



Rae Silver Kaplan Professor of Natural and Physical Sciences Columbia University

Senior Advisor Office of the Director

6 March 2006



## "Transformational" research Thinking Outside the Norm

- Is less predictable in its course and outcomes
- May not fit comfortably within scope of projectfocused, innovate, step-by-step research
- May not fare well in a panel-based system if experts are invested in current paradigms
- Investigators may be reluctant to submit radical or paradigm-shifting ideas, especially when there are scarce resources
- Desirable to evaluate the creative potential of the researchers as on the merit of proposed idea



### **Science Funding - NIH**



Katy Börner



### **Science Funding - NSF**



#### National Science Foundation



## The NSF







·Dr Brent Miller and many colleagues in BIO



# **Meeting Organizers**

•	Dr. Michael Clarke	MPS
•	Dr. Janice Hicks	MPS
•	Dr. Paul Werbos	ENG
•	Dr. Bruce Hamilton	ENG
•	Dr. Semahat Demir	ENG
•	Dr. Mary Ann Horn	MPS
•	Dr. Robert Malchow	BIO
•	Dr. Diane Witt	BIO
•	Dr. Brent Miller	AAAS/BIO
•	Dr. Daniel DeMenthon	CISE
•	Dr. Christopher Greer	CISE/BIO
•	Dr. Douglas Whalen	SBE

### **Perspectives on Opportunities in Neuroscience**

Neuroethological and Developmental Mechanisms: Molecular and Cellular Approaches Eve Marder, Brandeis University

Organization of Behavior: Emerging Principles Partha Mitra, Cold Spring Harbor Laboratory

Plasticity, Learning, and Development Jay McClelland, Stanfor University

Signal Processing and its Development in the Brain Emery Brown, Massachusetts Institute of Technology

Measuring the Brain: From Synapse to Thought Jonathan Sweedler, University of Illinois

Cognitive Systems Across Levels of Analysis in Brain Systems Nancy Kanwisher, Massachusetts Institute of Technology

Biomimetic Computational Systems Ted Berger, University of Southern California