

The Art of Science: Scientific Methods vs Pseudoscience

Marvin Zelkowitz

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Everyone has been exposed to the scientific method in grade school: Develop an hypothesis; Develop an experiment to test that hypothesis; Collect relevant data; Evaluate the data; Modify the hypothesis to account for differences in the observed and predicted results; and Repeat the process to improve your theory.

However, is this the way science works in practice? Do working scientists follow this method? Using computer science as a sample domain, the answer is "Sometimes." Looking at science in general, the differences between good and bad science and what levels of validation various experimental methods produce is discussed. Understanding when scientists do science and when they are venturing into the realm of pseudoscience is the focus of this talk.

Marvin Zelkowitz is a Professor Emeritus and Research Professor in the Computer Science Department at the University of Maryland. He

has been studying software development issues and technology transfer for the past 40 years. He is also on the Board of Directors of NCAS and is currently the Treasurer.

**Saturday, Nov 14, 2009
1:30 pm**

National Science Foundation
4201 Wilson Blvd, Room 110
Arlington, VA 22230
(Ballston Metro stop)

Enter NSF from the corner of 9th N & N Stuart Streets.
www.nsf.gov/about/visit/

**FREE admission – Everyone welcome,
members and non-members**

For more information, call the 24-hour NCAS
Skeptic Line recording at 301-587-3827.
ncas@ncas.org
www.ncas.org



National Capital Area Skeptics Public Lecture Series
20/20 SINCE 1987

Drinking Skeptically

On Wednesday, November 11, come to Jackie's Restaurant at 8081 Georgia Ave. in Silver Spring at 7:00 p.m. to join fellow NCASers for the next DC-area *Drinking Skeptically* event. *Drinking Skeptically* is an informal social event designed to promote fellowship and networking among skeptics, critical-thinkers, and like-minded individuals.

Don't drink? Don't let that stop you from joining us! Some of the world's most famous skeptics are teetotalers, and we are happy to have you!

ncas.org/ds-ncas.html

www.jackiesrestaurant.com

www.drinkingskeptically.org

There's no cover charge, and if you order from their very reasonably-priced menu, you'll be delighted. (January's *Washingtonian* magazine rated Jackie's #78 of all DC-area restaurants.)

Remember that drinking skeptically means drinking responsibly. If there's one thing science has taught us, it's the effects of alcohol on the human body. ☒

Music and the Brain Lecture Series at the Library of Congress

The Library's Music and the Brain events offer lectures, conversations and symposia about the explosion of new research at the intersection of cognitive neuroscience and music. Project chair Kay Redfield Jamison convenes scientists and scholars, composers, performers, theorists, physicians, psychologists, and other experts at the Library for a compelling 2-year se-

ries, with generous support from the Dana Foundation.

All events in the series are free and open to the public. No tickets are required, but seating is limited, and early arrival is advised.

Ten compelling programs in the 2008-9 season featured a diverse lineup of speakers, including neuroscientists Daniel J. Levitin, Antonio Damasio, Aniruddh D. Patel, and Steven Brown. Science, music and medicine converge in talks exploring a range of topics—the role of music and human evolution, and the universality of music across cultures; how the human brain is designed to perceive, understand, and like music; how the perception of music and the response to it is deeply rooted in human biology; how music conveys meaning and emotion; depression and creativity; and music, the brain, and behavior.

This series is now in its second year.

Next lecture is Saturday, November 14, 2009 at 6:15 pm: *Dangerous Music III: Suckers, Firestarters, & Cultural Anarchists, Oh My!* by Jessica Krash, George Washington University and Norman Middleton, Music Division, Library of Congress

Unless otherwise noted, the Music and the Brain series will be presented at 6:15 p.m. in the Library's Whittall Pavilion on the first floor of the Thomas Jefferson Building, 10 First St. S.E., Washington, D.C.

Lecture information for the current season (2009-2010) available at: <http://www.loc.gov/rr/performance/concert/0910-brain.html>

Podcasts of the first year are available at: <http://www.loc.gov/podcasts/musicandthebrain/index.html> ☒

