



Further information on the Rolf Schock Prizes 2008

The prize in logic and philosophy

THOMAS NAGEL has made important contributions to several areas in philosophy, in particular the philosophy of consciousness, the theory of knowledge, metaphysics, ethics and political philosophy. A consistent theme in his writing is the tension between subjective and objective perspectives. The ambition to achieve objectivity, which is especially evident in the natural sciences, leads to an increased understanding of reality, but a purely objective conception of the world can never be fully comprehensive. There are many truths that are only accessible from a subjective perspective. Nagel also argues that, contrary to what many people claim, our experiences cannot be reduced to neurological processes or behavioural dispositions.

However, Nagel not only rejects the idea that the subjective can be reduced to something objective but also the opposite idea put forward by many philosophers that the objective should be understood within the framework of the subjective, and that mankind's perspective should therefore in some way set a limit on what is real.

He also shows how the difficulty of uniting the subjective with the objective gives rise to severe problems. One example is the question of freedom of action. From an inner, subjective perspective, our actions seem to be free and caused by ourselves, but from an objective perspective, they appear either to be caused by previous events and circumstances or possibly to be purely random, in the sense that they do not have any adequate causes at all. In both cases, we seem to lack control of what we do. Many people have tried to solve or explain away this conflict, but Nagel argues that no one has yet succeeded in doing so.

***THOMAS NAGEL** was born in 1937 in Belgrade in the former Yugoslavia. He has been an American citizen for many years and carried about studies at Cornell, Oxford (England) and Harvard. After that, he taught between 1963 and 1980 at Berkeley and Princeton. Since then, he has been a professor at New York University, since 1986 of both philosophy and jurisprudence. He has published some dozen books and a hundred or so articles. Unlike large parts of modern philosophical literature, most of his writing is more or less accessible for a non-specialist audience. His books have been translated into many languages; three of them have been translated into Swedish.*

Link: www.bu.edu/philo/faculty/hintikka.html

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The prize in mathematics

ENDRE SZEMERÉDI has made several important contributions to mathematics. He works mainly in combinatorics and theoretical computer science, but his results have had a wide impact on several branches of mathematics. Some of the most spectacular advances in mathematics in recent years have their origins in Szemerédi's work.

Szemerédi is awarded the Rolf Schock Prize for his pioneering paper from 1975 on arithmetic progressions within subsets of the integers. An arithmetic progression is a sequence of integers such that the difference between successive elements in the sequence is constant. For

instance, 3, 7, 11, 15, 19, 23 is an arithmetic sequence of length 6 and constant difference 4.

In his 1975 paper, Szemerédi shows that if a subset of the integers has “positive density” (this is a certain quantitative measure testifying that it is not too insignificant) then it must contain arbitrarily long arithmetic progressions. This is shown by means of a long and very intricate combinatorial argument, containing parts of great independent value and importance.

Szemerédi’s 1975 theorem has subsequently been proved in other ways. For instance, Hillel Furstenberg found a proof based on ergodic theory in 1977 and Timothy Gowers gave a proof based on both combinatorics and Fourier analysis in 2001. This shows some of the ways in which Szemerédi’s work has stimulated other areas and led to a very interesting interplay between different areas of mathematics.

Very recently, his work has led to spectacular progress in number theory. Namely, in 2005, Ben Green and Terence Tao showed that there are arbitrarily long arithmetic progressions among the prime numbers. This solves a very old problem. The prime numbers do not have positive density, so Szemerédi’s result is not directly applicable. But the methods developed in the wake of his 1975 paper, for which this year’s Schock prize is awarded nevertheless turns out to provide the key to the solution to this problem.

Szemerédi’s work is characterized by clarity, strength and great originality. The methods he has introduced are pioneering and have led to progress in several branches of mathematics.

ENDRE SZEMERÉDI was born in Budapest on August 21, 1940. He studied in Hungary and received his “diploma” at Eötvös University, Budapest, in 1965. His mathematics teachers were Paul Erdős and András Hajnal. He also gained the “Candidate Degree” (stronger than a Ph.D.) from Moscow State University in 1970, supervised by I.M. Gelfand. He has been employed at the Renyi Mathematical Institute of the Hungarian Academy of Sciences since 1965 and since 1990 has also been Professor of Computer Science at Rutgers, the State University of New Jersey, USA.

Szemerédi was awarded the Pólya prize by the Society for Industrial and Applied Mathematics in 1975. He received the Leroy P. Steele Prize for a Seminal Contribution to Research by the American Mathematical Society in 2008. He is a corresponding member (1982), and member (1987) of the Hungarian Academy of Sciences.

Link: www.renyi.hu/~szemered/

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The prize in visual arts

MONA HATOUM is a rich and multi-faceted artistic oeuvre which mirrors experiences involving exile and gender. In a highly sensitive way, Mona Hatoum has availed herself of recent developments as regards means of artistic expression and choice of materials in order to set forth ideas of great urgency and deep personal experiences. In the process, she has absorbed influences from Piero Manzoni and Arte Povera, from Eva Hesse’s subtle art and from minimalism’s restraint, fusing them into a personal mode of expression that makes sorrow and pain go hand in hand with the sensuousness of the materials and the pleasures of sound workmanship. Hatoum’s work represents and highlights the darkness and the cruelty of the contemporary world while at the same time exhibiting a redeeming sense of humour and pointing to alternative solutions.

In a text by Piero Manzoni published in one of her catalogues there is quote well describing her own artistic practice: “We can therefore say that subjective invention is the only means of discovering objective reality, the only means that gives us the possibility of communication between men”.

Mona Hatoum was born into a Palestinian family in Beirut in 1952 and since 1975 has lived and worked in London and Berlin. She originally went to England on a visit and stayed when the outbreak of civil war in Lebanon prevented her return.

Mona Hatoum works with sculpture, video, installation and performance. Her primary point of reference is the human body.

MONA HATOUM has studied at the Byam Shaw School of Art, London and Slade School of Art, London. Her works has been exhibited widely in Europe, USA, Canada and Australia. She has also participated in art biennales in Venice, Sydney and Istanbul.

In 1995 Mona Hatoum was nominated to the Turner prize for her exhibitions at Centre George Pompidou, Paris (1994) and at the London gallery, White Cube (1995). In 2004 she became the laureate of the prestigious Sonning Prize, awarded by the University of Copenhagen. The same year she also received the Swiss Roswitha Haftmann Prize in Zürich.

Links: www.magasin3.com/sv/utställningar/hatoum.html, www.whitecube.com/artists/hatoum/

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The prize in musical arts

The Rolf Schock Prize in Music is awarded to **GIDON KREMER**. With artistic integrity and tireless inquisitiveness he constantly reevaluates his experiences and challenges his audiences with new interpretations of contemporary music as well as older repertoire.

The violinist Gidon Kremer has established himself as one of the most original and compelling artists of his generation. Born in Riga, Latvia, in 1947, at four years of age he began studying the violin with his father and grandfather, both of whom were distinguished string players. At the age of seven he entered Riga Music School and when he was eighteen began his studies with David Oistrakh at the Moscow Conservatory. A number of prestigious awards, including first prize in the Tchaikovsky International Competition in 1970, helped launch his career.

He has appeared on virtually every major concert stage with the most celebrated orchestras of Europe and America, and has also collaborated with the foremost conductors, including Leonard Bernstein, Herbert von Karajan Valery Gergiev, and Claudio Abbado among others.

Gidon Kremer's repertoire is unusually extensive, encompassing all of the standard classical and romantic violin works, as well as music by twentieth century masters such as Henze, Berg and Stockhausen. He also championed the works of living Russian and Eastern European composers and has performed many important new compositions, several of them dedicated to him. He has become associated with such diverse composers as Alfred Schnittke, Arvo Pärt, Sofia Gubaidulina, Luigi Nono, Astor Piazzolla and Aribert Reimann. Very few other soloists of this international stature have done as much for contemporary composers as has Gidon Kremer.

An exceptionally prolific recording artist, Gidon Kremer has made more than 100 albums, many of which have brought him prestigious international awards. In addition he is the author of four books that reflect his artistic philosophy.

Gidon Kremer plays a "Nicola Amati", dated from 1641.

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Rolf Schock

Rolf Schock was born in France in 1933. His parents emigrated from Germany in 1931 and settled in the USA. Rolf Schock, who became an American citizen, went to school in New York and New Jersey. He continued his education at the University of New Mexico at Albuquerque, where he majored in geology and psychology, and read mathematics as a subsidiary subject. After taking his BA in 1955 he began postgraduate studies in philosophy at the University of California, first at Berkeley and then at Los Angeles.

In 1960 Schock moved to Sweden, where he pursued his studies in philosophy at Stockholm University, taking the degree of Fil. Lic. in 1964. During his studies at Los Angeles, where he was influenced by the American philosopher Richard Montague, he developed what was to become a lifelong interest in logic and its application to philosophy.

*He was especially interested in certain deviant logics that make no existence assumptions, and wrote a dissertation on this topic, for which he was awarded the degree of Ph.D. at Uppsala University in 1968. This study, *Logics without Existence Assumptions*, was an early work in what is now known as free logic, and it has often been cited by scholars in this field. In addition he wrote many other works in logic and philosophy of science, including several books and a large number of articles in international journals.*

After taking his doctorate Schock became Assistant Professor at Uppsala University in 1969. He held lectureships for a brief period at the universities of Uppsala and Stockholm, and for many years the Royal Institute of Technology provided him with a base. Never getting a permanent appointment, he led a very simple life as an independent scholar, devoted to his research in logic and related areas of philosophy. Having studied art at the University College of Arts, Crafts and Design, he was a keen painter. Some of his pictures were exhibited in Stockholm. He was also a devoted photographer and traveller.

Rolf Schock died in an accident on 5 December 1986. After his death it came as a surprise to most of his colleagues that he had left a considerable fortune, which he had inherited from his father, and had bequeathed half of it for prizes in the arts and sciences.

Link: www.kva.se