

Brief Bio and (PR)²: Problems & Pitches – Rants & Raves by Dr. John T. Bruer

Dear invited participant of the NSF Workshops on Knowledge Management and Visualization Tools in Support of Discovery at the National Science Foundation, Arlington, VA on March 10 & 11, 2008, see <http://vw.slis.indiana.edu/cdi2008/workshop1.html>.

In preparation for the workshop we ask you to provide a brief bio and your input to the questions below. Your input will be available to all participants and people which are “interested (but cannot attend)” before the meeting to complement the introduction of participants and to structure the workshop more effectively.

Thank you for your time.

Self Introduction

Please introduce yourself by providing a

- photo of yourself
- brief biography of about 250 words
- up to five major publications (some publications appear on JSMF website, see below.)
- link to your home page and www.jsmf.org
- links to data or software you serve (if applicable).

General Questions

1) What is (are) your main interest(s) in attending the workshop?

I hope to acquire a better understanding of visualization methods and current science of science research.

2) What information/knowledge management needs do you have?

I would like to use information/knowledge management methods to assess foundation programs and to do research in history and philosophy of science.

Explain your ‘dream tool’ for scientific discovery and innovation.

I would like to have 24-hour on-line access to Expert Scientometricians

3) What is the most insightful visualization of static or dynamic phenomena you know?

[Ideally this visualization led to a major discovery/innovation. Examples could come from science, art, or any other field of human endeavor. Note that we plan to use this visualization on your name card.]

See Anaximander’s Universe attached to my Biol

4) What would you like to learn / achieve at the workshop?

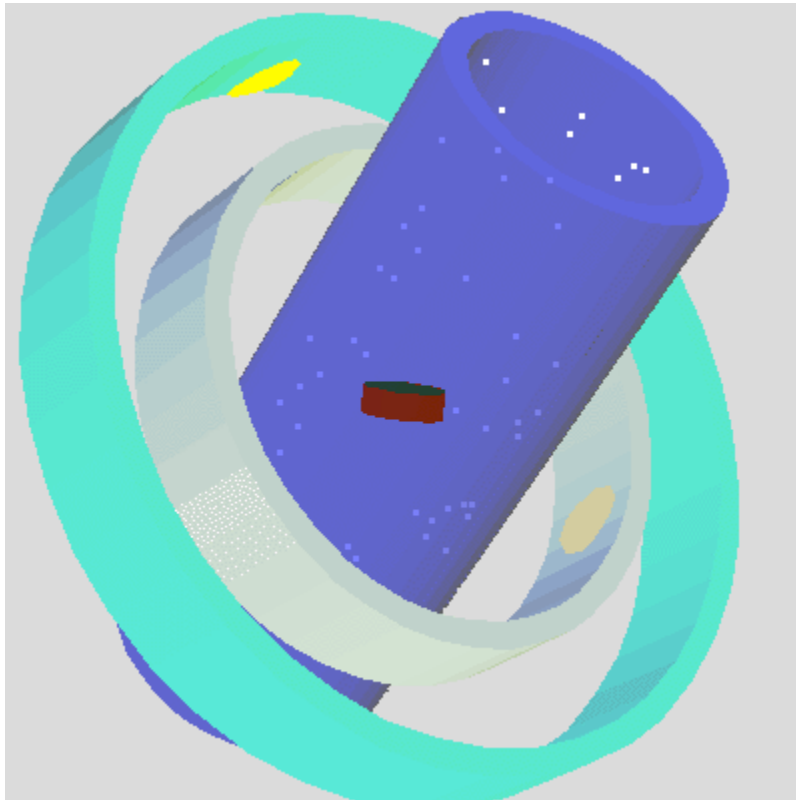
In addition in my own interests, I would like to be informed about contributions the McDonnell Foundation could make to the field.



Dr. John T. Bruer
President, James S. McDonnell Foundation
St. Louis, Missouri

Since 1986, Bruer has been president of the James S. McDonnell Foundation in St. Louis. The foundation awards over \$20 million annually to support biomedical research, education, and international projects. The Foundation has established programs in the areas of neuroscience, cancer research, education, and child health. Since 1999 the McDonnell Foundation has developed a specific program interest in complex systems research.

Bruer holds degrees in philosophy from the University of Wisconsin-Madison, Oxford University, and Rockefeller University. Bruer's book Schools for Thought: A Science of Learning in the Classroom (MIT Press, 1993) received the 1993 Quality in Educational Standards Award and the 1994 Charles S. Grawemeyer Award in Education. His book The Myth of the First Three Years (Free Press 1999) received the 2000 Eleanor Maccoby award from the American Psychological Association. He is Adjunct Professor of Philosophy at Washington University and a member of the National Science Board. His current research interests include issues in cognitive neuroscience, emergence and reduction in the special sciences, and causal reasoning. Bruer finds that his best insights arise either on a tennis court or over a bottle of wine.



Anaximander's Universe

The Pre-Socratic philosopher, Anaximander, developed the first model of the cosmos. This model depicted the Earth as a drum-shaped object, where the drum had the same dimensions as a column drums used to construct the first monumental stone temples at Didyma. Robert Hahn has argued that the need to construct plans for these temples created the need for architects to develop the idea of perspective drawings. This ability to “take different views”, Hahn claims, places the origins of Greek philosophy in the context of architecture and engineering. During Anaximander's time the only text written in prose where architectural manuals and philosophical texts. Anaximander's universe thus makes interesting connections between cosmology, applied sciences, philosophy, and visualization.