm). Forthcoming works include Naming the Christian God for the University of Virginia Press and The Offices of Love for Oxford University Press.

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The John Cardinal O'Hara Professor of Philosophy at the University of Notre Dame, **Peter van Inwagen** has written primarily on metaphysics, Peter van Inwagen the philosophy of logic, philosophical theology, and Christian apologetic. He has focused on such ultimate questions as the nature of the world, the reasons for its existence, and our place and purpose within it. Educated at Rensselaer Polytechnic Institute and the University of Rochester, where he earned a Ph.D. in philosophy in 1969, he began his teaching career at Syracuse University. He was named a professor of philosophy there in 1980 and remained on the faculty until 1995, when he accepted his present position at Notre Dame. Dr. van Inwagen has been a visiting professor at the University of Rochester, the University of Arizona, and Rutgers University. In addition to numerous invited lectures given in the United States, Canada, Peru, the United Kingdom, Europe, and China, he has delivered four major series of lectures—the F.D. Maurice Lectures at King's College, London, in 1999, the Wilde Lectures at Oxford University in 2000, the Stewart Lectures at Princeton University in 2002, and the Gifford Lectures at St. Andrews University in 2003. He is a member of the American Academy of Arts and Sciences and serves on the editorial boards of eight professional journals. Dr. van Inwagen has published some 125 articles in professional journals and edited five volumes of collected essays, including (with Dean Zimmerman) the forthcoming Persons: Human and Divine, which will be published by Oxford University Press. He is also the author of eight books. His first major work, An Essay on Free Will (1983), revolutionized the free will debate with his claim that human free will, a pre-condition of moral responsibility, is incompatible with determinism and his defense of it against various scientific and metaphysical objections. In Material Beings (1990), he developed and defended a theory of material objects according to which only living beings and fundamental particles exist. Following his now classic *Metaphysics* (1993, 2002) and a collection of essays in philosophical theology, God, Knowledge, and Mystery (1995), he published The Possibility of Resurrection and Other Essays in Christian Apologetics (1997). Ontology, Identity, and Modality

(2001) is another collection of his essays in metaphysics, and in his most recent book, *The Problem of Evil*, which will be published in June by Oxford Evil University Press, he contends that the vast amount of suffering in the world cannot be used to demonstrate that there is no God. A new work in preparation, *Being: A Study in Ontology*, will be published by the Clarendon Press.

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Fernando Vidal is a senior research scholar at the Max Planck Institute for the History of Science in Berlin. His scholarly interests include the relationship of self and body in the Christian tradition, particularly how discussions of the resurrection of the body may have shaped through time notions of personal identity. A native of Argentina, he was graduated magna cum laude from Harvard University and went on to study at the École Normale Supérieure in Paris before earning master's degrees in Fernando Vidal is a senior research scholar at the Max Planck Institute for the History of Science in Berlin. His scholarly interests include the relationship of self and body in the Christian tradition, particularly how discussions of the resurrection of the body may have shaped through time notions of personal identity. A native of Argentina, he was graduated magna cum laude from Harvard University and went on to study at the École Normale Supérieure in Paris before earning master's degrees in 25 What Is Our Knowledge of the Human Being? 26 psychology from the University of Geneva and in the history and philosophy of science from the Sorbonne. He took his Ph.D. in psychology from the University of Geneva in 1988. He had begun his teaching career in the psychology department at Geneva three years earlier, and in 1989 he became a lecturer in the history and philosophy of science and a *maître assistant* in psychology. Dr. Vidal was appointed an assistant professor of psychology and humanities at the University of New Hampshire in 1990, a post he held for two years until returning to the University of Geneva. He was named a maître d'enseignement et de recherche there in 1994 and accepted his present position at the Max Planck Institute in 2000. He has been a visiting research scholar at Harvard, a visiting scholar at the American Academy in Rome, and an invited professor at the Pontifícia Universidad Católica do Rio de Janeiro, the École des Hautes Études en Sciences Sociales in Paris, the Universidad do Estado do Rio de Janeiro, and the Universitat Autònoma de Barcelona. The recipient of a John Simon Guggenheim Memorial Fellowship, he also has been awarded the Prix Latsis Universitaire of the Latsis International Foundation and named an Athena Fellow of the Swiss National Science Foundation. Dr. Vidal serves as

consulting editor to *History of Psychology, Revue d'histoire des sciences humaines, Studi di psicologia dell'educazione,* and *Cuadernos argentinos de historia de la psicologia, as well as to From Past to Future: Clark University Papers on the History of Psychology.* He is the editor of an online edition of the early writings of Jean Piaget and of two books, including, most recently, (with Lorraine Daston) *The Moral Authority of Nature,* which was published in 2004 by the University of Chicago Press. In addition to articles and chapters in volumes of collected essays, he has written two books on Piaget, including *Piaget Before Piaget* (1994), which shows how moral and religious concerns influenced the Swiss psychologist's intellectual development, and *Piaget Neuchâtelois* (1996). His latest work, *Les sciences de l'âme: XVIe-XVIIIe siècle,* was published last month by Champion.

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A professor at the Institut Universitaire de France and on the Faculty of Medicine at the University of Paris-Sud, the renowned neurobiologist Jean-Didier Vincent was for many years the director of the Alfred Fessard Institute of Neurobiology at France's National Center for Scientific Research (CNRS) in Gif-sur-Yvette. He is a pioneer in the development of a new branch of biology that has come to be known as neuroendocrinology and is concerned with the interplay between glands and the nervous system. He was among the first to show how certain hormones act on the brain and on the neuronal mechanisms underlying functions such as hydromineral balance, hunger, thirst, reproduction, and sleep. A graduate of the University of Bordeaux II where he earned his medical degree and a Ph.D. in physiology in 1964, Dr. Vincent began teaching physiology at the University of Bordeaux in 1965 and was named a full professor in 1977. Four years earlier, he had become director of a CNRS laboratory, and in 1978, he created the Unit of Behavioral Neurobiology at INSERM, the French national medical research institute, which he directed until 1991 when he became director of the Fessard Institute, a position he held until 2004. A former president of the National Council of Programs in the Ministry of Education, he also has served as president of Scientific Council of the University of Paris-Sud and as a member of the Scientific Council of the University of Paris XI (Orsay). His many honors include election as an officier de l'Ordre de la Legion d'Honneur, chevalier de l'Ordre National du Mérite Agricole, and officier des Palmes Académiques. In addition to an honorary degree from the University of Bruselles and the Gold Medal of the University of Prague, he is the recipient of the Prix Lacaze de l'Académie des Sciences, the Prix Blaise Pascal, and the Prix Médecine et Culture. Dr. Vincent is a member of the French Académie des Sciences and Académie Nantionale de Médicine, the American Academy of Arts and Sciences, the Academia Europaea, and the Académie Royale de Belgique and an honorary member of the Académie Royale de Médicine de Belgique and the American Physiological Society. In addition to numerous scientific papers, essays in literary and philosophical journals, and chapters in volumes of collected works, he has written a dozen

best-selling science books for general readers, including: *The Biology of Passions* (1986, 1994, 2002) in which he proposes a new theory of emotions preserving free will; *Casanova: The Diseases of Pleasure* (1990); (with philosopher Luc Ferry) *What Is Man?* (2001), a reflection on the position of human beings within the context of nature; (with chef Jean-Marie Amat) *Towards a New Physiology of Taste* (2001), a work in the tradition of Brillat Savarin that describes the chemical and neuronal mechanisms of taste as well as attitudes toward food in contemporary society; and, most recently, *Les Coeur des autres: Biologie de la compassion*, which was published in 2003 by Plon.