

Center for Cognitive Science

University at Buffalo, State University of New York

Tuesday, April 15, 2003

Slee Concert Hall

North Campus

2:30 pm – 3:45 pm

**Distinguished Speaker Series 2003
Presents**

Philip Johnson-Laird Ph.D.

Dept. of Psychology

Princeton University

“How we Reason”

A long-standing tradition postulates that human thinking is rational because it is founded on the 'laws of thought'. This talk argues to the contrary that reasoning is not based on such laws, but on the ability to envisage possibilities. A conclusion is judged to be valid if it holds in all such MENTAL MODELS of the given information, and probable if it holds in most of them. This theory is based on three main principles: each mental model represents a possibility; the structure of models corresponds to the structure of what they represent; and models normally represent only what is true. The talk outlines the evidence corroborating the theory from behavioral and brain-imaging studies. Inferences from one model are easier than inferences from multiple models. Knowledge affects the process of reasoning. And, if falsity matters, reasoners commit systematic fallacies. Humans are not always rational, but they are not intrinsically irrational, either.

Johnson-Laird was born in Yorkshire, England. He left school at the age of 15 and spent ten years in a variety of occupations until he went to University College, London to read psychology. He later gained his Ph.D. there under the supervision of Peter Wason, and he joined the faculty in 1966. In 1971, he was a visiting member of the Institute of Advanced Study, Princeton, where he began a collaboration with George A. Miller. Subsequently, he held positions at the University of Sussex (1973-1981) and at the Medical Research Council's Applied Psychology Unit (1981-1989) in Cambridge, where he was also a Fellow of Darwin College. He returned to Princeton in 1989 to be a member of the faculty at the University, where he is the Stuart Professor of Psychology. He has published ten books, and over two hundred papers. He is married and has two children. In his spare time, if he had any, he would play modern jazz piano.

Open to the public.

Free Admission.

Sponsored by: Department of Psychology, Samuel P. Capen Chair of Anthropology, Department of Computer Science and Engineering, The C.S. Peirce Professorship in American Philosophy, Department of Philosophy

For information, please call the Cognitive Science Office at (716) 645-3794 or visit
<http://www.cogsci.buffalo.edu/html/2003spring.htm>

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