



HOW DO WE ROTATE OBJECTS IN OUR MIND?

The 4th Annual Lecture Series on Global Understanding

A Presentation of the Center for Global Studies

<http://www.calumet.purdue.edu/cca/cgs>

Tuesday, September 22, 2009, 11:30– 1:00 p.m.

Wednesday, September 23, 2009, 11:30-1:00 p.m.

Student Union and Library Building, Room 321

Purdue University Calumet

Hammond, Indiana

About the Presentation

Imagery is the most powerful intellectual force of the human being. On the one hand, this mechanism is responsible for developing our civilization because it can act in a world in which all is possible. On the other hand, imagery works on mental representations of 3D real world objects. It can only transform them into new ones by special procedures. One of the most recognized imagery operations is mental rotation, which is “a spontaneous kinetic image of three-dimensional structures majestically turning in space” (Roger Shepard). But is this operation running similarly in “a head” and in reality? This presentation is about some determinants of a real world object’s mental rotation processes and the methodological issues connected with research on it. Is there any difference between mental rotation of 3D objects presented on a flat computer screen and stereoscopically? Are mental representations of real world objects sensitive to a horizon line? How do people scan visual objects before they mentally rotate them? Is the Witkin’s Embedded Figures Test good for prediction of correctness of mental rotation? The outcomes are based on the data gathered in the experiments conducted last year by Dr. Piotr Francuz in the neuropsychophysiological laboratory of the John Paul II Catholic University of Lublin, Poland (<http://www.kul.pl/LabHD>).

About the Speaker



Piotr Francuz (Ph.D. John Paul II Catholic University of Lublin), associate professor of psychology, head of the Laboratory of Experimental Psychology, Psychoneurophysiological Laboratory and Studio High Definition at the John Paul II Catholic University of Lublin and the director of the Centre for Psychological Analysis of Mass Media Communication; Scholarship at the Catholic University of America, Washington D.C. (USA, 1988), University of Madison, WI (USA, 1989), Catholic University of Leuven (Belgium, 1994), Università Italiana per Stranieri (Italy, 1996) and University of London (Great Britain, 2007). An author of 18 books (among others: *Pictures in the mind. Studies in perception and imagery* (2007), *Understanding of television message* (2002), series: *Psychological aspects of audiovisual communication* (1999-2007) and under preparation: *On the neuroscience paths* (2009), *News understanding* (2009), *New media and visual communication* (2009) and *Mental imagery* (2010)) and over 80 learned articles published in the trade journals; he is conducting research focused on the influence of the structure of the audiovisual communicates on mind/brain cognitive processes (e.g. understanding and imagery) of the receivers. His several research projects were granted financial support by the Ministry of Higher Education and Polish Public Television Broadcasting; since 1995 he has been a lecturer, trainer and consultant in local and national Polish television stations. Email address: francuz@kul.pl.

Admission is Free and Open to the Public!