



PATRICIA SMITH CHURCHLAND

As scientists understand the role of genes in the neuronal wiring and chemistry of the brain, we are confronted with questions about choice and responsibility. Do people have free will or are decisions influenced or predetermined by our brains' wiring? In general daily life, we assume that some decisions are freely made and that people should be held accountable for those decisions. On the other hand, we see the range of allowable excuses from responsibility broadening as we understand the role of neuropathologies in deviant behavior. These developments take place against the debate concerning the right balance between considerations of public safety, justice, and individual freedom. Dr. Churchland will address these questions from the perspective of neurophilosophy, including the theological contention that *free* choice is *uncaused* choice, and the idea that scientific considerations can yield the best working basis for assigning responsibility.

Patricia Churchland pioneered the subfield of neurophilosophy—the interface between traditional philosophy questions concerning consciousness, knowledge, free will and developments in neuroscience. She is a professor of philosophy and former department chair at the University of California at San Diego, an adjunct professor at the Salk Institute, and former president of the Society for Philosophy and Psychology. Her books include *Neurophilosophy*, *The Computational Brain* (with T. Sejnowski), and *The Mind-Brain Continuum* (with R. Llinás).

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12th ANNUAL

MIND/BRAIN LECTURE SERIES

The Swartz Foundation's scientific and philosophical perspective on theoretical neuroscience is that capabilities of the brain—from sensory perception to learning to consciousness—intrinsically derive from biophysical properties and anatomical pathways...*the mind is the brain at work*.

Recent neuroscience research has led us to better understand the relationship between the mind and the brain, requiring the collaboration of investigators from a wide range of disciplines: theoretical neurobiology, cognitive science, mathematical physics, computer science, electrical engineering, etc. The application of systems analysis to distributed brain dynamics is also providing a deeper interpretation of brain activity imaging and data analysis related to human behavior. The Swartz Foundation and Stony Brook University present this ongoing lecture series to acquaint the University community and the public with current research in neuroscience.

For more on the Mind/Brain Lecture Series, please visit www.stonybrook.edu/sb/mind

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The Swartz Foundation

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and

The Swartz Foundation

are proud to present

an exploration into

the far reaches of the

human mind

with

Patricia Smith Churchland

Monday, March 10, 2008

at 4:30 pm

Staller Center for the Arts



“Although many philosophers used to dismiss the relevance of neuroscience on grounds that what mattered was ‘the software, not the hardware,’ increasingly philosophers have come to recognize that understanding how the brain works is essential to understanding the mind.”

—Patricia Smith Churchland

THE SWARTZ FOUNDATION

The Swartz Foundation was established by Jerry Swartz in 1994 to explore the application of physics, mathematics, and engineering principles to neuroscience, as a path to better understanding the mind/brain relationship.

To achieve these goals, the Swartz Foundation supports research at eleven centers for theoretical neuroscience: The Salk Institute, California Institute of Technology, New York University, University of California at San Francisco, Brandeis University, University of California at San Diego, Cold Spring Harbor Laboratory, and most recently, Columbia, Princeton, Yale, and Harvard universities. In general, our objective is to understand the distributed dynamics of brain activity and identify principles of brain function in relation to cognition and behavior. Targeted research projects range from experimental investigations of brain circuitry to computational modeling of large-scale neuronal networks to exploration of nonconscious mental processing—all utilizing physical and mathematical principles. The Swartz Foundation also organizes and sponsors neuroscience workshops and meetings. Core themes have included communication in brain systems, neurobiology of decision making, and large-scale neural network modeling.

Dr. Jerome Swartz co-founded Symbol Technologies Inc. in 1975, and was its chairman of the board and chief scientist until retiring in 2004. Swartz received a B.E.E. degree from the City University of New York and a Ph.D. in electrical engineering from Brooklyn’s Polytechnic University, where he was the recipient of National Science Foundation and Ford Fellowships.



Swartz is an expert in the allied engineering physics fields of electro-optics, laser systems, and optical design, with particular application to new product development. He is credited with some 200 U.S. patents and 30 published papers. He is a member of the National Academy of Engineering and a Fellow of the IEEE. Under his leadership, Symbol Technologies was awarded the 1999 National Medal of Technology, the highest honor for technical innovation in the United States. Swartz is a trustee of the Stony Brook Foundation, Cold Spring Harbor Laboratory, and the University of California at San Diego..

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12th ANNUAL SWARTZ FOUNDATION MINDBRAINLECTURE

PROBING THE MYSTERIES OF THE MIND

DECISIONS, RESPONSIBILITY, AND THE BRAIN

Patricia Smith Churchland, B. Phil.

Professor, Department of Philosophy,
University of California at San Diego

Author of *Brain-Wise:
Studies in Neurophilosophy*



Monday, March 10, 2008

4:30 pm

Staller Center for the Arts, Main Stage
Stony Brook University



*Free Presentation
Intended for a General Audience*

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