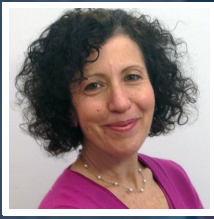


Attention, Curiosity, and Exploration



Jacqueline Gottlieb
Associate Professor, Department of Neuroscience

CURRENT RESEARCH

Understanding the biological mechanisms of selective attention

Humans have an amazing ability to selectively process information. At any point in time we are bombarded by a cacophony of signals from the external world and by vast numbers of memories from internal sources. And yet our brains have the almost magical capacity to ignore most of these inputs and focus on the small set of relevant information. The goal of the Gottlieb laboratory is to understand how the brain guides selective information processing as a function of learning, expectations and current task goals.

Our work examines visual attention – our ability to look at or attend to objects in a visual scene. We view these acts of attention as mental actions whose goal is to inform subsequent decisions. For instance, when we attend to a traffic light at an intersection, we seek to reduce the uncertainty of the subsequent decision (e.g., whether to stop or continue crossing the street). Using this simple idea, we can dissect the mechanisms that control selective information processing in a range of behavioral paradigms.

Dr. Gottlieb's research has the potential to impact many areas in which attention is important. For instance, her research may identify ways to help individuals with ADHD, depression, anxiety, and drug addiction better control their mental focus and make better decisions. Her research may offer a new understanding in fundamental and important concepts like curiosity, creativity, and exploration which will lead to developments in tools in many fields including education and management. Because selective information processing is such an integral part of human intelligence and functioning, the incredible research of Dr. Gottlieb may one day trickle down to applications in nearly...

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AFFILIATION



Columbia University

EDUCATION

- B.S., in Cognitive Science, 1986 , MIT
- Ph.D., in Neurobiology, 1993 , Yale University

AWARDS

- McKnight Memory and Cognitive Disorders Award, 2014
- Professional Schools Diversity Fellowship (Columbia University), 2008
- Young Investigator Award, National Alliance for Research on Schizophrenia and Depression, 2008
- McKnight Scholar Award, 2003
- Klingenstein Fellow, 2002
- and 2 more...

RESEARCH AREAS

Education, Neuroscience

FUNDING REQUEST

Your contributions will support the continued research of Dr. Gottlieb, of Columbia University, as she seeks to better understand attention. Your donation will support the necessary \$250K a year to cover the costs of personnel and equipment. Additional funding would support the costs of additional postdocs thereby allowing Dr. Gottlieb to effectively train more future scientists. In choosing to support Dr. Gottlieb, you will be a part of fundamental research with wide-ranging applications!