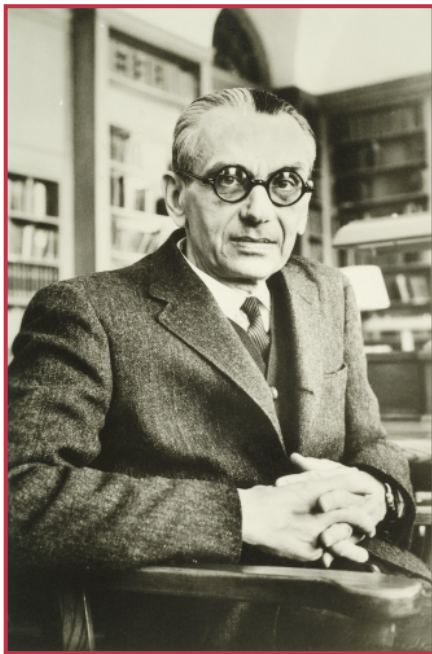


# THE INSTITUTE LETTER

INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY • SPRING 2006

## KURT GÖDEL CENTENNIAL



Kurt Gödel (1906–1978)

This year marks the 100th anniversary of the birth of Kurt Gödel, the foremost mathematical logician of the 20th century. Looking back over that century in the year 2000, *TIME* magazine included Gödel among its top 100 most influential thinkers. Gödel was associated with the Institute for Advanced Study from his first visit in the academic year 1933–34, until his death in 1978. He was Professor in the School of Mathematics from 1953 until 1976, when he became Professor Emeritus.

Kurt Friedrich Gödel was born on April 28, 1906, in what is now Brno in the Czech Republic. His father, Rudolf Gödel, was originally from Vienna; his mother, Marianne Handschuh, came from the German Rhineland. Rudolf Gödel managed and was part owner of one of Brno's major textile companies and the family lived in middle-class comfort with servants and a governess for Kurt and his older brother, Rudolf, born in 1902.

The young Gödel was known affectionately by the nickname, *der Herr Warum* (Mr. Why). In *Logical Dilemmas: The Life and Work of Kurt Gödel*, biographer John W. Dawson, Jr. describes him as “an earnestly serious, bright, and inquisitive child who was sensitive, often withdrawn and pre-occupied, and who, already at an early age, exhibited certain signs of emotional instability.” At age eight, after reading a medical book, Gödel became convinced that he had a weak heart, a possible complication of the rheumatic fever that he had recovered from at age six. Hypochondriac concerns for his health would become a lifelong preoccupation.

In 1923, Gödel enrolled in the University of Vienna with the intention of studying physics. After attending lectures on number theory by the charismatic professor Philip

Furtwängler, brother of famed German conductor Wilhelm Furtwängler, he switched to mathematics. Furtwängler was paralyzed from the neck down and lectured from his wheel chair with an assistant writing his formulae on the board. He made an impression much like that of Stephen Hawking today.

As a student, Gödel attended meetings of what would later become *Der Wiener Kreis* (Vienna Circle), a group of mainly philosophers who met to discuss foundational problems and who were inspired by Ludwig Wittgenstein's *Tractatus Logico-Philosophicus*. The group focused on questions of language and meaning and logical relations such as entailment, and originated Logical Positivism. Led by Moritz Schlick, a professor at the University who was later murdered by a deranged former student as he climbed the steps to the main lecture hall (1936), its members included Rudolf Carnap, Otto Neurath, Carl Hempel, Hans Reichenbach, and others.

In 1927, at age 21, Gödel met dancer Adele Nimbursky (née Porkert), in the Viennese night club, *Der Nachtfalter* (The Moth). Because Adele had been married and was six years older than Kurt, his parents disapproved of the match (his mother Marianne was 14 years younger than his father, Rudolf). This was the second time they had disapproved of Kurt's liaison with an older woman and it was not until the autumn of 1938 that Kurt and Adele were married.

Gödel pursued studies in mathematics and logic with Hans Hahn and Karl Menger. His doctoral thesis was completed in 1929, the year in which his father Rudolf died, leaving the family in comfortable circumstances. Gödel's mother bought an apartment in Vienna where she lived with both of her sons and enjoyed the cultural life of the city, especially musical theater. Gödel developed a lifelong love of operetta.

(Continued on page 6)



Kurt Gödel with his older brother Rudolf Gödel, Jr.

## INSTITUTE RECEIVES MAJOR GIFTS FROM TRUSTEES

The Institute for Advanced Study has received two extraordinarily generous donations from members of its Board of Trustees: Charles Simonyi, through the Charles Simonyi Fund for Arts and Sciences, and James H. Simons, through The Simons Foundation.

Charles Simonyi and James H. Simons have been Trustees of the Institute for Advanced Study since 1997 and 2001, respectively. Charles Simonyi is President and Chief Executive Officer of the Intentional Software Corporation in Bellevue, Washington, a company he founded in 2002. He has served the Institute as Chairman of its Academic Affairs Committee since 2001 and as President of the Corporation since 2003. James H. Simons is founder and President of Renaissance Technologies Corporation, an investment management firm dedicated to the use of mathematical methods. He is a distinguished mathematician and a past Member in the School of Mathematics (1972–73). Dr. Simons has served as Chairman of the Finance Committee since 2003.

The Charles Simonyi Fund for the Arts and Sciences has given the Institute an

unrestricted cash gift of \$25 million. In honor of Charles Simonyi's late father, a professor of electrical engineering who taught science to generations of Hungarian scientists and engineers, the Institute had created The Karoly Simonyi Memorial Endowment Fund (see sidebar, page 5).

The Simons Foundation has pledged \$10 million to the Institute as a challenge grant in support of the Institute's Center for Systems Biology, in recognition of which the Center will be named The Simons Center for Systems Biology (see sidebar, page 5). The grant is intended to inspire future funding from additional donors and is earmarked for operational costs associated with the Center, as well as the establishment of an endowment fund. The grant will be paid as the Institute matches the funds.

“We are immensely grateful to both of these Trustees for their outstanding endorsement of the mission of the Institute for Advanced Study,” said Peter Goddard, Director of the Institute. “This support will play an essential part in ensuring that the Institute is able to remain committed to its goal of advancing research in the most funda-

(Continued on page 5)

## NEWS OF THE INSTITUTE COMMUNITY

**A**dventures in Theoretical Physics: Selected Papers with Commentaries by STEPHEN L. ADLER, Professor in the School of Natural Sciences, has been published as Volume 37 in the *World Scientific Series in 20th Century Physics*. The volume contains reprints of seminal papers that helped lay the foundation for the current standard model of elementary particle physics, together with later important papers on a wide range of topics. The commentaries place the papers in both an historical and a current context.

**H**eights in Diophantine Geometry by ENRICO BOMBIERI, IBM von Neumann Professor in the School of Mathematics, is a 700-page volume published by Cambridge University Press. The book, co-authored with Walter Gubler (Dortmund University), belongs to a new series of mathematical monographs and deals with the study of numbers using advanced techniques of geometry and algebra.

**M**etamorphosis and Identity (2001) by CAROLINE WALKER BYNUM has been published in paperback (New York: Zone Books, 2005).

**I**n September, *Medieval Islamic Political Thought* by PATRICIA CRONE, Andrew W. Mellon Professor in the School of Historical Studies, won the British Kuwait Friendship Society prize in Middle Eastern studies. The book has recently been published in paperback by Edinburgh University Press as part of their New Edinburgh Islamic Surveys series and is available in the United States under the title *God's Rule—Government and Islam: Six Centuries of Medieval Islamic Political Thought*.

**I**n November, ROBERT P. LANGLANDS, Hermann Weyl Professor in the School of Mathematics, received the degree of Doctor of Science *honoris causa* from Madras University.

**T**he most recent book by JOAN W. SCOTT, Harold F. Linder Professor in the School of Social Science, has just been published in English, *Parité! Sexual Equality and the Crisis of French Universalism* (University of Chicago Press), and in French, *Parité! L'universel et la différence de sexe* (Albin Michel). In December, Professor Scott was awarded an honorary degree from the City University of New York's John Jay College.

**F**REEMAN DYSON, Professor Emeritus in the School of Natural Sciences, has received an honorary degree from the University of Michigan. Professor Dyson delivered the University's Commencement address on December 18, 2005.

**A**thènes Hellénistique: Histoire de la cité d'Alexandre le Grand à Marc Antoine (Paris, Les Belles Lettres, 2006) by CHRISTIAN HABICHT, Professor Emeritus in the School of Historical Studies, has just been published.

**I**n January, JOHN N. BAHCALL, the late Richard Black Professor of Astrophysics in the School of Natural Sciences, was posthumously awarded NASA's Exceptional Scientific Achievement Medal. NASA Administrator Michael Griffin presented the award to Dr. Neta Bahcall during a ceremony at the 207th meeting of the American Astronomical Society in Washington, DC. The award acknowledges John Bahcall's lifetime of achievement, including his work on development of the Hubble Space Telescope. For more information on Dr. Bahcall's career, legacy and impact, visit <http://www.sns.ias.edu/~jnb/>

**I**RVING LAVIN, Professor Emeritus in the School of Historical Studies, received the Premio Internazionale Galileo Galilei at the University of Pisa on October 10, 2005.

**I**n November, ADAM ASHFORTH, Visiting Associate Professor in the School of Social Science, received the 2005 Herskovits Award from the Africa Studies Association. The award recognizes the most important scholarly work in African studies published in English during the preceding year. Professor Ashforth was honored for *Witchcraft, Violence, and Democracy in South Africa* (Princeton University Press, 2005).

**I**nstitute Trustee MARIO DRAGHI has been appointed Governor of the Bank of Italy by the President of Italy, Carlo Azeglio Ciampi.

**I**n December, *Vita: Life in a Zone of Social Abandonment* (University of California Press, 2005) by JOÃO BIEHL, current Member in the School of Historical Studies and Member in the School of Social Science (2002–2003), was awarded the 2005 Eileen Basker Memorial Prize of the Society for Medical Anthropology during the annual meetings of the American Anthropological Association in Washington, DC. The award citation described Biehl's book as "an ethnographic study of social exclusion in Brazil that successfully marries powerful personal narrative with penetrating critical analysis." For his article, "The Activist State: Global Pharmaceuticals, AIDS, and Citizenship in Brazil," Biehl also received the Rudolph Virchow Award for the best professional article published in 2004 from the Society for Medical Anthropology.

**I**n January, *Just Silences: The Limits and Possibilities of Modern Law* by MARIANNE CONSTABLE, current Member in the School of Social Science, was published by Princeton University Press.

**A**n article by TANYA S. ROSENBLAT, current Member in the School of Social Science, "Why Beauty Matters," (joint with Markus Mobius) has been accepted for March publication in the *American Economic Review*. Dr. Rosenblat received a grant from the National Science Foundation in September for her research project entitled "Experiments with Real World Social Networks."

**I**AN ROXBOROUGH, current Member in the School of Social Science, was a prizewinner in the 2005 United States Naval Institute "Principles of War Essay Contest" for his article, "Take the Principles with a Pinch of Salt," published in *Proceedings*, October 2005.



**T**welve black-and-white and color postcards are available for sale from the reception desk in Fulld Hall, in sets or individually. The sets include period images such as that of pioneering archaeologist Hetty Goldman (1881–1972), the first woman on the Institute's permanent Faculty, and John von Neumann and J. Robert Oppenheimer in front of the IAS Machine in 1952, as well as contemporary views of Fulld Hall in autumn, the Institute pond, the Institute seal, and an archway at Fulld Hall.

**B**loodless Genealogies of the French Middle Ages: Translation, Kinship and Metaphor by ZRINKA STAHULJAK, current Member in the School of Social Science, was published by University Press of Florida in September.

**J**OHAN BALL, Member in the School of Mathematics (1993–94, 2002–03) and Sedleian Professor of Natural Philosophy at the Mathematical Institute, University of Oxford, received a knighthood in the U.K. New Year Honors list. Professor Ball is president of the International Mathematical Union (IMU), which promotes cooperation among mathematicians around the world and through which Professor Ball has helped coordinate support for mathematics in developing nations.

**D**efending the Rights of Others: The Great Powers, the Jews, and International Minority Protection, 1878–1938 (Cambridge, 2004) by CAROLE FINK, Member in the School of Historical Studies (1999), has been awarded the George Louis Beer prize of the American Historical Association for the best book in European International History. Carole Fink is Distinguished Humanities Professor, Department of History, Ohio State University.

**T**he Man Awakened from Dreams by HENRIETTA HARRISON, Member in the School of Social Science (2001–02) has been published in paperback by Stanford University Press.

**I**n November, SIMON A. LEVIN, a professor of ecology at Princeton University and a Member in the School of Natural Sciences (1999) was awarded the Kyoto Prize in the basic sciences for his role in establishing the field of spatial ecology. The award of a gold medal and \$423,700 from the Inamori Foundation is given for achievement in the arts and sciences.

**I**n December, economist MICHAEL S. MCPHERSON, Member in the School of Social Science (1981–82) was elected to the TIAA and CREF Boards of Overseers. He is co-author and editor of seven books, including *Keeping College Affordable* and *Economic Analysis and Moral Philosophy*, and was founding co-editor of the journal *Economics and Philosophy*.

**W**ILLIAM R. NEWMAN, Member in the School of Historical Studies (2000–01) received the History of Science Society's Pfizer Prize for his outstanding scholarly publication, *Alchemy Tried in the Fire: Starkey, Boyle, and the Fate of Helmontian Chymistry* (University of Chicago Press, 2002) which he co-wrote with Johns Hopkins University Professor Lawrence M. Principe. Newman is professor of the history and philosophy of science at Indiana University.

**T**HOMAS WILSON, Member in the School of Historical Studies (1999–2000) has been awarded a fellowship by the National Endowment for the Humanities (NEH) for his study of the cult of Confucius in China from the fourteenth through eighteenth centuries. While at the Institute, Wilson completed work on an edited volume titled *On Sacred Grounds: Culture, Society, Politics, and the Formation of the Cult of Confucius* (Harvard, 2003), for which he wrote two chapters and other articles, including "Sacrifice and the Imperial Cult of Confucius," *History of Religions* (Feb. 2002); and "Confucianism: The Imperial Cults," *Encyclopedia of Religions 2nd Edition* (Macmillan, 2004).

## Letter from the Director



Last year, the Institute for Advanced Study marked the 75th anniversary of its founding with a series of programs of special lectures, seminars, and discussions organized by each of its four Schools as well as a special celebration on the actual anniversary of the founding, May 20. These events provided opportunities for the entire Institute community—Faculty, Staff, current and former Members, Trustees, Friends and supporters—to reflect upon the Institute’s history, its mission, its continuing relevance and the ways in which this unique institution has developed over the years.

The Institute has remained, in the words of its founding Director, Abraham Flexner, “small and plastic,” but its influence, through the achievements of its Members and through the new institutions it has inspired, has been wide and profound. It is still, in its very essence, a community of scholars, both those who are here now, and more broadly, all who have benefited from membership. It retains the intimacy and focus envisioned by its founders.

Our anniversary celebrations provided occasions for some hundreds of past Members to return to the Institute. We heard of the impact that their time at the Institute had on their research careers, not only the work they began and finished here but also the contacts and friendships they formed. They spoke of the opportunities afforded by a period with the freedom to work on the attainment of long-determined goals without pressure for short-term results. In a world in which funding bodies tend to support research that is programmatic and promises predetermined deliverables, the freedom provided by the Institute to its Faculty and Members is increasingly rare. Whilst the focus of the work of the Faculty and Members has evolved in response to advances in knowledge and developments in society at large, the Institute’s commitment to curiosity-driven research remains constant and central to its purpose.

We are deeply indebted to the founders and our subsequent benefactors for providing and maintaining the independence which is essential for the Institute’s mission. The freedom for Faculty and Members to pursue their research, unconstrained by external pressures, depends upon the financial strength of the Institute. It is a freedom that we are working hard to preserve for future generations. To this end, we have set an initial capital campaign goal of \$100 million to increase the Institute’s endowment. This will be an important first step toward securing longer term funding, both for the new initiatives begun in recent years and for the fields long established at the Institute.

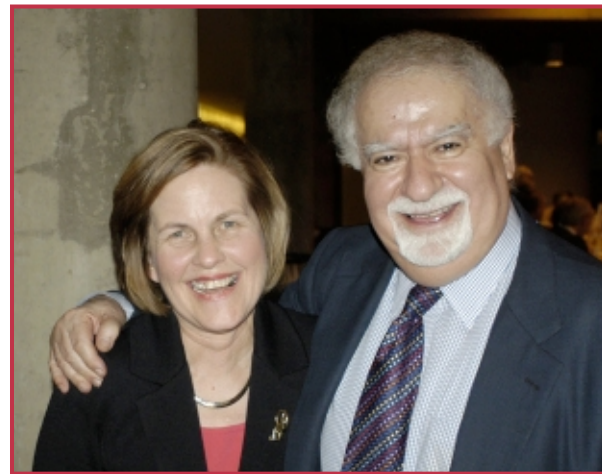
Many have contributed to the progress already made toward our goal. In particular, the Institute is profoundly grateful to the Charles Simonyi Fund for the Arts and Sciences and to The Simons Foundation for their extraordinary generosity. Their leading example is acknowledged in this issue of *The Institute Letter*. We thank them and all those who have supported the Institute for enabling it to remain true to the vision of its founders.

—Peter Goddard, *Director*

## ALLEN I. ROWE AND RACHEL D. GRAY RETIRE FROM THE INSTITUTE

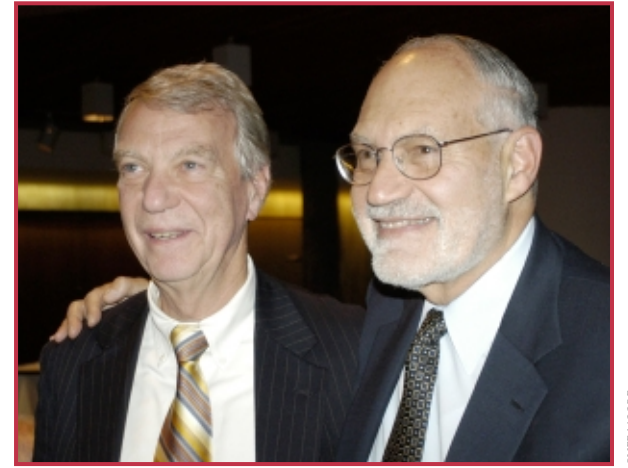
Two individuals who have embraced, sustained and carried forth the mission of the Institute have retired after years of dedicated service. In December 2005, Allen I. Rowe, who served as the Associate Director and Treasurer, retired after twenty-seven years, and in January 2006, Rachel D. Gray retired after serving as Associate Director for Development and Public Affairs for almost sixteen years. With more than forty years of combined leadership and dedication to the Institute, Mr. Rowe and Ms. Gray demonstrated exemplary commitment to its growth and development, and helped ensure its current and future success.

In celebration of their achievements, the Board of Trustees honored Mr. Rowe and Ms. Gray at a dinner on October 28, 2005. Chairman of the Board of Trustees James D. Wolfensohn, Board Vice Chairmen Richard B. Black and Martin L. Leibowitz, and Trustees Vartan Gregorian, Nancy S. MacMillan and Brian F. Wruble all delivered remarks that reflected on their respective years of close collaboration with both retirees. At the dinner, Mr. Rowe and Ms. Gray were each presented with commemorative awards in recognition of their many contributions. On January 13, 2006, more than



Retiring Associate Director Rachel Gray with Institute Trustee Vartan Gregorian on October 28, 2005

200 family members, friends, and community leaders joined Institute Trustees and current and former staff for a final send-off for Mr. Rowe and Ms. Gray in the Institute’s Dining Hall. After remarks by Institute Director Peter Goddard, Mr. Rowe and Ms. Gray were each presented with gifts that reflect their well-known personal interests and hobbies. Mr. Rowe, who intends to start playing golf again, received a set of TaylorMade golf clubs and sessions with a pro, in addition to a kayak to further enjoy his love of the outdoors. Ms. Gray, a gracious hostess known for her love of cooking and entertaining, received a dinner setting for eight of Royal Danish Silver flatware and serving pieces.



Retiring Associate Director Allen Rowe with Institute Board Vice Chairman Martin Leibowitz

Allen Rowe came to the Institute from Princeton University, where he served as Assistant Controller and then as Business Manager and Associate Division Head of the Plasma Physics Laboratory. In 1978, he was appointed Associate Director and Treasurer at the Institute, and since then, he has carried the responsibility for the Institute’s administration and finances. Over a period of close to three decades, which spans the tenures of four of the Institute’s eight Directors, Mr. Rowe oversaw the expansion of the Institute’s campus facilities, including Wolfensohn Hall, Simonyi Hall and Bloomberg Hall. In addition to physical expansion, this period also included an expansion of academic areas at IAS, including Theoretical Computer Science, East Asian History, Astrophysics and Theoretical Biology, further strengthening the diversity and vitality of life and scholarship at the Institute. While retired as Associate Director and Treasurer, Mr. Rowe has assumed a new role at the Institute as Executive Administrative Officer, with responsibilities including the administration associated with the Institute’s investments and the planning and management of some major projects.

After heading Development at the Princeton Ballet, Rachel Gray began her career at the Institute in 1990 as Assistant Development and Public Relations Officer. She assumed her role as Associate Director for Development and Public Affairs in 1992, and as Secretary of the Corporation in 1993. During her tenure, which included direction of all Development and Public Affairs initiatives, Ms. Gray increased the Institute’s resources and helped to better communicate its mission, while deepening and strengthening contact with existing and new supporters. Ms. Gray built important bridges between the Institute and the community, and worked passionately on behalf of the preservation of the Institute Lands while securing funding for major projects such as Bloomberg Hall.

## Successors Appointed

In December 2005, John Masten joined the Institute as Associate Director for Finance and Administration. Mr. Masten has worked for more than 30 years in financial, operations and strategic planning for academic, not-for-profit and public institutions. He was most recently the Executive Vice President for Finance at Columbia University, where he directed for a decade the financial management of the University. While there, Mr. Masten carried out a complete restructuring of the budgetary relationship between the University and its schools, to foster transparency and accountability, and helped secure an upgrading of the University’s credit rating to triple A from both Moody’s and Standard and

Poor’s. Before coming to Columbia, Mr. Masten worked at The New York Public Library for eleven years in a range of key roles, concluding his tenure there as Executive Vice President (1991–94). Mr. Masten graduated *summa cum laude* in history from Dartmouth in 1969, and went on to earn an M.A. in Politics, Philosophy and Economics at Balliol College, Oxford, in 1971. He then received a J.D. from Yale Law School in 1974.

Michael Gehret, the Institute’s new Associate Director for Development and Public Affairs, joined the Institute in November 2005. Mr. Gehret, a seasoned development professional with extensive not-for-profit experience

(Continued on page 9)

## AVISHAI MARGALIT APPOINTED TO KENNAN CHAIR

Avishai Margalit has been appointed as the George F. Kennan Professor in the School of Historical Studies. Dr. Margalit is Schulman Professor of Philosophy at the Hebrew University in Jerusalem. He is considered one of the foremost thinkers and commentators on the contemporary human condition, current moral issues and problems facing western societies. Dr. Margalit will begin his two-year appointment on July 1, 2006.

“Avishai Margalit’s work bears on some of the most important moral and political issues of our time. He has introduced fresh insights, born of subtle analysis, to illuminate the most highly fraught international problems and the challenges of modern society. He is an important intellectual figure whose presence will add much to the life of the Institute,” said Peter Goddard, Director of the Institute.

“I eagerly await my stay at the Institute as the Kennan Professor,” stated Avishai Margalit. “The intensity of the scholarship and diversity of study there is unsurpassed, and I look forward to many productive and stimulating discussions with my future colleagues on the Institute’s Faculty and with the scholars who visit each year.”

Dr. Margalit’s work in analytical philosophy is chiefly concerned with issues of metaphor, theory of language, logic and theories of rationality. He is highly regarded for his observations of the Israeli-Palestinian conflict and the broader conflict between Islam and the West. His many books and articles include *The Decent Society* (1996) and *Occidentalism* (with Ian Buruma, 2004).



Avishai Margalit

Born in Jerusalem in 1939, Dr. Margalit received his BA and MA in philosophy in 1963 and 1965, respectively, at the Hebrew University, where he also received his Ph.D. in 1970. That same year, he joined the faculty of the department of philosophy at the Hebrew University, and has remained ever since. Since 1974, he has held visiting professorships at leading universities around the world, among them Harvard University and the Free University of Berlin, and he has been a Fellow at international institutions including the Max Planck Institute, Wolfson College and St. Antony’s College at Oxford University, and the Center for Human Values at Princeton University. A public figure in Israel and beyond, he is a founder of “Peace Now,” the Israeli peace movement calling for recognition of the rights of Palestinians to self-determination in their own state, alongside Israel. In 2001, Dr. Margalit received the Spinoza Lens Prize, awarded by the International Spinoza Foundation for “a significant contribution to the normative debate on society.” In Spring 2005, he delivered the Tanner Lectures at Stanford University. He is a frequent contributor to *The New York Review of Books*.

The Kennan Chair is designed to bring to the Institute outstanding scholars whose work bears on the understanding of the contemporary world and who combine such excellence with acknowledged importance as a voice or presence in the public arena. Established in 1995 to honor the diplomat, scholar and Institute Faculty member George F. Kennan (1904–2005), the chair was previously held by Jack F. Matlock, Jr. (1996–2001) and by José Cutileiro (2001–2004). ■

## SUPPORT FOR MEMBERS

### D. E. Shaw & Co., L.P. Membership



Simeon Hellerman

Simeon Hellerman, a five-year Member in physics in the School of Natural Sciences (2003–08), is the first D. E. Shaw & Co, L.P. Member at the Institute for Advanced Study. This new Membership supports work in the area of mathematical aspects of string theory and comes from the New

York City-based company founded in 1988 by Dr. David E. Shaw. Currently working on a variety of topics in string theory and its application to cosmology and particle physics phenomenology, Dr. Hellerman reports that his most active project is “devoted to mapping out the set of ‘non-geometric’ vacua of string theory—those in which the unseen dimensions of spacetime cannot be understood in terms of tiny spaces with well-defined geometry and topology.” In his research work, Dr. Hellerman tries to derive, within the framework of the most general consistency conditions of quantum gravity, bounds on the effective measurable parameters of low-energy physics, such as axion decay rates and interaction cross sections.

The D. E. Shaw group is a specialized investment and technology development firm whose activities center on various aspects of the intersection between technology and finance. Headquartered in New York, the D. E. Shaw group encompasses a number of closely related entities with approximately US \$19 billion in aggregate capital.

### Hans Kohn Membership

Jeremy Popkin is the Hans Kohn Member in the School of Historical Studies at the Institute for Advanced Study. Dr. Popkin’s research interests lie in

the area of French history with a current emphasis on “Colonial Issues and Politics in Revolutionary France, 1788–1804.” He is a professor in the department of history at the University of Kentucky. Dr. Popkin is currently examining the ways in which colonial issues—particularly the question of whether overseas colonies constituted part of the French nation, and the implications of slavery for the answer to that question—affect politics in revolutionary France. He is interested in Napoleon’s attempt to reinstitute slavery in the French colonies in 1802. “This was an integral part of Napoleon’s effort to bring the Revolution to an end and its failure ultimately led to the independence of the new nation of Haiti, with profound consequences for the entire Atlantic world. Despite the obvious importance of the subject, there has not been any comprehensive examination of this topic in any language for over half a century,” said Dr. Popkin.

This Membership is endowed by Immanuel and Vera Kohn in honor of Mr. Kohn’s father, Hans Kohn (1891–1971), an educator and intellectual historian who was a Member in the School of Historical Studies (1948, 1955). The first Hans Kohn Member was named in the 2002–03 academic year. Hans Kohn received a Doctor of Law degree from the German University in Prague. After being held as a prisoner of war during World War I, he lived in Paris, London and Jerusalem. He published numerous books and articles, lectured and



Jeremy Popkin

served as a newspaper correspondent before coming to the United States in 1934, initially as Professor of History at Smith College. From 1949 until 1961 he taught at City College of New York. He also taught at the New School for Social Research and was a visiting professor and lecturer at a number of universities, including Harvard, Texas, Berlin, Chicago and Northwestern. Hans Kohn’s more than 40 pub-

lished books include: *The Age of Nationalism: The First Era of Global History* and his autobiographical reminiscences *Living in a World Revolution: My Encounters with History*.

Immanuel Kohn has been a Trustee of the Institute since 1997. Mr. and Mrs. Kohn have been Friends of the Institute since 1981 and are Members of the Chairman’s Circle of Friends.

### Martin and Sarah Leibowitz Membership



Kaja Harter-Uibopuu

Kaja Harter-Uibopuu is the Martin and Sarah Leibowitz Member in the School of Historical Studies. Dr. Harter-Uibopuu works at the Commission for Ancient Legal History, Austrian Academy of Sciences. Her current research project concerns “Judicial Organization and the Law of Procedure in Roman Athens,” for which she is currently examining the law of procedure in private and public cases in Roman Athens from the first century BC to the third century AD using epigraphic as well as literary evidence. She is analyzing the organization of the courts and the role of the judicial magistrates as well as the forms and stages of trials, sentences and verdicts and the important question of execution.

Dr. Harter-Uibopuu, whose research is furthered by the Institute’s collection of squeezes in the School of Historical Studies, hopes that her study will “fill a gap in legal history and contribute to research on the interaction between Rome and Athens.”

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Martin L. Leibowitz is a Trustee of the Institute and is a Vice Chairman of the Board. In addition to this endowed Membership, Martin and Sarah Leibowitz’s thoughtful support over many years has been significant in advancing the mission of the Institute. ■

## INSTITUTE RECEIVES MAJOR GIFTS (Continued from page 1)

mental aspects of the sciences and humanities.”

The two gifts continue the strong legacy of support established by the Institute’s founders, Louis Bamberger and his sister Caroline Bamberger Fuld. The sequence of Bamberger/Fuld gifts, made between 1930 and their deaths in 1944, amounted to more than \$16 million and created the foundation for the Institute’s endowment. Together with other significant gifts

received since mid-2004 from supporters of the Institute, the Simonyi and Simons gifts bring the total gifts and pledges to the Institute over an 18-month period to more than \$60 million. This figure represents more than half of an initial capital campaign goal of \$100 million established by the Institute as an important step toward strengthening its endowment and funding existing programs.

### Charles Simonyi Fund for Arts and Sciences



BRIAN SMALE

Charles Simonyi

The Seattle-based Charles Simonyi Fund for Arts and Sciences was established in 2003. Its gift constitutes a landmark in the Institute’s history as the largest donation since the founding of the Institute in 1930.

“Charles Simonyi is a remarkably enlightened person, deeply committed to the Institute and its objectives,” said Peter Goddard. Dr. Simonyi has been actively involved with the Institute since 1996, endowing the Charles Simonyi Professorship in Theoretical Physics held by physicist Edward Witten of the Institute’s School of Natural Sciences since 1997. He also donated \$5 million to the Institute’s School of Mathematics to assist it in providing the financial independence to select the very best Members, many from abroad. Simonyi Hall, the building that houses the School of Mathematics, was dedicated in May 2000 in recognition of Dr. Simonyi’s participation in the life of the Institute community and his commitment to the work that takes place here.

Encouraged to emigrate to the United States from Hungary by his late father, Charles Simonyi earned a

B.S. in engineering and mathematics from the University of California at Berkeley in 1972, and his Ph.D. in computer science from Stanford University in 1977. He worked at the Xerox Palo Alto Research Center (PARC) from 1972 until 1980, where he did most of the design and the critical implementation work on Bravo, the first WYSIWYG (what-you-see-is-what-you-get) editor, and led the team that built it. In 1981, Dr. Simonyi joined Microsoft to start the development of microcomputer application programs, and was responsible for hiring and managing teams who developed such well-known programs as Microsoft Word, Microsoft Excel, Multiplan and others. For this work, he was elected to the National Academy of Engineering and the Hungarian Academy of Science. He left Microsoft in 2002 to start the Intentional Software Corporation, which aims to improve software productivity.

“I believe that the Institute performs a crucial role in nurturing and promoting original thinking and scholarship,” said Charles Simonyi. “It is an honor for me to be so closely engaged with the Institute, its Faculty, and its Members, who come from around the world to pursue their influential research. The Simonyi Fund for Arts and Sciences considers this gift to the Institute important for fostering the future practical advancements that will result from intellectual inquiry, and it is thrilling to be part of such a worthy endeavor.”

### The Simons Foundation



CLIFF MOORE

James H. Simons

The New York City-based Simons Foundation was established in 1994 by James H. Simons and his wife Marilyn Hawrys Simons in order to advance the frontiers of research in the basic sciences and mathematics.

“James Simons is actively engaged in the intellectual life and growth of the Institute,” said Peter Goddard, “and he believes strongly in the development of biology as a discipline. The Simons Foundation’s matching grant is a testimony to the lasting significance that the Institute holds for those, such as Jim, who have worked here and the impact it has had on their lives. This challenge grant will greatly facilitate the Institute’s new initiative in theoretical biology, comprising biologists and scientists trained in physics and in mathematical disciplines, working in close proximity to the Institute’s leading theoretical physicists and astrophysicists. We are confident that other supporters will rise to The Simons Foundation’s challenge to join them in nurturing this crucial extension of the work of the Institute.”

Prior to founding Renaissance Technologies Corpo-

ration, Dr. Simons served as Chairman of the Mathematics Department at the State University of New York at Stony Brook, was a cryptanalyst at the Institute for Defense Analyses in Princeton, and taught mathematics at the Massachusetts Institute of Technology and Harvard University. His work in mathematics includes the discovery and application of certain quantities called the Chern-Simons Invariants, which have led to important developments in many areas of mathematics and theoretical physics. Dr. Simons received his bachelor’s degree from the Massachusetts Institute of Technology and his Ph.D. in mathematics from the University of California at Berkeley. Marilyn Simons, Ph.D. has been President of The Simons Foundation since 1994. In addition to her work at the Foundation, Dr. Simons’ primary involvement has been with non-profits that focus on education.

“During the past several decades developments in biology have made the field increasingly amenable to the methods and insights of physics and mathematics,” said Dr. Simons. “The establishment of a kernel of outstanding biologists at IAS, where large numbers of equally outstanding mathematicians and natural scientists are continually in residence, is a perfect way to nurture this incipient development. Arnold Levine and his colleagues are eager to teach, and we believe many IAS Members will be eager to learn. Together, they may begin to attack and to solve some of the deepest and most important problems in the life sciences.” ■

### KAROLY SIMONYI MEMORIAL ENDOWMENT FUND

The Karoly Simonyi Memorial Endowment Fund will honor the values embodied and espoused by Karoly Simonyi, who believed in the pursuit of knowledge, the excellence of and dedication to scholarship, and the intricate connection between the humanities and the natural sciences. One of ten children from a small village in the Hungarian countryside, Karoly Simonyi excelled in school and went on to a long career in teaching, including 25 years at the Technical University of Budapest. An accomplished teacher, author and scholar, he wrote many textbooks, including *Foundations of Electrical Engineering* and *Electron Physics*, both of which have been published in multiple editions and translated into a half dozen languages.

Following World War II and the Soviet occupation of Hungary, Karoly Simonyi sought refuge in his work. After the failed revolution in Hungary in 1956, he had to leave his post at the Physics Research Institute. When his son Charles successfully emigrated from Hungary to the United States, the communist authorities stripped Karoly Simonyi of his professorship in retaliation. While disheartening, the event enabled Karoly Simonyi to focus on lecturing informally about the history of science, the result of which was his book, *The Cultural History of Physics* (1978), tracing the development of physics from antiquity against the backdrop of the evolution of thought in philosophy, theology and the arts. Published in three editions in Hungarian and German, the book brought a new and significant appreciation of science, history, and the humanities to a broad readership. Karoly Simonyi died in Budapest in 2001 at the age of 85.



### THE SIMONS CENTER FOR SYSTEMS BIOLOGY

The Institute’s Center for Systems Biology was established in 2003 under the leadership of Arnold J. Levine, Professor in the School of Natural Sciences. It conducts research at the interface of molecular biology and the physical sciences and hosts a range of distinguished Members and Visitors annually, fostering original theoretical research in the fields of systems biology, most commonly utilizing genetic, molecular and evolutionary approaches, and in some cases, a focus upon understanding disease processes. The Center’s existence creates opportunities for individuals working in systems biology to meet, hold seminars and symposia, collaborate in research and interact on a regular basis.

In addition to providing a stimulating environment for its Members and Visitors, the Center has close collaborations with the Cancer Institute of New Jersey, Robert Wood Johnson Medical School, Lewis-Sigler Center for Integrative Genomics at Princeton University, and BioMaPS Institute at Rutgers, The State University of New Jersey. These partnerships help to extend and promote the necessary exchange and practice of ideas for future discoveries and strides in the field. As one of the leading centers for theoretical research in the sciences, the Institute is a natural home for biologists to visit and work, since life scientists increasingly require extensive skills in mathematics, physics, computer science and chemistry.

## TEA WITH KURT AND ADELE

### *Glimpses of Gödel from Freeman Dyson's 1948 letters home to his parents*

Looking through his collection of letters written to his parents in England, Freeman Dyson, Professor Emeritus in the School of Natural Sciences, discovered a report of his visit to the home of Kurt and Adele Gödel, written less than a month after he first arrived at the Institute in 1948: "It is remarkable that Gödel invited me to his home," comments Professor Dyson, "I was a fresh post-doc and he had never seen me before. He was much more friendly and much more hospitable than I had expected. Here is what I wrote."

*Before I stop I must tell you about my meeting with Gödel. We talked mainly about mathematics and physics. He is an amusing talker, and not so pathologically shy in his home as he is at the Institute. He is a little man of about forty, with a fat little Austrian wife, and they live together seeing very little of anybody, and will no doubt continue to do so for many years to come since he is a permanent member of the Institute. The interesting thing to me was to learn what Gödel is doing and proposes to do in the way of research. He produced during his youth two epoch-making discoveries in pure mathematics, one in 1932 and one in 1939, and since then nothing has been heard from him. With the whole of mathematics to choose from and his unrivalled talents, I was very curious to know what such a man would choose to do. The answer, when it came, was completely baffling. It turns out that he has spent the last few years working in physics, in collaboration with Einstein, on problems of general relativity.*

*I will try to explain why this is so baffling. In the first place, there is no question of Gödel suffering from deterioration of intellect. He understands general relativity and its position in physics as well as anybody, and knows quite well what he is about. He has found some results which will certainly be of interest to specialists in relativity. On the other hand, it is fairly clear to most people that general relativity is one of the least promising fields that one can think of for research at the present time. The theory is from a physical point of view completely definite and completely in agreement with all experiments. It is the general view of physicists that the theory will remain much as it is until there are either some new experiments to upset it or a development from the direction of quantum theory to include it. And in spite of all this, there is Gödel.*

Professor Dyson comments: "Unfortunately there is only one more glimpse of Gödel in the letters. Two months later [letter of November 25, 1948] he comes with his wife to the Institute dance, which was held in the common room. His wife dances with me but he does not dance. He was standing around by himself miserably while all this went on. He did not seem to talk to anybody all the evening. My memories of those early years at the Institute are faded and fragmentary. In later years I interacted very little with Gödel. He sometimes called me by telephone to ask whether the astronomers had any new observations, which could either confirm or contradict his model of a rotating universe. That was the model that he had been working on when he talked to me in 1948. I had to tell him each time that the observations of galaxy distributions and of the cosmic microwave background radiation were not yet accurate enough to set interesting limits on the speed of rotation of the universe. He always remained intensely interested in finding out whether his model might give a true picture of the universe we live in. Now, thirty years later, the observations are far more precise, and we still see no evidence that we live in Gödel's rotating universe."

## GÖDEL CENTENNIAL (Continued from page 1)



Kurt Gödel and Adele Porkert were married in Vienna in 1938.

and was sometimes thought to be Jewish. He had once been attacked as such by a gang of youths while walking with Adele on a street in Vienna. During the 1930s it was not unusual for university students who were Jewish or had socialist leanings to be forcibly removed from classes. Many of Gödel's contemporaries were fleeing Europe.

In 1931, Gödel published results in formal logic that are considered landmarks of 20th-century mathematics. Gödel demonstrated, in effect, that hopes of reducing mathematics to an axiomatic system, as envisioned by mathematicians and philosophers at the turn of the 20th century, were in vain. His findings put an end to logicist efforts such as those of Bertrand Russell and Alfred North Whitehead and demonstrated the severe limitations of David Hilbert's formalist program for arithmetic.

In his introduction to his 1931 paper, Gödel stated: "It is well known that the development of mathematics in the direction of greater precision has led to the formalization of extensive mathematical domains, in the sense that proofs can be carried out according to a few mechanical rules.... It is reasonable therefore to make the conjecture that these axioms and rules of inference are also sufficient to decide all mathematical questions, which can be formally expressed in the given systems. In what follows it will be shown that this is not the case."

After receiving his doctorate, Gödel became a *privatdozent* (unpaid lecturer) at the University of Vienna. Like many of the young scholars who later found their way to the Institute for Advanced Study from Europe in the 1930s, Kurt Gödel was brilliant. Unlike many, he was not Jewish, although he moved in circles of Jewish intellectuals

By the age of 25 Kurt Gödel had produced his famous "Incompleteness Theorems." His fundamental results showed that in any consistent axiomatic mathematical system there are propositions that cannot be proved or disproved within the system and that the consistency of the axioms themselves cannot be proved. In addition to his proof of the incompleteness of formal number theory, Gödel published proofs of the relative consistency of the axiom of choice and the generalized continuum hypothesis (1938, 1940). His findings strongly influenced the (later) discovery that a computer can never be programmed to answer all mathematical questions.

Of his influence on the development on theoretical computing, Avi Wigderson, Herbert H. Maass Professor in the School of Mathematics, says:

"Gödel's work in the 1930s had a strong influence on the development of theoretical models of computation (and thereby, to the creation of real computers and the computer revolution we live today). Firstly, his definition of recursive functions gives one of the first models of computation, influencing Turing and Church in their study of the universality of this notion. Next, Alan Turing's seminal work on defining computation (via Turing machines) has strong analogies with Gödel's work on Incompleteness, and was certainly strongly influenced



By several accounts, Adele Gödel was a loving support to her husband, whom she addressed as *strammer bursche* (strapping lad).

## GÖDEL'S WORK

Kurt Gödel was logician, mathematician, and philosopher, all rolled into one. He was perhaps the foremost logician of the twentieth century, with major ground-breaking results in the theory of formal deductive systems, in automata theory, in intuitionistic mathematics, in set theory, and in relativistic physics, most within the span of a scant 20 years. His most celebrated result is the pair of 1931 theorems on the incompleteness of formal systems of arithmetic, in which he showed that it is impossible to devise a system of axioms for even the elementary arithmetic of whole numbers that are sufficient for answering every question that can be framed in their terms—including the question of their own consistency.

If devising axioms and constructing proofs that consist in the derivation of consequences from those axioms is a central way that mathematics proceeds, these theorems show its task to be essentially incomplete, even within areas already under investigation.

The questions Gödel chose to investigate and the results he achieved were, by his own admission, guided by his philosophical views on the nature of mathematical activity as a mental activity that cannot be modeled as any sort of mechanical process. He wrote

as follows in 1963 by way of suggested correction to a proposed article that was to appear in *TIME* magazine:

*Before Gödel's work it had been widely conjectured that any precisely formulated mathematical yes or no question can be decided by the mechanical rules of logical inference on the basis of a few mathematical axioms. In 1931, Gödel showed that, no matter what axioms are chosen, there exist number-theoretical yes or no questions not decidable from the axioms. Combining this proof with A.M. Turing's theory of computing machines, one arrives at the following conclusion: either there are infinitely many number-theoretical questions which human reason is unable to answer or human reason contains an element which, in its action, is totally different from any finite combinatorial mechanism and its parts. Gödel hopes it will be possible to prove that the second alternative holds.*

Paul Benacerraf  
Princeton University  
Director's Visitor 2004–05



Kurt Gödel at the Institute for Advanced Study

by it. In particular, the use of the diagonal argument in Turing's work for proving Incomputability of basic computational tasks strongly resembles Gödel's argument on Incompleteness, especially the dual role played by integers as simultaneously representing data as well as programs/formulae.

"Gödel's insight into computing has gone far beyond computability. In the 1950s he was interested in efficient computation—the main focus of current research in Theoretical Computer Science. In a (recently discovered) letter to von Neumann, Gödel foreshadowed some of the insights of the 1970s. In it, he almost precisely defines a major problem of this field (and more generally of Mathematics), the P versus NP problem, with which we are struggling to this very day."

In 1938, Gödel's application for a paid position at the University of Vienna was turned down. Fearing conscription into the Germany army, he applied for a visa to the United States. In late 1939, Kurt and Adele

fled Nazi Germany, traveling via the trans-Siberian railway and ship to San Francisco, where they arrived on March 4, 1940. They settled in Princeton where Gödel's position at the Institute was renewed annually until 1946, when he became a permanent Member until appointed to the Faculty.

At the Institute, Gödel developed close friendships with John von Neumann and Albert Einstein. Von Neumann had been one of the first to recognize the implications of Gödel's work. When von Neumann, who was lecturing on Hilbert's work at the time, read Gödel's 1931 paper, he cancelled what was left of his course and began lecturing on Gödel's findings. Friendship between Gödel and Einstein developed as they walked to and from the Institute, engaged in physical and philosophical discussion with respect to relativity, including Gödel's rotating universe model, among other topics.

When Gödel applied for naturalization as an American citizen in 1948, it was Einstein who, together with Oskar Morgenstern, accompanied him to his interview with the Immigration and Naturalization Service (see below). It was Einstein too who suggested Gödel for the prestigious Einstein Award, which he received in 1951 jointly with Julian Schwinger, a move designed by Einstein to bolster Gödel's morale at a time when he had been ill.

After suffering from severe bleeding from a duodenal ulcer, Gödel maintained an extremely strict diet that led to severe weight loss. By several accounts, Adele Gödel was a loving support to her husband, whom she addressed as *strammer bursche* (strapping lad). Mathematical logician Georg Kreisel, a Member in the School of Mathematics (1955–57), records their relationship in *Biographical Memoirs of Fellows of the Royal Society* [1980, Volume 26]: "I visited them quite often in the fifties and sixties. It was a revelation to see him relax in her company. She had little formal education, but a real



Albert Einstein presenting Einstein Awards to Kurt Gödel and Julian Schwinger in 1951.

flair for the *mot juste*, which her somewhat critical mother-in-law eventually noticed too, and a knack for amusing and apparently quite spontaneous twists on a familiar ploy: to invent—at least, at the time—far-fetched grounds for jealousy. On one occasion, she painted the I.A.S., which she usually called *Altersversorgungshaus* (home for old-age pensioners), as teeming with pretty girl students who queued up at the office doors of permanent professors. Gödel was very much at ease with her style."

When Gödel became convinced that he was being poisoned, Adele became his food taster. His digestive ailments and, particularly, his refusal to eat led ultimately to his death on January 14, 1978. He died in Princeton at age 72 and is buried in the Princeton Cemetery. ■

## GÖDEL, EINSTEIN AND THE IMMIGRATION SERVICE



Gödel and Einstein were often seen walking together to and from the Institute during the early 1950s.

On September 13, 1971, Oskar Morgenstern recorded the following memory of Kurt Gödel's 1948 Trenton interview with an official of the Immigration and Naturalization Service (INS).

"[Gödel] rather excitedly told me that in looking at the Constitution, to his distress, he had found some inner contradictions and that he could show how in a perfectly legal manner it would be possible for somebody to become a dictator and set up a Fascist regime never intended by those who drew up the Constitution. I told him that it was most unlikely that such events would ever occur, even assuming that he was right, which of course I doubted. But he was persistent and so we had many talks about this particular point. I tried to persuade him that he should avoid bringing up such matters at

the examination before the court in Trenton, and I also told Einstein about it: he was horrified that such an idea had occurred to Gödel, and he also told him he should not worry about these things nor discuss that matter.

Many months went by and finally the date for the examination in Trenton came. On that particular day, I picked up Gödel in my car. He sat in the back and then we

went to pick up Einstein at his house on Mercer Street, and from there we drove to Trenton. While we were driving, Einstein turned around a little and said, "Now Gödel, are you really well prepared for this examination?" Of course, this remark upset Gödel tremendously, which was exactly what Einstein intended and he was greatly amused when he saw the worry on Gödel's face.

After this remark, Gödel wanted to discuss all sorts of questions relating to the Constitution of the United States and his forthcoming examination. Einstein, however, rather deliberately, turned the conversation around. He told Gödel and me at great length that he had just read a rather voluminous account as to how it came that the Russians adopted the Greek Orthodox religion of Catholicism instead of the Roman Catholic faith.... Gödel did not want to hear any of this but Einstein in his sardonic way insisted on going into incredible details of this entire history, while I was trying to drive through the increasingly dense traffic at Trenton.

When we came to Trenton, we were ushered into a big room, and while normally the witnesses are questioned separately from the candidate, because of Einstein's appearance, an exception was made and all three of us were invited to sit down together, Gödel, in the center. The examiner first asked Einstein and then me whether we thought Gödel would make a good citizen. We assured him that this would certainly be the case, that he was a distinguished man, etc. And then he turned to Gödel and said, *Now, Mr. Gödel, where do you come from?*

Gödel: *Where I come from? Austria.*

The examiner: *What kind of government did you have in Austria?*

Gödel: *It was a republic, but the constitution was such that it finally was changed into a dictatorship.*

The examiner: *Oh! This is very bad. This could not happen in this country.*

Gödel: *Oh, yes, I can prove it.*

So of all the possible questions, just that critical one was asked by the examiner. Einstein and I were horrified during this exchange; the examiner was intelligent enough to quickly quieten Gödel and broke off the examination at this point, greatly to our relief."

## SCHOOL OF SOCIAL SCIENCE Celebratory Events for the Institute's 75th Anniversary

In recognition of the 75th anniversary of the founding of the Institute for Advanced Study in 1930, the School of Social Science at the Institute for Advanced Study hosted a series of lectures by distinguished scholars on Friday, November 11 and Saturday, November 12. The lectures were attended by current and past Members of the School, as well as by members of the Institute community and the general public.

On Friday, the School presented short talks by members of the Faculty on the subject of "Social Science and the Contemporary World." UPS Foundation Professor Michael Walzer discussed the revival of religion in states that had been established by secular national liberation



Michael Walzer, UPS Foundation Professor in the School of Social Science

movements such as those of India, Israel and Algeria. His talk, "National Liberation and Religious Revival," raised questions about the cultural reproduction of secular politics. Regarded as one of America's foremost political thinkers, Michael Walzer addresses a wide variety of topics in political theory and moral philosophy in his writings, including political obligation; just and unjust war; nationalism and ethnicity; economic justice; and the welfare state. His work has played a critical role in the revival of a practical, issue-focused ethics and in the development of a pluralist approach to political and moral life. Currently, he is working on the toleration and accommodation of "difference" in all its forms and also on a collaborative project focused on the history of Jewish political thought.

In his talk, "Auction Theory in Practice," Albert O. Hirschman Professor Eric S. Maskin considered some of the theoretical ideas behind an auction run by the government of the United Kingdom in 2003 in which



Eric S. Maskin, Albert O. Hirschman Professor in the School of Social Science

the participants were British companies and whose purpose was to reduce their emissions of greenhouse gases. Professor Maskin is an internationally recognized authority on economic theory. His work has been drawn on extensively by researchers in industrial organization, finance, development, and other fields in economics and political science. He works in many areas of economic theory, including game theory, the economics of incentives, and social choice theory.

Harold F. Linder Professor Joan Wallach Scott spoke on "Balancing Equality and Difference," discussing the ways in which demands for the recognition of group difference (by women, ethnic and religious groups, and homosexuals) have posed a major challenge to countries (France was the primary example) in which cultural sameness or assimilation to a single cultural standard have been considered the best guarantee of equality. Professor Scott is known internationally for writings that theorize gender as an analytic category and she is a leading figure in the emerging field of critical history. Her groundbreaking work has challenged the foundations of conventional historical practice, including the nature of historical evidence and historical experience and the role of narrative in the writing of history, and has contributed to a transformation of the field of intellectual history.

The lectures were followed by questions and discussions that continued into the reception held in the Fuld Hall Common Room. Following dinner in the Dining Hall, Robert M. Solow, Institute Professor Emeritus of the Massachusetts Institute of Technology and the 1987 Nobel Laureate in Economics for his contributions

to the theory of economic growth, presented "Experimental Tests of Social Programs: What Have We Learned?"

Founded in 1973, the School of Social Science is the youngest of the Institute's four Schools. Its mission is the



Robert M. Solow, Institute Professor Emeritus of the Massachusetts Institute of Technology

analysis of societies and social change. It is devoted to a multi-disciplinary, comparative and international approach to social research. Each year, the School brings together some fifteen to twenty visiting scholars with various perspectives to examine historical and contemporary problems. The theme for the 2005-06 academic year is "Psychology and Economics."

This theme was the focus of two lectures on Saturday, November 12 when Daniel Kahneman, Professor of Psychology at Princeton University, spoke on "Recent Advances in the Study of Well-Being," and Roland J. M.

(Continued on page 11)



Daniel Kahneman, Professor of Psychology at Princeton University



Joan Wallach Scott (center), Harold F. Linder Professor in the School of Social Science, with Friend of the Institute Norman Harvey and former School of Social Science Member Ava Baron at the reception in Fuld Hall on the occasion of the School's celebration of the Institute's 75th Anniversary.



A small exhibit of materials relating to the history of the School of Social Science was on view in the foyer of Wolfensohn Hall during the School's celebratory weekend.



## DAVID RUBENSTEIN ELECTED TO INSTITUTE BOARD OF TRUSTEES



David M. Rubenstein

David M. Rubenstein, Founding Partner and Managing Director of the Carlyle Group, has been appointed to the Board of Trustees of the Institute for Advanced Study. Mr. Rubenstein joined the Board in October 2005.

Founded in 1987, the Carlyle Group is one of the world's largest private equity firms. Prior to its co-founding, Mr. Rubenstein practiced law in New York with the firm of Paul, Weiss, Rifkind, Wharton & Garrison. He served as Deputy Assistant to the President for Domestic Policy in the Carter Administration and practiced law in Washington, D.C., with the firm of Shaw, Pittman, Potts & Trowbridge.

Mr. Rubenstein graduated *magna cum laude* from Duke University and the University of Chicago Law School. He is a member of the Board of Directors of the Council on Foreign Relations and is also on the Boards of Duke University, Johns Hopkins University, Cold Spring Harbor Laboratory, the Kennedy Center for the Performing Arts, the Lincoln Center for the Performing Arts (of which he is Vice-Chairman), the Center for Strategic and International Studies, and the Dance Theatre of Harlem. He is a member of the Trustees' Council of the National Gallery of Art, the Visiting Committee of the Kennedy School of Government at Harvard, the Trilateral Commission, and the National Advisory Committee of J.P. Morgan Chase. Mr. Rubenstein lives in Washington, D.C. ■

Mr. Rubenstein lives in Washington, D.C. ■

## \$2 MILLION PLEDGE FROM NANCY AND DUNCAN MACMILLAN



COURTESY OF NANCY AND DUNCAN MACMILLAN

Duncan and Nancy MacMillan

Nancy and Duncan MacMillan have pledged \$2 million to the Institute for Advanced Study. "It is our goal in making an unrestricted gift to the Institute's endowment to ensure the independence and quality of the Institute in years to come," said Nancy MacMillan.

The MacMillans have been Friends of the Institute for Advanced Study since 1993 and members of the Chairman's Circle of the Friends since 1997. Nancy MacMillan was elected to the Board of

Trustees in 2001 and currently serves as Chair of the Development Committee. Duncan MacMillan works for Bloomberg LP. Nancy MacMillan is currently Publisher of the *Princeton Alumni Weekly*.

This is not the first generous gift the couple has made to the Institute. A gift of \$3 million from the MacMillans established a professorship in the field of theoretical computer science at the Institute in 2003. Named in honor of Nancy MacMillan's great-uncle Herbert Halsey Maass, a founding Trustee and President of the Board from 1942 to 1949, the professorship is held by Avi Wigderson in the School of Mathematics.

Herbert H. Maass was attorney and close advisor to the Bambergers. In introducing Louis Bamberger and his sister Caroline Bamberger Fuld to Abraham Flexner, Herbert H. Maass was instrumental in bringing the Institute into being. ■

### Planned Giving to the Institute

Making a planned gift to the Institute for Advanced Study offers a flexible and simple way to combine philanthropy with financial planning. In fact, a planned gift, which can be funded with cash, securities, real estate or gifts of tangible property, may enable you to give more than you thought possible while still providing you, or someone you designate, with favorable financial and/or tax benefits.

For some donors, a gift made through a will is the most realistic way of making a substantial contribution, and many former Members, Faculty, Trustees and Friends have made a provision for a bequest in their wills and trusts. To make such a gift, you can use the following language in your will or trust:

*I give to the Institute for Advanced Study-Louis Bamberger and Mrs. Felix Fuld Foundation, a non-profit 501(c)(3) Corporation, headquartered in Princeton, NJ, the sum of \$\_\_\_\_\_ for its general purposes (or for a specific purpose as named here).*

Or, you may choose to name the Institute as one of the beneficiaries or the sole beneficiary of your retirement plan, bank, brokerage or other account, or life insurance policy. Other planned gifts, such as charitable lead trusts or charitable remainder trusts, can provide income to you or someone you designate.

For more information, please contact Kamala Brush at 609-734-8031 or [kbrush@ias.edu](mailto:kbrush@ias.edu).

### SUCCESSORS APPOINTED (Continued from page 3)



DINAH KAZAKOFF

John Masten



CLIFF MOORE

Michael Gehret

rience, has worked primarily in orchestra management with a focus on general institutional management, development, planning and marketing. He came to the Institute from the consulting firm of Charles R. Feldstein and Company, where he worked with a variety of clients including the Atlanta Symphony Orchestra, the Baltimore Symphony Orchestra, the Clark Art Institute, and the Smithsonian American Art Museum. Prior to joining Feldstein, Mr. Gehret served as Senior Vice President for Resources and Planning for the Chicago Symphony Orchestra (CSO) for close to a decade. Under his direction, the CSO completed a successful capital campaign, raising more than \$112 million for the renovation of Orchestra Hall and construction of Symphony Center, which opened in October 1997. Mr. Gehret earned a bachelor's degree in Psychology from Princeton University in 1969 and a master's degree in Higher Education Administration from Columbia in 1971. ■

## INSTITUTE FOR ADVANCED STUDY CONCERT SERIES THIS SPRING

“Giant Pipes and Flowerpots: Music in the Birch Garden,” a performance by So Percussion and Trollstilt will take place on Saturday, May 13 at 7:30 p.m. in the Birch Garden. There will be a pre-concert conversation between composer David Lang and Institute Artist-in-Residence, composer Jon Magnussen, on Saturday at 6:30 p.m. in the Birch Garden and a pre-concert talk with participating musicians on Friday from 12:30 p.m. to 1:30 p.m. in the Dilworth Room.

So Percussion—Douglas Perkins, Adam Sliwinski, Jason Treuting, and Lawson White—combines musical, theatrical and artistic elements in performance of new music. Trollstilt—instrumentalists Dan Trueman on Hardanger and electric fiddles and Monica Muga on classical and steel-string guitars—is inspired by the folk traditions of Norway and America.



So Percussion

The concert will feature work by David Lang and an electronic chamber work by Dan Trueman. So Percussion, which has been described in *The New York Times* as “consistently impressive,” will perform David Lang’s *The So-Called Laws of Nature*, which he wrote for So Percussion and for which the group chose some unusual musical instruments including giant pipes and flower

pots. So Percussion will be joined by Trollstilt for *Five (and-a-half) Gardens* by Dan Trueman.

The Artist-in-Residence Program was established in 1994 to create a musical presence within the Institute community and to have in residence a person whose work could be experienced and appreciated by scholars from all disciplines. In 2003, the Program launched Recent Pasts 20/21, a four-year initiative of chamber music concerts and lectures. Hosted by composer and Artist-in-Residence Jon Magnussen, the series is designed to explore the wide variety of aesthetic perspectives in western art music of the 20th and early 21st centuries. ■

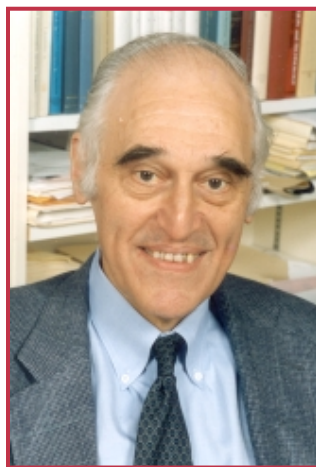


Trollstilt

## LECTURES AT THE INSTITUTE FOR ADVANCED STUDY

### Friends Forum

Giles Constable, Professor Emeritus in the School of Historical Studies, was the speaker at a Friends of the Institute for Advanced Study Forum held at the Institute on Wednesday, February 8. Professor Constable’s lecture, “The Economics of the Gold Rush: Benjamin Davidson and Heinrich Schliemann in California 1851–1852,” described how it was that the paths of the British banker Benjamin Davidson and the German businessman (and future archaeologist) Heinrich Schliemann crossed briefly in 1851–52 in California, where they both came to seek their fortunes—Davidson as agent in San Francisco for N. M. Rothschild & Co. and Schliemann as a banker in Sacramento. So far as is known, Davidson and Schliemann had not met before, though they had both been in St. Petersburg in 1847–48. It is probable that they never saw each other again after 1852. During Schliemann’s final seven months in California, however, he had an active business partnership with Davidson. Letters (from Schliemann to Davidson and from Davidson to Rothschilds) shed light not only on their relationship but also on the early history of California generally and particularly on the economics of the gold rush.



Giles Constable

### School of Historical Studies Faculty Lecture



Caroline Walker Bynum

On Wednesday, February 22, Caroline Walker Bynum, Professor in the School of Historical Studies, presented “Living Blood Poured Out: Piety, Practice, and Theology in Northern Europe in the Fifteenth Century,” in Wolfensohn Hall.

Professor Bynum’s public lecture discussed the widespread prominence of images of the bleeding Christ in iconography and piety during the one hundred and fifty year period prior to the Protestant Reformation. Once perceived as a period of religious decadence, this period is now understood as one of anxious piety, in which the faithful purchased indulgences, went on pilgrimage, and engaged in a variety of superstitious practices to ward off the ills of a violent society.

Bringing new scrutiny to the prominence of blood in the cult, prayers, art, and theological disputes characteristic of the period, Professor Bynum discussed the many university-level theological debates about blood relics and miracles, including anti-Jewish host desecration libels. She argued that the fifteenth-century concern with the

blood of Christ was not simply a matter of superstition or a reflection of social unrest but rather a site where profound philosophical and religious questions such as the nature of identity, or the interaction of matter and spirit, were explored.

### School of Mathematics Faculty Lecture

On Wednesday, March 22, at 4:30 p.m., Vladimir Voevodsky, Professor in the School of Mathematics, will speak on “Foundations of Mathematics and Homotopy Theory.” The public lecture will take place in Wolfensohn Hall.

### Leon Levy Lecture

The Leon Levy Lecture, “The puzzle of quasi-Calvinist motivation, in economics and everyday life,” by Drazen Prelec, Member in Social Science, will be delivered on March 29 at 5:00 p.m. in West Building Lecture Hall.

Professor Prelec works on “rational models and psychological theory” as part of the program on Psychology and Economics. This year the School of Social Science is focusing on the intersection of psychology and economics: expanding concept of homo economicus to accommodate phenomena such as altruism and fairness. The public lecture commemorates the late Trustee Leon Levy’s interest in the topic.

Professor Prelec is working on two projects, both of which combine normative theory with psychological research. The first deals with the so-called ‘self-signaling’ phenomenon, which is also the subject of the Leon Levy Lecture. “There is clear experimental evidence that people are often motivated to take actions that are diagnostic of good outcomes, though the actions have no ability to cause the desirable outcomes. Such behavior raises questions such as: How can such non-causal or quasi-Calvinistic motivation be accommodated within a formal model? What neural mechanisms support non-causal motivation? What are the implications of non-causal motivation for self-control, for collective action, and for legal, precedent-based reasoning?” The second project involves designing and testing game-like procedures for eliciting subjective information, including forecasts, political or historical inferences, and artistic or legal interpretations. “I am especially interested in procedures that can identify truth even when the majority opinion is wrong,” he says.

Professor Prelec, who was born in Zagreb, Croatia, is currently Professor in the Sloan School of Management at the Massachusetts Institute of Technology. He received his A.B. in Applied Mathematics from Harvard University, where he also earned his Ph.D. in Experimental Psychology. ■



Drazen Prelec

## MARSHALL CLAGETT

January 23, 1916 – October 21, 2005

Marshall Clagett, Professor Emeritus in the School of Historical Studies, passed away on October 21, 2005, in Princeton. He was 89.

“Marshall Clagett brought an intensity and vitality to his field of study. His influential body of work has had an indelible impact on the history of medieval science, and the depth and clarity of his scholarship has enlightened our understanding of subject areas as diverse as medieval physics and Egyptology. He will be greatly missed by the Institute,” said Peter Goddard, Director of the Institute.

Heinrich von Staden, Professor in the School of Historical Studies, stated: “Marshall Clagett was a giant in the field of the history of science. He contributed influential, groundbreaking work to the interpretation of medieval science, in particular mathematics and natural philosophy, and he had a tremendous impact on the field through both his scholarship and his personality. He was a generous interlocutor for scholars young and old working in a wide range of disciplines, and he will be greatly missed by his Institute colleagues and the larger intellectual community.”

Professor Clagett, who came to the Institute as a Member in 1958–59 and again in 1963, was appointed to the Faculty in 1964. He became Professor Emeritus in 1986. The author of more than a dozen volumes on the history of science and mathematics, he was one of the dominant scholars in the field of medieval science, in particular the work and influence of Archimedes. His lifetime of work was marked by incisive, astute and rigorous research and scholarship on the continuity of the history of science from antiquity, through Byzantium and Islam, to the medieval and Renaissance West.

Professor Clagett’s most recent work at the Institute focused on science in ancient Egypt, for which he made extensive use of computers for the interpretation of hieroglyphics. At the time of his death, he was working on the fourth and final volume of *Ancient Egyptian Science*. In 1989, Volume I of this text received the John Frederick Lewis Prize of the American Philosophical Society, the second time Professor Clagett received the prize, which he first received in 1981 for Volumes II and IV of his seminal work, *Archimedes in the Middle Ages* (1964–84). In 1987, Professor Clagett commented of the Institute, “It always sustained my work so that I didn’t ever have to stop...it’s been for me the perfect place to come to. If you do real scholarship, you have justified your existence. I feel the Institute has been influential throughout the world. I hope I have influenced thought in my field.”

Renowned for his genial manner and sense of humor, Professor Clagett employed a serious and meticulous style in his research and was uncompromising in his careful translations and interpretations of ancient texts. He is perhaps best known for his landmark ten-tome, five-volume work, *Archimedes in the Middle Ages*, which was published over a period of twenty years. Edward Grant and John E. Murdoch noted in the Introduction to *Mathematics and Its Applications to Science and Natural Philosophy in the Middle Ages: Essays in Honor of Marshall Clagett* (1987): “The number of Archimedean texts edited with full critical apparatus is truly staggering. All are thoroughly analyzed



Marshall Clagett at the ceremony for the International Galileo Galilei Prize for Contributions to the History of Science in Italy on October 6, 1996.

and most are translated for the first time...[it is] a magnificent and enduring contribution to the history of science.”

Born in Washington, DC in 1916, Professor Clagett began his undergraduate education in 1933 at the California Institute of Technology, transferring in 1935 to George Washington University. There he completed both his A.B. and a Master of Arts in 1937. In 1941, he received his Ph.D. in history from Columbia University, with a thesis in the history of science. From that same year until 1946, he served in the United States Navy, beginning his military career as an Ensign and completing it as a Lieutenant Commander, after which he returned to Columbia University as an instructor in history and the history of science.

Before his appointment to the Faculty of the Institute for Advanced Study, Professor Clagett served as professor of the History of Science, and later Vilas Research Professor, in the Department of History of Science at the University of Wisconsin between 1947 and 1964, and was Director of the University’s Institute for Research in the Humanities from 1959 to 1964. He was instrumental in making Wisconsin an important center for the study of the history of science, and in shaping critical thinking in the field.

Over the years, his work has been recognized with numerous awards. In 1981, he received the Alexandre Koyré Medal of the International Academy of the History of Science for *Archimedes in the Middle Ages*. In 1995, he was awarded one of two newly-created Giovanni Dondi dall’Orologio European Prizes in the

History of Science, Technology, and Industry, which is given in recognition of a lifetime of scholarship in the history of science. In presenting the 35th annual International Galileo Galilei Prize in 1996, given by the Award Foundation of the Italian Rotary for outstanding contributions by a foreign scholar to the study and diffusion of Italian culture, Professor Tristano Bolelli, President of the Award Foundation, said of Professor Clagett: “In his long and industrious scholarly life in the history of science he has drawn an exacting picture, rich and suggestive, of the European scientific and philosophical culture from the Duecento to Galileo, one in which he has amply and fittingly documented the essential contribution of Italian Civilization.”

A fellow of the Medieval Academy of America and past president of the History of Science Society, Professor Clagett was a member and former vice-president of the American Philosophical Society. He was a Member of the Deutsche Gesellschaft für Geschichte der Medizin, Naturwissenschaft und Technik, and the International Academy of the History of Science, where he also served as its Vice-President from 1968 to 1971.

Professor Clagett is survived by his wife, Sue Riley Clagett of Princeton, N.J.; his daughter, Kathleen Williams of Towson, Md.; two sons, Dennis Clagett of Nyon, Switzerland and Michael Clagett of Yardley, Pa.; a half-brother, Brice Clagett of Washington, D.C.; and five grandchildren, Mary Kate Di Tursi, of Troy, N.Y.; Jay K.B. Williams, Jr., Marshall Clagett Williams and Michael Williams, of Towson, Md.; and Emily Clagett of Yardley, Pa.

A Remembrance for Professor Clagett is planned for Fall 2006 at the Institute. ■

### SCHOOL OF SOCIAL SCIENCE WEEKEND (Continued from page 8)

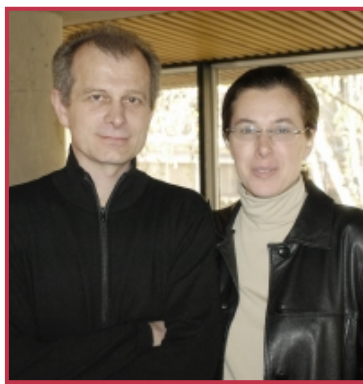


Roland J. M. Benabou, Professor of Economics and Public Affairs at Princeton University

Benabou, Professor of Economics and Public Affairs at Princeton University, presented “Belief in a Just World and Redistributive Politics.” Professor Kahneman is the recipient of numerous awards, among them the 2003 Nobel Prize in economic sciences for the pioneering work he has done integrating psychological research into economics.

Professor Benabou’s contributions span a broad range of macroeconomic and microeconomic areas, such as the effects of inflation in imperfectly competitive economies; the links between education, finance, local interactions, and the socioeconomic structure of cities; the impact of inequality on growth and development; the determinants of social mobility; and the political economy of redistribution.

The talks were followed by lively discussion and a Member luncheon in the Dilworth Room. ■



João Biehl, Member in the School of Social Science (2002–03) and current Member in the School of Historical Studies, and Adriana Petryna, Member in the School of Social Science (2003–04) and current Visitor in the School, on Saturday, November 12



Clifford Geertz (second from right), Professor Emeritus in the School of Social Science, and Visiting Associate Faculty member Adam Ashforth join former School of Social Science Member Joan Fujimura (left) and Karen Blu at the reception in Fuld Hall on the occasion of the School’s 75th Anniversary.

PHOTOS BY CLIFF MOORE

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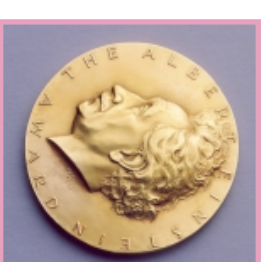
# THE INSTITUTE LETTER



COURTESY OF DOROTHY MORGENSTERN THOMAS

This year marks the 100th anniversary of the birth of mathematical logician Kurt Gödel (1906–1978), pictured above with his friend Albert Einstein (1879–1955). Gödel and Einstein walked routinely to and from the Institute for Advanced Study. In 1951, Gödel was the first recipient of the Institute's Einstein Award, which he received jointly with the mathematical physicist Julian Schwinger, then at Harvard. The award consisted of a gold medal (shown below) and the sum of \$15,000. The gift of Institute Trustee Lewis L. Strauss, it was presented to Gödel by Einstein at a ceremony in Princeton. Following this award, several other accolades came to Gödel. He received honorary doctorates from Yale, Harvard, and Rockefeller universities and from Amherst College. He received the 1974 National Medal of Science in the discipline of mathematics and computer science from President Ford in a ceremony at the White House. The award citation read: "For laying the foundation for today's flourishing study of mathematical logic." He was a member of the

National Academy of Sciences of the United States, a Fellow of the Royal Society, a Member of the Institute of France, a Fellow of the Royal Academy, and an Honorary Member of the London Mathematical Society.



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